



# Regenerative agriculture: a potentially transformative storyline shared by nine discourses

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## Abstract

Modern agriculture is underpinned by a colonial, industrial and productivist discourse. Agricultural practices inspired by this discourse have fed billions but degraded socio-ecological systems. Regenerative agriculture (RA) is a prominent alternative seeking to transform food production and repair ecosystems. This paper proposes that RA discourse is supported by a shared storyline binding diverse actors and discourses together—a discourse coalition. Consequently, multiple discourses contribute to the over-arching discourse of RA. A discourse analysis was conducted on texts from ninety-six organisations and complimented by twenty-two interviews in Australia and the USA. This analysis identified nine discourses contributing to RA discourse: Restoration for Profit; Big Picture Holism; Regenerative Organic; Regrarian Permaculture; Regenerative Cultures; Deep Holism; First Nations; Agroecology and Food Sovereignty; and Subtle Energies. This paper describes and examines these component discourses and discusses tensions that may make RA vulnerable to co-optation and greenwashing, diluting its transformative potential.

**Keywords** Regenerative agriculture · Discourse · Transformations · Discourse coalitions · Regenerative storylines

## Introduction: transformation and regenerative agriculture (RA)

Modern agriculture has reshaped landscapes to maximise profit and production (Gliessman 2007; Lawrence et al. 2013; McKeon 2015). It is an extractivist activity that unsustainably draws on human, material and natural capital to increase yields (Anderson and Rivera-Ferre 2021). These yields rely on fossil fuel inputs, artificial fertilisers, pesticides and herbicides supplied by multi-national corporations (Horrigan et al. 2002; Kimbrell 2002). Modern agriculture values agricultural expansion, which continues the displacement of First Nations people and the annihilation of ecosystems (Levers et al. 2021). This expansion is encouraged by neoliberal economic storylines (Clapp and Moseley 2020; Lawrence et al. 2013), which are staunchly committed to

economic growth, leading to overconsumption and exploitation (Riedy 2020). Modern agriculture is contributing significantly to the vulnerability of food systems (Clapp and Moseley 2020) and the degradation of earth systems (Campbell et al. 2017; Rockstrom et al. 2009). Consequently, transformation is needed to prevent these systems breaking down (Leventon et al. 2021).

For the purposes of this paper, transformation is defined as a radical shift in shared socio-cultural structures, as well as technological, economic and ecological processes (Linnér and Wibeck 2020). Adherents to modern agriculture have attempted to invalidate the transformative potential of alternative agricultural models by downplaying their performance regarding yield, economic viability and capacity to address climate change (Ahmed et al. 2021). One such alternative is regenerative agriculture (RA), which has nevertheless seen a radical increase in popularity amongst farmers (Gosnell et al. 2019), celebrities (Kiss-the-Ground 2021) and corporations (Gordon et al. 2022). RA integrates different farming approaches (Duncan 2015) to restore and realise the potential of damaged landscapes (Francis and Harwood 1985; Massy 2013, 2017; Wahl 2016).

Given that RA integrates diverse practices and is informed by distinct bodies of literature (O'Donoghue et al. 2022),

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we anticipated that its discursive origins would be similarly diverse. As Gordon et al. (2022) point out, the transformative potential of RA discourses has only been marginally explored in the literature: foremost by Massy (2013) and Page and Witt (2022). This paper brings further clarity into this knowledge gap by identifying discursive contributions to the broader discourse of RA. It examines these component discourses and discusses tensions that may dilute RA's transformative potential. First, we introduce discourse coalitions as a conceptual framework and outline our methods. Two sets of findings are presented: (1) four tensions in RA; (2) nine discourses contributing to RA discourse. Finally, the discussion positions these findings within the broader literature and explores implications for transformation.

## Discourse coalitions as a conceptual framework

Discourses are shared social practices or ways of speaking (Fairclough 1989) that draw on dynamic configurations of meanings, phrases, assumptions and storylines (Dryzek 2013; Hajer 1995; Riedy 2020). To make sense of how discourses influence RA, we draw on the related concept of discourse coalitions (Hajer 1993). A discourse coalition binds diverse actors together around shared storylines (Hajer 1995; Riedy 2020). It is “a group of actors that, in the context of an identifiable set of practices, shares the usage of a particular set of storylines over a particular period of time” (Hajer 2006, p. 70). These shared storylines are central to establishing alliances between the actors participating in diverse discourses because they create a perceived common ground (Hajer 1995), therefore, enabling communication between groups that might otherwise disagree (Edenborg 2021). The growing popularity of RA could be partly explained by the formation of a discourse coalition; yet, there has been limited work on this subject.

To understand which discourses and storylines are associated with RA, we conducted a discourse analysis. Waring (2018, p. 9) defines discourse analysis as closely reading the “use of language along with other multimodal resources for the purpose of dissecting its structures and devising its meanings.” We looked for tensions in RA discourse that might point to boundaries between contributing discourses. The capacity to *think*, *act* and *communicate* is influenced by conceptual systems that are predominantly metaphoric (Lakoff and Johnson 2008). As such, we also examined metaphors as an indicator of discourse.

In addition to identifying the discourses contributing to RA discourse, we explored the transformative potential of the discourse. A discourse with many unresolved tensions may be vulnerable to co-optation and greenwashing that dilutes its transformative potential (Gordon et al. 2022).

As explained by de Jong and Kimm (2017), discursive co-optation is a process whereby non-adherents to a discourse appropriate, dilute and reinterpret it for their own political purposes. The discursive concepts embedded in a movement are adopted, but their intent is subverted. Similarly, greenwashing is the act of misleading people regarding the environmental benefits of practices, products or services (de Freitas Netto et al. 2020). Some scholars argue that sustainability discourse became unable to deliver transformation in this way (Blühdorn 2017). As Riedy (2022) suggests, discursive transformation involves understanding how specific storylines and discourses are being created and performed. This paper addresses this knowledge gap for RA with three research questions:

- (1) What tensions are apparent in RA that point to boundaries between underlying discourses?
- (2) What discourses contribute to the emerging discourse of RA?
- (3) What shared storyline for transformation might the discourse coalition form around?

## Methods

We took a mixed-methods approach combining desktop research with semi-structured interviews. A discourse analysis, adapted from Fairclough (1989) and Charteris-Black (2004), was conducted on texts from ninety-six organisations talking about RA. These were predominantly located in Australia and the USA, but also Europe, Africa, Central America and India (see Fig. 1). Texts included websites, reports, blog posts, newsletters, podcasts, email correspondence and presentations associated with each organisation. The analysis underwent three phases:

(1) *Textual identification*: the lead author read and annotated texts actively, identifying whether words were being used metaphorically or literally.

(2) *Interpretation*: the lead author examined the style, framing and modality of texts, unpacking how positions were made to appear credible, plausible or rational. Identifying points of contrast helped establish where the tensions were in RA by asking: *what does this perspective stand in contrast to?* The lead author mapped how metaphors were connected to subconscious ‘conceptual’ metaphors. E.g. in some texts, potential was discussed as “arising” from place, or that places were “...reaching their regenerative potential” (Fullerton 2015, p. 9). This is a spatial schema: *potential = up*. It also provides further insight into the author's metaphoric construction of place: *place = the source of potential*.

