

A landscape photograph of a rural field with a fence and trees under a cloudy sky. The image is split vertically. The left side is a faded version of the same scene, serving as a background for the text. The right side is the original, vibrant photograph. The scene shows a grassy field in the foreground, a wire fence, and a line of trees in the distance under a sky filled with large, white and grey clouds.

# How might transition to regenerative agriculture be increased, *by design*?

PhD Research – Design for Transition

Michelle Miller | UTS HREC REF NO. ETH18-2681

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Section 1.

# About my research





# Research overview

- The long-term viability of farming and the health of our soils is very close to my heart. In my research I have learned about the potential Regenerative Agriculture holds for the sustainability of agriculture, and so I am undertaking a project to **design for the uptake of Regenerative Agriculture in NSW** – primarily in grazing and mixed grazing-cropping operations.
- This approach is known as participatory action research. My objective is to enable more widespread uptake of forms of agriculture that result in regeneration. I am not attached to specific practices, but rather to a broader goal of agricultural sustainability.
- By designing for the uptake of Regenerative Agriculture, I seek to *contribute to the field of Transition Design*. Transition Design is an emerging field that applies design approaches to help society transition to more sustainable ways of living. Transition Design has not yet been used in agriculture, and so my research will contribute a case study for this application.





# Research Methods

The following qualitative, design-based and action research methods are being used when engaging participants:

- Semi-structured interviews
- Participatory small-group conversations and workshops
- Generative methods (that invite participant co-creation), visualisation and systems mapping
- Working groups supported by design consultation, e.g. in support of stakeholders taking up specific ideas and interventions (like an initiative or movement)
- Design ethnography – immersion in local context, culture and life, using photography and reflection to document

Additional theories, frameworks and practices will be layered in as needed.

These methods have their origins in diverse fields and together will form a transition design practice. Origins include:

- Qualitative methods, e.g. from sociological traditions in academia
- Action research, including participatory research
- Design research, e.g. from design practice
- Strategic design, dialogic design and social innovation practice
- Participatory, collaborative and transdisciplinary methods



# Participants

The research will likely include the following participants:

## **Farmers practicing Regen Ag**

Farmers who have been working with regenerative methods for a long time as well as those who are newer

## **Key influencers**

Educators, extension officers & consultants. Others TBD.

## **Farmers in transition**

Farmers who are actively in transition, curious about transition, interested but skeptical, or struggling to transition

The research is currently not intended for those who oppose regenerative methods.

# Who will benefit from this research?

The expected beneficiaries of this research are as follows:

## **Transition Design Practitioners**

Case study and methods for practice

## **Researchers**

Agricultural transitions – new knowledge and gaps

## **Farmers, educators, extension, consultants, government, & commercial businesses, etc.**

New insight into the relationships, capabilities, mindsets and interventions needed for transition

The research question:

**How might we increase  
transition to regenerative  
agriculture methods, *by  
design?***



Section 2.

# Scoping research findings



# Regenerative Agriculture is...

## **Agriculture that achieves production through regeneration.**

e.g. Regeneration is the basis of production. The two cannot be de-coupled. If production exists and regeneration does not exist (and vice-versa), it's not regenerative agriculture.

*It is characterised by a holistic approach. This includes building soil health, increasing biodiversity, capturing carbon, improving water and nutrient cycles and promoting ecosystem functionality*

Managing the five landscape functions

Stimulating & benefiting from nature's ability to regenerate

Working *with* nature







# Known benefits of Regenerative Agriculture

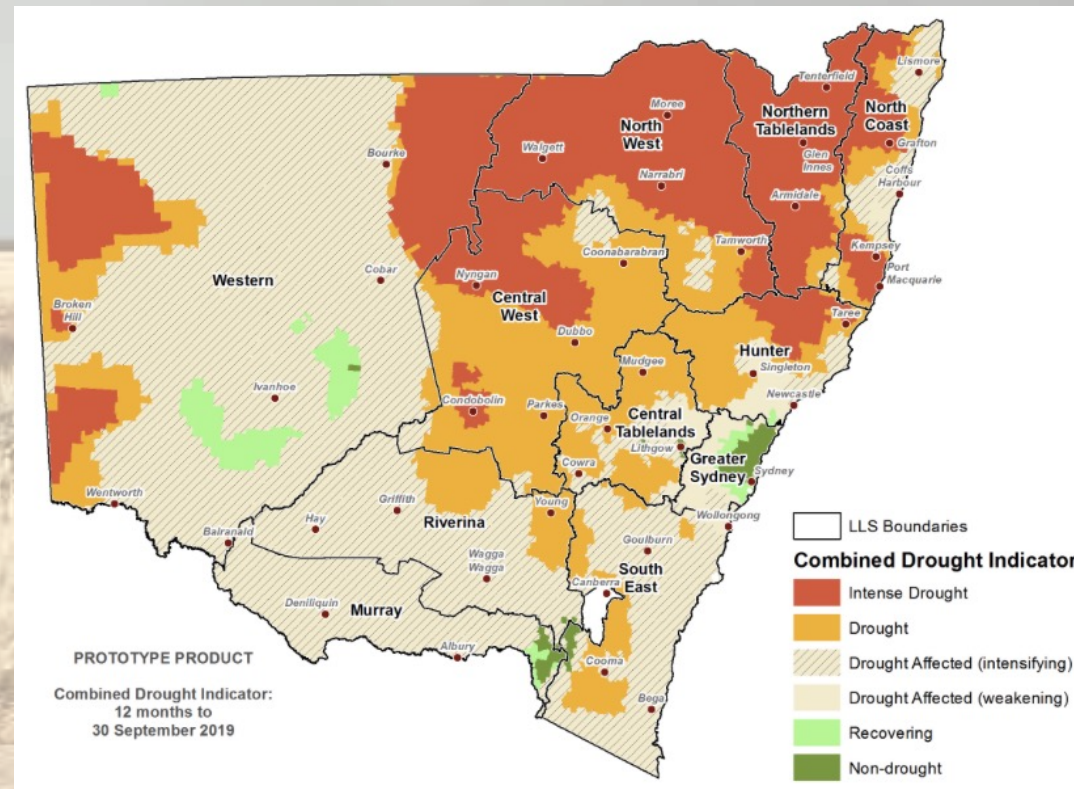
Regenerative agriculture achieves\* ...

- conservation
- quality yields
- profitable production
- climate resilience and