(3) *Social context and explanation*: using evidence from phase two, the lead author articulated different social



**Fig. 1** Origins of organisations

**Table 1** Participant demographics

Gender	Country	Participant
She/her	Australia	3, 4, 10, 18, 19, 20, 21
She/her	USA	14
She/her	Australia, First Nations	22
He/him	Australia	1, 2, 5, 7, 11, 12, 13, 17
He/him	USA	15, 16
He/him	Australia, First Nations	6
They/them	New Zealand, First Nations	8
They/them	Australia	9

practices (ways of speaking) about RA in the texts. He re-read the texts and considered whether these categories made sense within the broader data set.

This data set was complimented by twenty-two semi-structured interviews conducted in Australia, with three from the USA (see Table 1). The goal of the interviews was to answer questions arising from the discourse analysis.

They were, therefore, conducted with people most likely to shed light on particular tensions between the texts. Questions were designed around tensions and aimed to determine how texts related to practitioner experiences. Participants included farmers, consultants, trainers and community leaders in RA. Interviews were conducted by the lead author, averaging an hour in length over zoom or somewhere chosen by the participant. They were recruited via email. After each interview, the lead author created recorded reflections. These acted as analytic memos (Saldana 2009), which helped document observations on each participant's context. Interviews were transcribed and used to refine discourse analysis findings.

## Findings

### Tensions in RA

We identified four major tensions, the discursive origins of which suggested that a 'family' of discourses was

**Table 2** Four tensions in RA

Tensions	Discourse criteria
Genealogy and holism	The discourses are differentiated through their core genealogies and associated interpretations of holism
Equity and power	The discourses are differentiated based on the extent to which they emphasise issues of equity and power in the food system
Definition	The discourses are differentiated by whether their definitions of RA are process-based, outcomes based, both or neither
Departure	The discourses are differentiated by the strength or invisibility of their connection with industrial and productivist approaches

contributing to RA discourse. These tensions became criteria for establishing the boundaries between contributing discourses (see Table 2).

### Tension one: genealogy and holism

Participant 13 remarked that in the 1960/70s, agricultural alternatives had powerful leaders who clashed heavily, each with their own ideology. This created an either/or mentality between the farming approaches (Shennan et al. 2017). The literature reflects this dichotomy, e.g. permaculture (Holmgren 2007; Mollison 1988), holistic management (Savory and Butterfield 2016) and organics (Howard 1940). However, as participant 13 points out “this new generation [of regenerative farmers] draw on the different threads that are going to work for them. No longer are you in this group or that group, it’s not a club, there’s no coercion. It’s a movement of individuals.” This implies that regenerative farmers often participate in multiple discourses simultaneously.

Interpretations of holism also have different genealogies such as systems thinking (Mann et al. 2019) or pattern understanding (Mollison 1988), nested (Haggard and Mang 2016) or holarchic interpretations (Benne and Mang 2015; Wilber 2001), and some avoid holistic terminology (Becker et al. 2017; Hobdod et al. 2016; Park et al. 2017; Teague and Barnes 2017; Teague and Kreuter 2020). The Savory and Butterfield (2016) holistic decision-making framework promotes stepping back from the parts to see the whole. Meanwhile, Bortoft (1996, p. 24) argues that stepping back from the parts leads to an abstraction of the whole. He says, “authentic wholeness means that the whole is in the part; hence careful attention must be given to the parts instead of to general principles.” Seeing the ‘whole’ of a document does not indicate its meaning. Interpreting each letter, word and sentence—informed by your cultural and political context—reveals the meaning of the document.

### Tension two: equity and power

As Ahmed et al. (2021, p. 15) say, “approaches that aim to repair, regenerate, and transform our systems toward socio-ecological resilience must address the systemic issues of equity and power.” Participants 8 and 9 compared RA to the gay liberation movement. Assimilationist tools that portrayed gayness and straightness as the same created a dichotomy between “good gay subjects” and “bad queer others” (Ashley 2015, p. 29). This is a form of co-optation. In RA, this could mean popular discourses overshadow the goals of smaller discourses (or bad queer others). As RA gains widespread participation, “the first people to benefit will be the most privileged; usually the whites and the able bodied” (participant 9). The risk is that “those who benefit the most from partial gains have less of an impetus to support larger

collective gains that would benefit the whole of the movement” (Ashley 2015, p. 29).

Power and equity remain largely absent in RA texts. Newton et al. (2020) found that only 17% of the academic papers and 40% of the practitioner websites talked about social and community issues when defining RA. Fassler (2021) further affirmed that there was zero mention of racial parity. As Fassler (2021, p. 47) comments, “if issues related to land access, economic equity, and racial parity fall outside its purview,” then what is RA really about? Romero-Briones refers to this as taking conversations up to the fence: “you’ll talk about soil and carbon, but we don’t want to talk about land ownership” (Fassler 2021, p. 38). This tension is heightened because some supporters of RA do not recognise the influence of Indigenous worldviews, which has led to the co-opting of Indigenous approaches (Angarova et al. 2020; Romero-Briones et al. 2020). If discussions around social and political transformation are omitted, RA “can be seen as merely a reformist approach, which leaves it susceptible to greenwashing” (Ahmed et al. 2021, p. 15).

### Tension three: definition

Different groups define RA as either process-based, outcomes based, or both (Grelet et al. 2021; Newton et al. 2020). Process-based definitions focus on *how* you farm and the practices you use, whereas outcomes based definitions are unconcerned about practices so long as you are achieving the right results (Newton et al. 2020). There were clear tensions between these definitions in interviews, e.g. we will fail if we focus on processes (participant 12); focussing on outcomes is cheating (participant 15). An outcomes based approach might say that regenerative farmers should plant genetically modified seeds if those crops facilitate higher yields. A process-based approach would disagree because genetic modification raises ethical issues that are “inherently antithetical to the regenerative ethos” (Fassler 2021, p. 15).

Definitional ambiguity in RA means corporates can shape the discourse to their own ends, potentially resulting in co-optation and greenwashing (Giller et al. 2021). Many participants were concerned that ‘big farmer’ chemical companies were relabelling themselves and supplying products with ‘regenerative’ on them (participants 4, 5, 11, 13, 14, 15 and 16). Participant 13 said, “the way the farmers think won’t change. It’s just the product will change.” Loring (2022b, p. para 11) remarks that, “corporate plans to invest in regenerative agriculture appear to be mere appropriations of agro-ecological practices, hollowed out of their potential for supporting broad societal transformation.” Haslet-Marroquin says that the desire to define RA is a form of colonisation and that *not* defining it is fundamental for achieving regenerative outcomes (Loring 2022a). Definitions that reduce RA to processes and/or outcomes alone often exclude the

non-quantifiable aspects of a regenerative mindset (Seymour and Connelly 2022).

#### Tension four: departure

RA is advocated by multi-national companies, NGOs and civil society (Giller et al. 2021) despite coming from conflicting sides of food system debates (Giller et al. 2021; Gordon et al. 2022). Participant 11 believes this is because unlike the divisiveness of organics, RA “is not socially partisan; it’s not politically partisan; and it’s not economically partisan.” This is why companies such as Patagonia, General Mills and Cargill can simultaneously support RA and an industrial, productivist food system (Gordon et al. 2022). For them, RA can be “layered on top of farming as it currently exists” (Fassler 2021, p. 6). However, others argue that RA requires a complete re-structuring of the food system (Fassler 2021), which cannot function regeneratively unless the surrounding “economic, political and social systems ... are also regenerative” (Gordon et al. 2022, p. 9).

This indicates that groups within RA are departing from industrial and productivist approaches to differing degrees (Gordon et al. 2022). This spectrum was emphasised by participant 9 who said that RA is a stepping-stone between Western and Indigenous ontologies. As a group departs, knowledge about how and why to regenerate is increasingly framed through the lens of relationality instead of productivity (participants 2, 4, 6, 7, 8, 9, 10, 12, 17, 19, 20 and 22). The ‘biotic community’ (Leopold 1949) is sometimes discussed metaphorically to suggest, “that humans belong to this greater community; humans are not ‘outside’ or ‘other’ to the natural world” (Sanford 2011, p. 292). Participant 2 referred to this as humans existing in the *web of life*. The terms regenerative and ecological are sometimes used together because the latter emphasises the relationship between living beings and their environment, e.g. “an ecological agriculture that is regenerative” (IEA 2022, p. para 3). *Relational agriculture* is also a term that has been explored (Leslie et al. 2019) and Seymour and Connelly (2022) refer to a more-than-human ethics of care in RA.

#### Discursive contributions to RA

Based on these criteria, we identified nine discourses contributing to RA. Table 3 gives an overview of these discourses and their positionality regarding the four tensions.

#### Restoration for Profit

This discourse focusses on restoring soils to be more productive and profitable. 33/96 organisations included in this analysis contributed to Restoration for Profit (see Fig. 2). It

“appeals strongly to conventional farmers by ... focusing on bottom line profits through increased soil health” (Soloviev 2019, p. para 11) and integrating methods such as no-till, conservation agriculture and carbon farming. The shift to RA is fundamentally linked with regenerating soil to be more productive. As participant 3 said, “these sharp implements that we’ve driven into the soil time and time again, in mono-cropping, have actually destroyed our soil base, so what was there to help us to be more productive, has now ended up making us less productive.”

Carbon farming has become a powerful subset of this discourse to “save the planet by sequestering carbon in the landscape” (participant 3). As participant 5 said, “if you’re building soil carbon, you’re being regenerative.” Adherents to other discourses would disagree with this broad, outcomes based definition, pointing out that a carbon-rich farm could still be undertaking practices that damage the environment. Nonetheless, some adherents to this discourse are hyper-focussed on carbon farming and natural capital: “you stick a value on the environment and pay someone to look after it, you’ve just protected the environment. It’s as simple as that” (participant 3).

The profit and production orientation of this discourse makes it inviting for corporate investors, because adherents argue that “the profitability of regenerative agriculture is identical to conventional agriculture” (participant 5). It is also focussed on scalability, which aligns with goals such as Cargill’s to “advance regenerative agriculture practices across 10 million acres” (Cargill 2020). This discourse does not challenge the industrial supply chain, as pointed out by participant 11, who said that transformation is isolated to the farm and people are still commodity producers: “Goodman Fielder or Cargill or someone like that might be promoting regenerative agriculture, but they’re still running their corporate palaver; they’re not changing. All they’re doing is rebranding.”

Restoration for Profit is a powerful stepping-stone for conventional farmers interested in RA; its critique of industrial agriculture is mild, and it departs the least from the mainstream. This similarity with the status-quo means that adherents accept many practices that other proponents of RA do not support. This puts the discourse at risk of co-optation and greenwashing because it can be absorbed into the rhetoric of industrial agriculture without changing behaviours, e.g. chemical companies relabelling themselves as ‘regenerative’ to market and perpetuate chemical use. Accusations that RA is being used for greenwashing are most often directed towards adherents to this discourse.

**Table 3** Discursive contributions to RA

Discourse overview	Genealogy/holistic approach	Equity and power	Definition	Departure
<i>Restoration for Profit</i> : RA is restoring soil health to increase productivity and profitability, whilst also reversing climate change	Conservation agriculture, no-till and carbon farming; atomistic/reductionist science; global North	Regenerative practices can be layered over the current agricultural system; does not address issues of equity and power	Outcomes and process-based; broadacre focus	Uses greener practices to build soil carbon and increase productivity/profitability; has a mild critique of the status-quo
<i>Big Picture Holism</i> : RA is looking at how everything is connected on the farm to make good management decisions and enhance quality of life	Holistic/adaptive management; Savory/Smuts approach to holism; global North	Focuses on quality of life and the social wellbeing of the individual; does not address structural issues of equity and power	Outcomes based; broadacre focus	Emphasises holistic context and using tools towards that end. Unconcerned with what those tools are
<i>Regenerative Organic</i> : RA is building on the tenets of organic agriculture to regenerate soil health, animal welfare and social fairness	Organics; farm viewed as organism; global North	Includes issues of social fairness, focussing on keeping farmers accountable to fair work standards	Process-based; small and broadacre focus	Science predominant form of knowledge. Uses holistic rhetoric to emphasise soil health, animal welfare and social fairness; staunchly against chemical inputs
<i>Regrarian Permaculture</i> : RA is an approach to designing integrated farm systems that regenerate the land	Permaculture, keyline design and holistic management; systems thinking/pattern understanding approach to holism; global North	Influenced by permaculture ethics (e.g. people care); however, Regrarians do not have an ethical framework, prefer to let individuals make their own ethical decisions	Outcomes based (guided by permaculture principles); broadacre focus (with small-scale genealogical influence)	Permaculture influence means adherents recognise that agriculture needs systems change; however, predominantly focussed on broadacre land planning
<i>Regenerative Cultures</i> : RA is a spiritually rich and emotionally fulfilling practice at the heart of regenerative, place-based cultures	Regenerative development and design; holarchic/nested and living systems approach to holism; global North	Focussed on addressing issues of equity and power particularly beyond the farm-gate	Has a focus on systems change as opposed to reductive definitions	Pluralism is a prominent focus of the discourse; it is connected to the broader 'regeneration' movement. Moves beyond the farm-gate to challenge supply chain issues
<i>Deep Holism</i> : RA is a pathway for empathising with and experiencing ecosystems as inseparable from yourself	Deep ecology/ecosophy; Goethe/Bortoft approach to holism; global North	Issues of equity and power are a symptom of the root problem, which is a lack of ecological identity	Less focussed on production outcomes and processes. Is concerned with non-quantifiable aspects of an ecological mindset	Re-connects with relational ontologies in Western philosophy. Shares similarities with First Nations discourse (e.g. ecological identity) but does not explicitly advocate decolonisation
<i>First Nations</i> : RA is a new name for practices that First Nations people have been doing for tens of thousands of years	Indigenous foodways and worldviews (including traditional practices such as agroforestry, inter-cropping, and polycultures); kincentric approaches to holism; global North (settler colonial states) and South	Challenges RA to not just repackage practices from Indigenous cultures but also recognise their deeper worldviews	Reducing RA to an outcomes or process-based definition alone is colonial and overlooks relational ontologies	RA is a stepping-stone between Western and Indigenous ontologies because First Nations ways of being and living are so far beyond what Western colonial spaces can perceive
<i>Agroecology and Food Sovereignty</i> : RA is about regenerating communities and having people democratically involved in the food system	Agroecology and food Sovereignty movements; worldviews of traditional, peasant, Indigenous and small-scale farmers; originating in the global South	Has a specific theory of change around food sovereignty that challenges corporate power and advocates for democratic participation in food systems	Principles based; relies on food sovereignty definition for decision-making; small-scale focus	Complete food system transformation; removing corporate power and giving communities more ownership in local food systems; creates opportunities for horizontal knowledge sharing