- improved farmer mental health
- with limited or no chemicals and
- within the carrying capacity of land

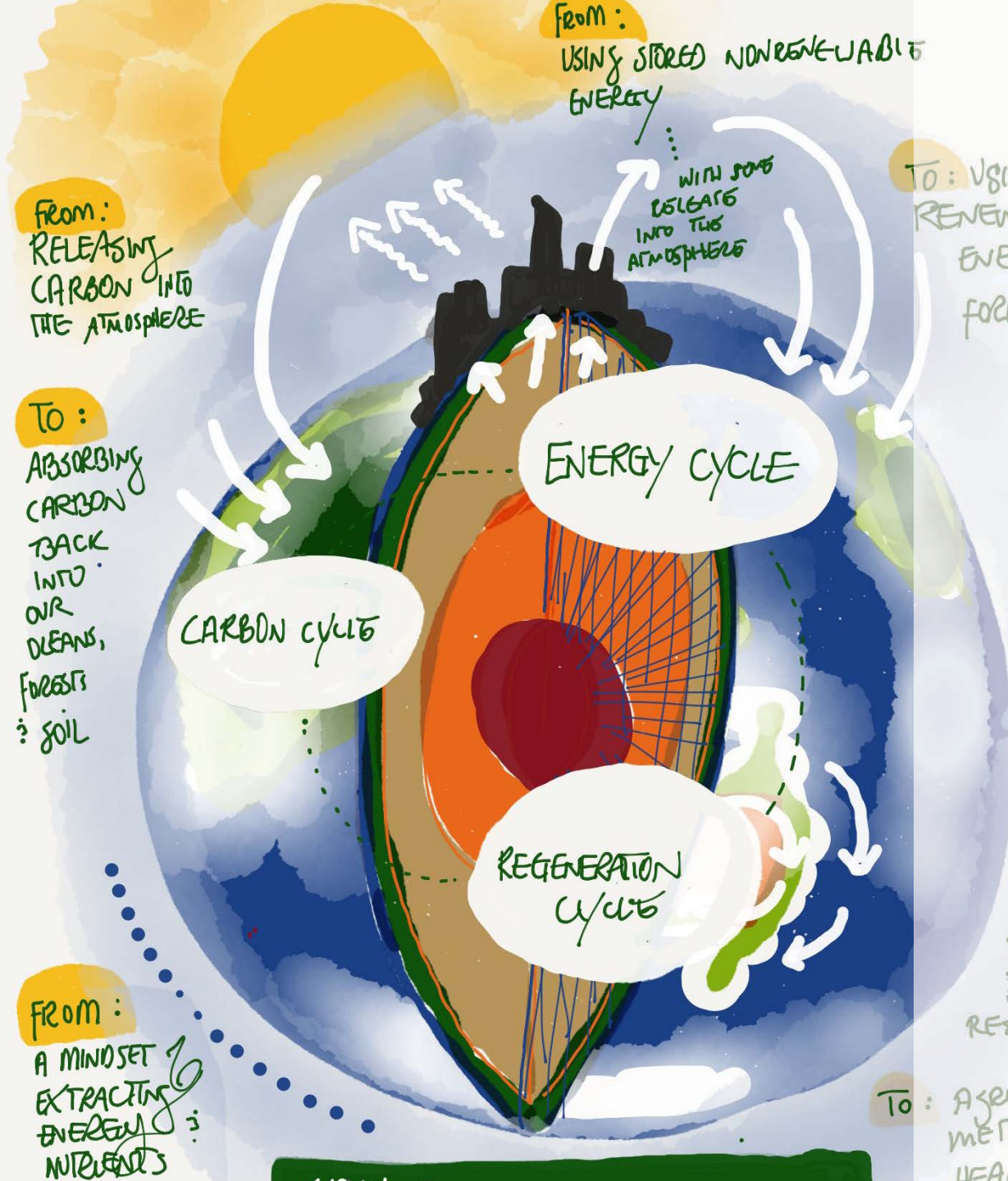
\*Ogilvy, S., Gardner, M., Mallawaarachichi, T., Schirmer, J., Brown, K., Heagney, E. 2018. *NESP-EP: Farm profitability and biodiversity project final report*. Canberra, Australia.