**Table 3** (continued)

Discourse overview	Genealogy/holistic approach	Equity and power	Definition	Departure
<p><i>Subtle Energies</i>: RA is a practice that works with the invisible or non-material dimensions of farming systems to connect with the intelligence of nature and restore energy imbalances</p>	<p>Subtle Energies (using intuition, dowling, kinesiology) and European animistic traditions; linked to Steiner, Goethe and biodynamics; quantum approach to holism; global North</p>	<p>Not directly concerned with issues of equity and power; focussed on non-material dimensions of farming systems</p>	<p>Process-based; Subtle Energies considered ‘tool’ to achieve outcomes in Restoration for Profit and Big Picture Holism; small and broadcastre focus</p>	<p>This is one of the most marginalised discourses; the status-quo would consider it ‘mystical’ or ‘esoteric’</p>

### Big Picture Holism

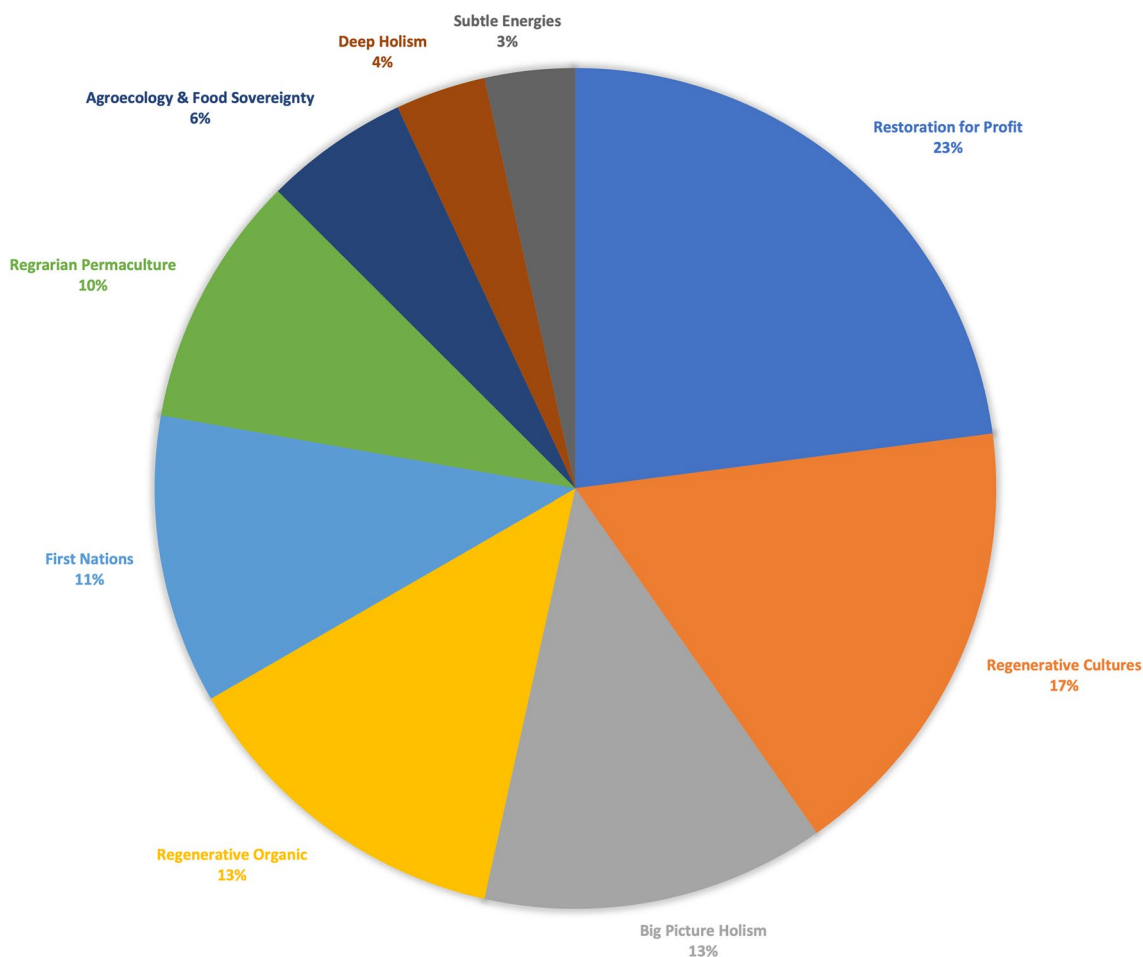
This discourse is typified by holistic management, which is a decision-making framework used predominantly by regenerative graziers and developed by Savory and Butterfield (2016). 19/96 organisations included in this analysis contributed to Big Picture Holism (see Fig. 2). The holism of Smuts (1973) is core to this discourse and finds form in the Savory and Butterfield (2016) holistic decision-making framework. Participant 12 said, “when it comes to complex dynamics, like the social and environmental, we’re trying to simplify things by focussing on one thing at a time. As soon as you do that, you lose sight of the *big picture*. Holistic management gets you to look and see that everything is connected. All living things: environment, soils, the business.” This is a ‘big picture’ approach to holism that goes “away from the part to get an overview” (Bortoft 1996, p. 25).

The social wellbeing of the farmer is integral for discourse adherents, which hope to move “farmers away from just looking at production, production, production. It’s about the environment, and it’s about people” (participant 12). However, this manifests on an individual level; the rhetoric does not generally extend to broader issues of equity and power. Instead, it is about getting people to understand those “feelings and values that *they* hold” (participant 12). To do this, adherents create a ‘holistic context’ (Savory 2012). This is a personal vision that considers the ‘big picture’ and is based on the feelings and values of adherents.

A farmer’s holistic context is the ultimate outcome in this discourse. The Savory Institute’s ‘Land to Market Ecological Outcomes Verification System’ is an outcomes based program for ecological monitoring that requires a positive trend line for ecosystem improvements. Adherents to this discourse prioritise outcomes and are willing to use diverse ‘tools’ to get there. E.g. “there’s a need to be careful about how we use tillage, but it’s a tool like anything else. Fertiliser is a tool. All these things are tools. It’s the misuse of tools that get us into trouble, not the tool itself” (participant 5). Adherents to this discourse think about which tools are going to work best for them in the pursuit of their holistic context. Participant 12 said, “the processes that people are coming up with, they’re all fantastic. There’s no good or bad, even chemicals—they’re not good or bad. It’s how we use them, how we manage them. And we can’t manage without context. If we just focus on processes, we will fail.”

### Regenerative Organic

This discourse extends the tenets of organic agriculture, e.g. cover cropping, crop rotation and composting (Rodale 2019). It uses these as a foundation and expands to include practices that actively regenerate soils, and address issues of social fairness and animal welfare. 19/96 organisations



**Fig. 2** Discourses contributing to RA

included in this analysis contributed to Regenerative Organic (see Fig. 2). Participant 15 said, “organic isn’t enough—you don’t have to plant cover crops to be organic. But you have to plant cover crops to be regenerative. You don’t have to graze animals to be organic, but you have to graze them if you want to regenerate the soil.”

This discourse is promoted by the Regenerative Organic Alliance and its Regenerative Organic Certification (ROC), supported by the Rodale Institute and Patagonia. In this discourse, the term *regenerative* was coined by Robert Rodale, whom with his daughter Maria articulated the *seven tendencies towards regeneration* (Rodale and Rodale 1989). RA has come to be clearly defined through the ROC and “applies specifically to measures of soil health, animal welfare and social fairness” (Rodale 2019).

Adherents to this discourse do not use chemical or synthetic inputs; participant 16 said this was a universal principle, “if we get chemicals out of the system, we free up the soil’s innate ability to improve and regenerate itself.” Social fairness is also an important part of the discourse, which seeks “fair payments and living wages for farmers

and farmworkers, safe working conditions, capacity building and freedom of association” (Rodale 2019). As reflected in the ROC standard, this discourse is process-based: “you can build a standard based on outcomes; but the reality is, you have then built a standard on cheating” (participant 15). They said, “one of the by-products of old coal mines is coal dust. It contaminates waterways, clogs fish’s gills and all sorts of things; it’s a pollutant. But if I take coal dust, and I spread it on my land, I can change my carbon tremendously, while I’m actually polluting the soil.” Discourse adherents disagree with outcomes based verification standards like the Savory Institute’s Land to Market: “we don’t think it’s enough. They don’t talk about chemicals in the system, and they don’t talk about social justice. We think you need more of a complete package if you truly want to say you’re regenerative” (participant 15).

Participant 16 said, “all these big companies have started to pick up the word regenerative agriculture to market themselves. If everyone is using the word, and everyone is defining the word differently, then it’s becoming meaningless. That’s why the Rodale Institute works very hard to promote



the idea of *regenerative organic*.” This discourse differentiates itself from the ambiguity of RA. This differentiation is discursively critical, “is it regenerative agriculture or regenerative organic agriculture?” (participant 14). The rise of this discourse coincided with *Organic 3.0* (Leu 2020), which envisions organics moving back towards its founding principles (Arbenz et al. 2017).

## Regrarian Permaculture

This discourse introduces the systems thinking and design principles of permaculture (Holmgren 2007) to broadacre farming. 14/96 organisations included in this analysis contributed to Regrarian Permaculture (see Fig. 2). As participant 10 remarked, “permaculture is particularly good on kitchen gardens, orchards, food forests; it is very weak on agriculture.” The discourse is championed by the *Regrarians* (Doherty and Jeeves 2016; Regrarians 2021), which is a neologism of ‘regenerative agrarian’ (Regrarians 2021). The Regrarians are a consultancy and farmer network that introduced permaculture to broadacre farming by integrating it with holistic management and keyline design (Soloviev 2019).

The integration of holistic management and permaculture is unique to adherents of this discourse; typically, these approaches operate on different scales. However, participant 11 said, “holistic management is really strong on developing a holistic context, really strong on grazing planning, shit on land planning though. Permaculture is quite good on land planning, good on its principal set; but pretty bad when it comes to broadacre stuff.” As such, farmers can have the benefit of permaculture’s land planning combined with holistic management’s broadacre (and particularly grazing) expertise. Whilst this discourse also uses the holistic context, similarly to Big Picture Holism, its understanding of holism predominantly comes from systems thinking.

The work of the Regrarians is outcomes based, with clear regenerative outcomes listed on their website (Regrarians 2021). Participant 11 emphasised that the Regrarian approach was akin to the Savory Institute, “looking more at outcomes—have I increased landscape function, ecological value, biodiversity?” They remarked that RA “is sort of like permaculture; it’s a goal.” Participant 10 also took an outcome-based approach saying, “I see everything in terms of restoration—restoring the things that make life possible: air, water, soil, biodiversity.”

Participant 11 said the Regrarians have not adopted permaculture’s ethics because people can bring their own ethics to the work. Nonetheless, these ethics were referenced by other participants. Participant 9 felt that using permaculture without the ethics subverted the core intent of permaculture. They said, “if we don’t have ‘people care’ in this system, is it truly regenerative?” There is a tension in this discourse

between the ideology of permaculture and the practicality of Regrarian Permaculture. Participant 10 summed this up neatly with the question: “are we just regenerating the land or are we regenerating agriculture?” Adherents to Regrarian Permaculture are focussed on land regeneration and do not typically address issues beyond the farm-gate.

## Regenerative Cultures

This discourse moves beyond the farm-gate to challenge supply chain issues and has emerged predominantly from regenerative development: a practice that seeks to align human activities with the continuing evolution of living systems (Benne and Mang 2015; Haggard and Mang 2016; Mang and Reed 2012; Muller 2020). 25/96 organisations included in this analysis contributed to Regenerative Cultures (see Fig. 2). The consultancy Terra Genesis has been fundamental in bringing this approach into an agricultural context (Soloviev and Landua 2016).

Unlike others, this discourse is closely aligned with the rhetoric of the broader regeneration movement—epitomised in Hawken (2021). It has had a lot of interest from multinational non-government organisations, such as the World Wildlife Fund (WWF 2022). RA is considered a pathway for shifting towards a “culture of regeneration” (participant 9). Adherents to this discourse believe that “deeply regenerative agriculture can exist only if it is completely interwoven into a thriving regenerative culture” (Soloviev and Landua 2016, p. 13).

Participant 8 remarked, “we really love regenerative agriculture because of how it’s not only changing the practice of farming, but the practice of how we engage regeneratively in the economy and trade and radically shifting how power and land is viewed within the agricultural industry.” This discourse is not just talking about regenerating land, but shifting supply chains by creating *regenerative producer webs* (Soloviev and Landua 2016). These move the focus beyond “regenerative agriculture to regenerative culture. So, it has to be the growing of food, it has to be the relationships with the people on the farm, it has to be their relationship to the people who transport the food, it has to be the relationship to the people who sell the food. And if at any point that gets co-opted by capitalism, or colonisation, that’s not a regenerative system. It has regenerative parts, but it’s not regenerative” (participant 8).

Regenerative Cultures emerge from the context of bioregions (Wahl 2016) and include “songs, stories, myths, rituals, foods, ceremonies and music that transform agriculture from a functional economic activity to a spiritually rich and emotionally fulfilling central heart of an agricultural community” (Soloviev and Landua 2016, p. 14). The transformation of the supply chain is critical to this. Participant 8 posed the question “what does it take to have regenerative

consumers? Once we've gotten to that point, we really start to step into the space of an actual regenerative food system culture.”