# Regenerative approaches improve drought resilience







# A significant opportunity through regenerative agriculture:

## Carbon sequestration at scale

One of biggest opportunities we have to reduce greenhouse gases in our atmosphere\*

TO: USING RENEWABLE ENERGY FORMS

FROM: AG. METHODS THAT DEGRADE THE SOIL & NATURAL RESOURCES

TO: AGRICULTURAL METHODS THAT HEAL + REGENERATE

\*Hawken, P. ed., 2017. *Drawdown: The most comprehensive plan ever proposed to reverse global warming*. Penguin.



# What participants are saying: Mindsets

Participants named key mindset shifts in transitioning to regenerative agriculture, including:

- Managing holistically
- Viewing soil as a primary asset to protect and grow
- Promoting landscape and ecosystem functions
- Working with complexity and increasing complexity; Increasing native species and biodiversity
- Seeing weeds as a sign of needs in the landscape
- Low or no inputs; Improving through biology rather than chemicals
- Treating rain as an opportunity, not an expectation
- Measuring quality, not just productivity
- Focusing on profit
- And...



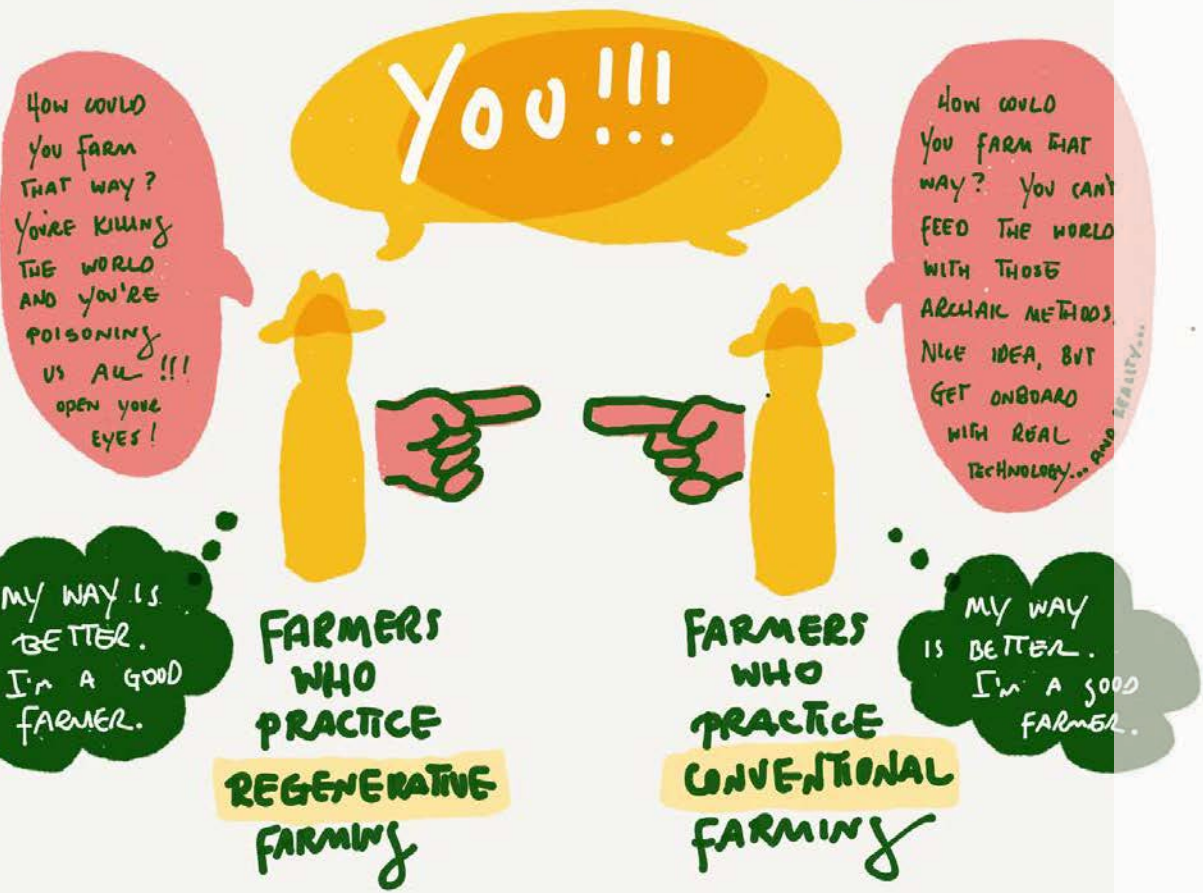
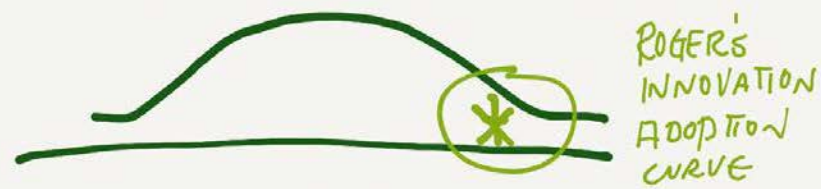
# The farmer's pride and joy

A paradigm shift in what is  
valued as success in farming





# Who is the LAGGARD?



## What participants are saying: Barriers

Despite the benefits, it is *understood* that the majority of farmers remain sceptical.

Farmers who are not convinced have been heard to say:

- "We have to feed the world"
- "Where's your data? Glyphosate is good science"
- "It won't work for me"
- "It's hard to go green when you're in the red"

Participants have observed the following barriers:

- Social pressure and the social unacceptability of regenerative agriculture
- The financial attraction of conventional farming
- Big money and big power: vested corporate interest and the power of chemical companies
- Farmer's identity and pride tied to the dominant way of farming
- Controlled trial methods unsuited to researching regenerative agriculture (e.g. methods that do not include ecological factors)
- Regenerative agriculture is not well understood or straightforward to adopt



# Top barriers for farmers wanting to transition

1. **Definition** – A common understanding regen ag
2. **Financials and planning** – How do you plan a transition? How will I afford it? Can I transition in phases?
3. **On farm choices** – How do I select and implement practices that work for me? Where do you begin? What are 'easy' things "anyone" can start with?
4. **Measurement** – How do I know how well I'm going?
5. **Supply chain** – A whole new ecosystem needs to exist around farmers for both inputs and outputs
6. **Succession** – What you do when family are not on board
7. **Social pressure** – Criticism from neighbours and peers



Section 3.