Working regeneratively requires discerning the potential of a place, based on its essence (Mang and Reed 2012). This is “the true nature or distinct character that makes something what it is” (Haggard and Mang 2016, p. 48). Such work often involves addressing the colonialism, extraction and degradation experienced by First Nations people. As Brewer (2019, p. 4) says, “to learn about regeneration of landscapes is to find atonement for the loss ... a great Truth-and-Reconciliation is needed in each little piece of land.”

## Deep Holism

This discourse emerges from deep ecology (Naess 1988, 1989). 5/96 organisations included in this analysis contributed to Deep Holism (see Fig. 2). *Deep* refers to an embedded way of experiencing nature, compared to a flat experience that observes nature from the outside (Valera 2018). It also refers to the view of holism as outlined by Bortoft (1996) and Goethean Science (Wahl 2005), which goes deep into the parts to see the whole, rather than looking at the ‘big picture.’ Bortoft (1996, p. 22) explains that “the universal is seen within the particular, so that the particular instance is seen as a living manifestation of the universal.” Adherents believe Big Picture Holism uses analytical consciousness to see all the parts together—viewing the *totality* but not the *whole* (Cochrane 2019).

Discourse adherents participate in a broadening or widening of personal identity, which invites the ecological community into a person's sense of self. As such, “the self to be realised extends further and further beyond the separate ego and includes more and more of the phenomenal world” (Naess 1988). As participant 17 said, “ecological identity is the experience that the social identity that we've all grown up to identify with is merely the flimsiest film on top of our larger identity, which stretches back to the beginning of everything, and relates us to everything.” This is called the *ecological self* (Naess 1988).

Participant 7 referred to ecological identity as “an indivisible connection with your whole environment, which is cognitive, it's emotional, it's deep psychological, it's probably stuff we're not even aware of; it's in our ancient brain.” He adds that it is “not just a paradigm; it's a complex, social-environmental interaction that's like a universe.” This opens adherents up to the idea of Gaia, that earth is a self-regulating system made up of the interactions between organisms and their inorganic environments (Lovelock 2016). Participant 19 said that spirituality and ecological practice should be combined and that this is the “real issue for integrating ecology with self.” Participant 2 felt connected to their

environment through deep time saying, “the piece of corn I can see in the distance, that's a living organism and so am I, so we have a connection in history.”

This perspective is supported by the use of second person pronouns (you, your, yours, yourself/yourselves) to connect with nature. The second person perspective creates “the capacity to have an I/thou or ‘we’ relationship with someone or something” (Cochrane 2021, p. 113). In this discourse, there is no completely isolatable ‘I’ and adherents experience themselves as a genuine part of all life—the ‘thou’ (Valera 2018). If people can “express their second person relationship with the world ... it strengthens the bond between them and the environment, rather than looking at something, they're actually taking that something inside themselves and putting it into their imagination” (participant 2). This differs from the dominant I/it attitude towards nature (Buber 1970; Kramer and Gawlick 2003). Despite similarities with First Nations perspectives, this discourse does not necessarily prioritise decolonisation processes.

## First Nations

First Nations people have been practising *regenerative* forms of land custodianship for tens of thousands of years (Ahmed et al. 2021; Hawken 2021). 16/96 organisations included in this analysis contributed to First Nations discourse (see Fig. 2). This history has gone predominantly unrecognised in RA because all the discourses presented thus far have an ethnocentric bias, originating in the colonial global North. However, First Nations people challenge RA to not just repackage practices from their cultures but also recognise their deeper worldviews: “inspiring a consciousness shift that hopefully will support us to go from a dominant culture of supremacy and domination to one founded on reciprocity, respect, and interrelations with all beings” (Angarova et al. 2020).

First Nations people view themselves as relations in an extended ecological family: “the whole of the universe is family to Aboriginal people. I practice that every day, it's fundamental to who I am. My relationship with the earth is as if she were a family member and I'm enjoying her wisdom but bending my back for her care” (participant 6). Unlike English, First Nations languages structurally support relational ontologies. E.g. in English 30% of the words are verbs, whereas for Potawatomi, the proportion is 70% (Kimmerer 2013). In Potawatomi a bay, or a day, a hill or a colour—these can all be understood as verbs, instead of nouns. This animates the world—if a bay is a *doing* word, rather than an inanimate *thing*, it is imbued with livingness. Yunkaporta (2019) writes in the dual first person, which he translates as *us-two*, as such expanding the first person to take in another—similarly to Deep Holism. Kimmerer (2013) critiques the lack of pronouns for non-human beings

in English. She proposes the pronoun *ki* (or *kin*), inspired by *Bemaadiziiaaki*, the Anishinaabe word for ‘beings of the living Earth’ (Kimmerer 2015).

More-than-human kinship is an important aspect of First Nations discourse (participant 22) and is embedded in cultural practices (Salmon 2000). As participant 6 demonstrated, “I do a greeting to the sun every morning and it reminds me of, not just who I am, but what my responsibilities are. And if you do that every day, you start the day reminding yourself that you are responsible for the dignity of the earth.” Participant 9 referred to RA as a stepping-stone between Western and Indigenous ontologies: “when we come from this anthropocentric, Western colonial view, we need stepping-stones because First Nations ways of being and living are so, so far beyond what Western colonial spaces can really perceive.” If we look at how far each discourse is departing from the status-quo, we see a scale that moves between two different ontological perspectives. RA “is part of an iteration of where we need to go, it’s not fully formed in the fact that it can’t be fully formed” (participant 8).

### Agroecology and Food Sovereignty

Agroecology has a unique influence on RA because of its connection with the global South (Rivera Ferre 2018) where peasant farmers challenged industrial agriculture and the Green Revolution (Catacora-Vargas et al. 2017). 8/96 organisations included in this analysis contributed to Agroecology and Food Sovereignty (see Fig. 2). Despite their similarities, agroecology is critical of RA for being apolitical (Tittonell et al. 2022). Jonas (2021, p. 7) remarks that RA “has not developed a theory of change for an economic or social transformation and is growing a new generation of ‘experts’ and gurus who profit from teaching the ‘how’ rather than the ‘what’ or ‘why.’” This leaves RA open to “corporate capture” (Jonas 2021, p. 1).

As such, this discourse has a specific theory of change and political structure around food sovereignty (IPC 2015), which directly challenges the dominance of corporate power in the food system (Chaifetz and Jagger 2014). This is why agroecology resisted co-optation by agri-food companies when it was endorsed by the Food and Agriculture Organisation (de Molina et al. 2019). Participant 4 remarked that, “because I think more into the agroecology space too, regenerative agriculture is about regenerating communities and democratic participation in the food system. A regenerative food system would have people deeply and democratically involved in it.” Democratic participation through frameworks such as *Community Supported Agriculture* is what prevents the corporatisation of agroecology.

Soul Fire Farm has particularly influenced RA by challenging food apartheid and the structural injustice of white,

industrially produced food (Hughes et al. 2020; Penniman 2018; Soul-Fire-Farm 2018). This is “an Afro-Indigenous centred community farm committed to uprooting racism and seeding sovereignty in the food system” (Soul-Fire-Farm 2022). African American communities have had a rich agricultural history, which influenced the emergence of RA through George Washington Carver (Hawken 2021; White 2018). These communities focussed on developing democratic, collective and collaborative models to create self-sufficiency during a time when they were denied voting rights (White 2018). Growing food became an act of resistance in this way (White 2018). Some regenerative farmers in the USA showed solidarity with the Black Lives Matter protests, emphasising that, “agriculture cannot be regenerative without racial equity” (Quivira-Coalition 2021).

### Subtle Energies

This discourse recognises an invisible or non-material dimension in farming systems (Wright 2021). Wright (2021, p. xxix) explains this as “involving vibrational energy, consciousness, ether, sentience/intelligence and/or electromagnetic or sound waves/frequencies.” 5/96 organisations included in this analysis contributed to Subtle Energies (see Fig. 2). There is a lineage of animism in this discourse, a belief that “the natural world is ‘inspired’—that is, inhabited by nature spirits” (Massy 2021, p. 306). Participant 14 said, “I’ve had conversations with plants and animals in my journeys that lead me to believe that everything is conscious, even the rocks are conscious.” It was not until participant 14 started studying shamanism that they understood how nature was trying to communicate with them.

This discourse conflates Subtle Energies with quantum physics to explain RA. Participant 5 said, “the subtle energy and the quantum physics side of agriculture is one of the large areas that will expand and is expanding now. In my experience regen ag doesn’t work well if it doesn’t have the subtle energy side of it.” Subtle Energies focus on the “frequencies which cannot be measured by conventional instrumentation but which can affect organisms at a cellular level” (RCS 2021, p. para 7). Adherents use intuition, dowsing and kinesiology to connect with the “intelligence of nature” (MacManaway 2020, p. 2) and correct energy imbalances. Participant 5 said, “quantum agriculture is the new one coming.”

Quantum agriculture draws on the biodynamic work of Lovel (2015). Biodynamics is based on Steiner (1993, 2005) and “works with the planets and the cosmic forces of the constellations as a scientific process” (participant 13). For participant 13, “biodynamics is part of the regen ag movement.” Quantum agriculture goes beyond biodynamics and practices an intuitive farming, where “a message is received from another organism, intuition arises within the human

body, particularly the heart, arising as a ‘knowing’ without knowing how one knows” (Wright et al. 2017, p. 109). The quantum perspective is used to explain such phenomena because “there’s no separation; everything is joined, linked, the same. When you’re looking at regeneration, you’ve got to do it from that perspective” (participant 5).

Quantum Leap workshops hosted by Resource Consulting Services suggest that “sunlight and rainfall are natural and free assets in your production system to be managed and profited from. With the right knowledge and techniques quantum physics is another natural and free asset from which your business can benefit” (MacManaway 2020, p. 2). As such, quantum physics/subtle energy is an asset that can improve profitability, which plays into the rhetoric of Restoration for Profit. Some regenerative farmers avoid mentioning Subtle Energies for fear the discourse will seem unscientific and undermine the RA movement (participant 3).

Table 3 gives an overview of the nine discourses and their positionality regarding the four tensions. Figure 2 shows the number of organisations in this study contributing to each discourse.

## Discussion

The findings explicitly address the first two research questions by exploring the tensions and discourses contributing to the emerging discourse of RA. This discussion aims to position these findings in the literature by exploring the third question: what shared storyline for transformation might the discourse coalition form around?

### RA as a potentially transformative storyline

Loring (2022c) introduces four archetypal food system regimes reflecting different storylines around which discourses can organise. *Degenerative* systems eat down diverse resources; *regenerative* systems sustain diverse resources; *impoverished* systems have little to no resources; and *coerced* systems maintain a few highly valued resources. Widespread participation in RA as opposed to systems that are degenerative, impoverished or coerced requires bringing people into the discourse without compromising it to the extent that others leave (Hajer 1993). This means looking for common ground across the nine discourses (Gordon et al. 2022) and finding shared storylines that enable transformations.

As is demonstrated by the four tensions and the lack of a shared definition (Newton et al. 2020), the meaning of RA is ill-structured, vague and malleable. This is because the nine discourses influencing RA have interacted and co-created a storyline that has interpretive flexibility. As Gordon et al. (2022, p. 11) say, “there is enough common ground in

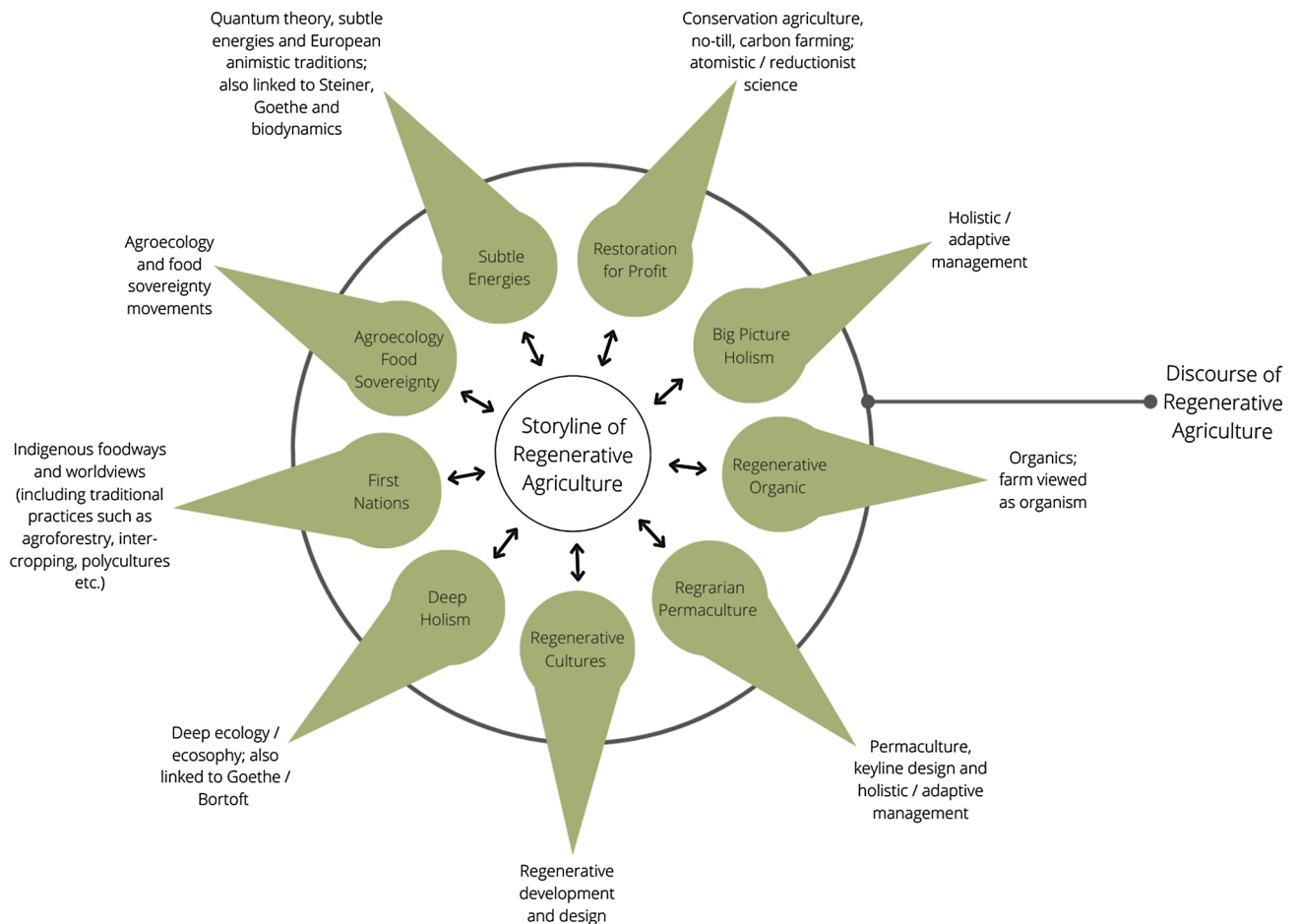
regenerative agriculture to feel included in the community, but also enough space for interpreting it in your own way.” This is an essential trait for a discourse coalition approach, which assumes that “the political power of a text ... comes from its multi-interpretability” (Hajer 1995, p. 61). The diversity of these discourses speaks directly to the multi-interpretability of RA as a storyline.