# Moving to action

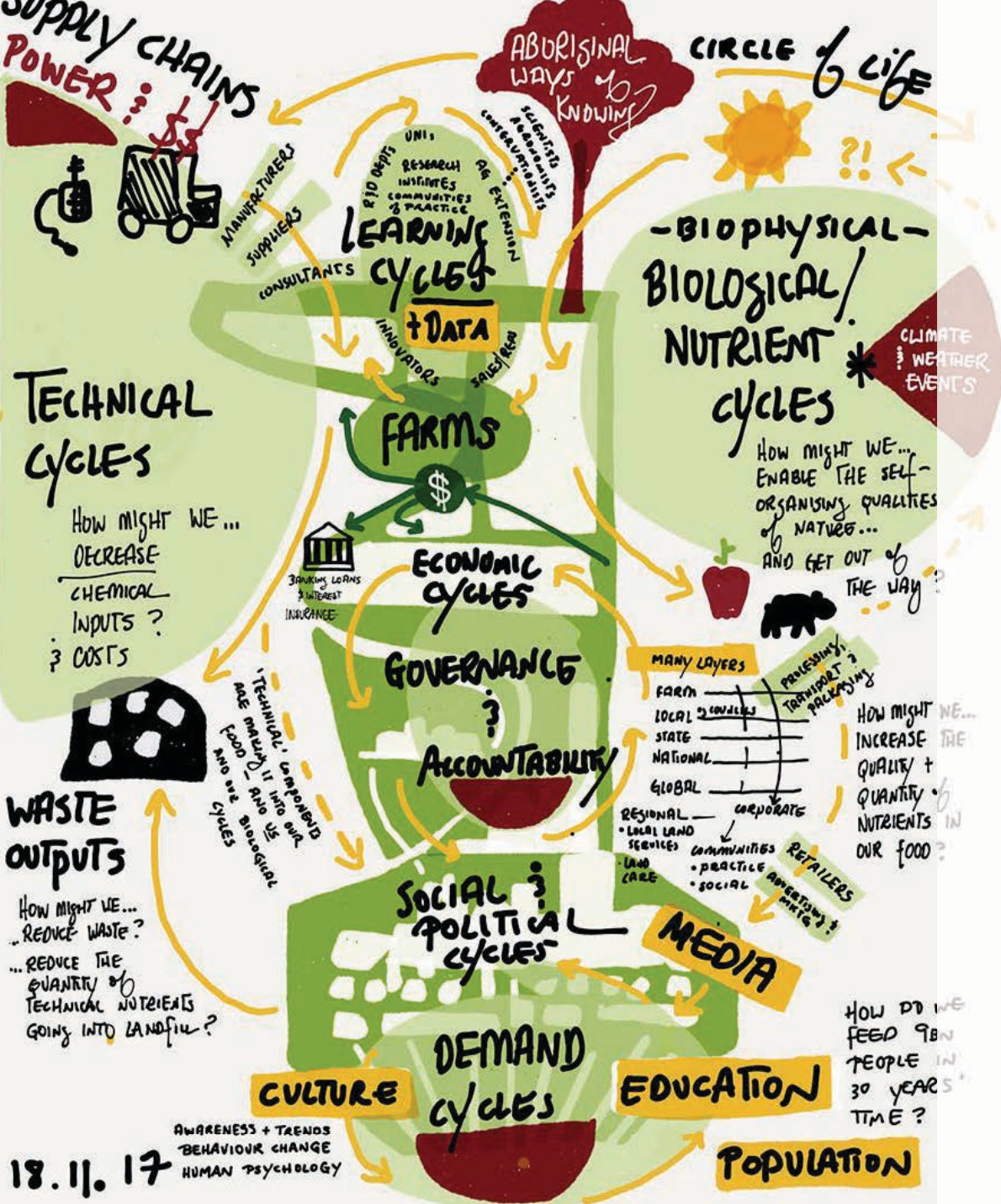




A photograph of a rural landscape in Western NSW, Australia, featuring a dirt road, a wire fence, and scattered trees under a clear blue sky. The foreground is a dirt road with a wire fence running across it. The background shows a flat, open landscape with scattered trees and a clear blue sky.

**So, how do we support farmers to transition?**





# What participants are saying: Opportunities

Participants named a number of opportunities to facilitate transition for individual farmers as well as across the 'system', including:

- Supporting farmers to transition: *how* to transition
- Developing shared framing, messages and vision for Regenerative Agriculture
- (Re)Designing education, extension, training and training facilities
- Linking farmers to mentoring, support groups and consultants
- Creating suitable supply chains, processing and markets
- Developing policy mechanisms, incentives and governance
- Promoting demand-side mechanisms to increase consumer demand – like bionutrient pricing and provenance
- Taking a 'strategic extension' approach to change through capacity building that is informed by psychology (e.g. Bates model)
- Creating opportunities for connection to land and learning from Aboriginal ways of knowing





**Thank you.**