The RA storyline broadly goes *let’s work with nature to restore, revive and renew our environments*. Since it has multi-interpretability, this storyline shape-shifts and expands depending on the discursive lens. The reasons for regenerating could be desertification (Big Picture Holism), climate change and better productivity (Restoration for Profit) or ecological identity (Deep Holism). It may mean no chemicals (Regenerative Organic) or working with energy imbalances (Subtle Energies). Regenerating social and cultural environments might be a priority (Agroecology and Food Sovereignty, First Nations, Regenerative Cultures); for others, it is ecological regeneration (Restoration for Profit; Regrarian Permaculture). This storyline is sometimes imbued with a holistic (Deep Holism, Big Picture Holism) or systems thinking perspective (Regrarian Permaculture). In other cases, it is not (Restoration for Profit). As is evident across the discourses, people are not necessarily talking about the same thing when drawing on this storyline.

However, the discourse coalition obscures disagreements and creates “the appearance of discursive unity, as if everyone were talking about the same thing” (Edenborg 2021, p. 2). This means that consensus on the meaning of RA is not required for coordinated action because individuals can act together whilst retaining their own interpretations (Gordon et al. 2022). In this way, RA bridges conflicting perspectives, which is a powerful “starting point for political action” (Edenborg 2021, p. 2). Whilst this creates opportunities for widespread participation in RA, it is also an invitation to more powerful actors—such as multi-national corporations—to try and shape the storyline in ways that suit their interests. This raises questions as to whether power dynamics and equity discourses are sidelined in ‘mainstream’ RA, thus sharpening the risk of transformations perpetuating the status-quo (Blythe et al. 2018).

### The risk of co-optation and greenwashing to the transformative potential of RA

Powerful actors can dilute the transformative potential of RA through co-optation and greenwashing (Giller et al. 2021). This dilution occurs because the more radical changes such as food democracy (Agroecology and Food Sovereignty); ecological identity (Deep Holism) or Indigenous sovereignty (First Nations) do not get taken up. These actors attain this discursive power by creating principles and/or definitions (Mills 2020) that overshadow the contributions of minority



**Fig. 3** RA discourse

discourses (First Nations, Deep Holism and Subtle Energies) or assimilate RA with the expectations of industrialism and productivism (Restoration for Profit). Tensions two, three and four reflect this process, which can lead to a splintering of the discourse coalition and a decline in the discursive power of RA amongst farmers.

For RA to achieve widespread participation, central actors in farming communities, corporations, supply chains and governments will need to be “persuaded by, or forced to accept, the rhetorical power of a new discourse” (Hajer 1993, p. 48). We will likely see increased *institutionalisation* where the ideas of the storyline are reflected in institutional practices (Hajer 1993). Zero Budget Natural Farming (ZBNF) in India similarly started as a grassroots movement that motivated its members through discourse and other means (Bharucha et al. 2020; Khadse et al. 2017). It became institutionalised when the state of Andhra Pradesh developed public policies to scale ZBNF. However, there remains concern that external funding for these policies may threaten the movement’s original value of autonomy from capital (Khadse and Rosset 2019).

Institutionalisation can easily privilege the quantifiable aspects of RA, e.g. definitions that reduce RA to processes (Regenerative Organic) or outcomes (Big Picture Holism). For RA to be transformative without being greenwashed or co-opted, institutions need to integrate diverse forms of knowledge (Seymour 2021); e.g. taking the non-quantifiable approaches of Deep Holism, First Nations and Subtle Energies seriously. Otherwise, the risk is that institutionalisation will be achieved by shedding the more transformative discursive elements. This would force some component discourses out of the coalition. To realise transformative potential, “we need institutions and discourses which are capable of learning” (Dryzek 2013, p. 234), e.g. via horizontal farmer-to-farmer exchanges (Anderson et al. 2019) that let them commune at the edges of their discourse and share dialogue.

The institutionalisation of ZBNF supported similar horizontal learning processes (Khadse and Rosset 2019). Fortunately, dialogic spaces are emerging between discourses in RA, e.g. communities of practice sharing standards for quality of work (IEA 2022). This is promising because as Dryzek (2013) demonstrates, other environmental discourses have impeded their own learning, particularly when

over-confident in the correctness of their interpretations. There are different opportunities for transformation through each discourse: e.g. Restoration for Profit is more accessible to conventional farmers; First Nations leads decolonisation processes. As such, the transformative potential of RA could be realised through its multi-interpretability. This makes coordinated action between very different actors possible and increases the chances of widespread participation in RA. Figure 3 visualises RA discourse and its contributors.

## Conclusion

This paper presented evidence that RA is an attempt to build a more encompassing discourse through an alliance of smaller discourses—a discourse coalition. We explored four tensions in RA (see Table 2) that were used as criteria for differentiating between nine discourses (see Table 3). RA is in part a storyline that is interpreted differently by these nine discourses. This multi-interpretability gives RA its transformative potential because it creates the appearance of discursive unity—that everyone is talking about the same thing. If the discourse coalition can remain intact, this makes coordinated action between very different actors possible and increases the chances of widespread participation in RA.

Future research can explore how high levels of discursive interest are translating into institutional change. This includes the relationship between discursive power and actors such as multi-national companies, not-for-profits and governments. It can also explore opportunities to create dialogue between the discourses, and what impact this has for transformation—in this way, the discursive model could function as a conceptual framework. The discourse coalition approach demonstrates that RA is full of nuance and allows researchers to hold that complexity without resorting to an over-simplified and restrictive definition.

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**Data availability** The datasets generated and analysed during the current study are available from the corresponding author on reasonable request.

## Declarations

**Conflict of interest** The authors declared that they have no conflict of interest.

**Ethical approval** Ethics approval was obtained for this study—UTS HREC REF NO. ETH22-7029.

**Consent to participate** Participants in the research signed a consent form and agreed to the conversation being published as part of this study.

**Consent for publication** Participants in the research signed a consent form and agreed to the conversation being published as part of this study.

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