

# The challenge of systemicity in organic research

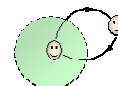
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This presentation is at <http://www.orgprints.org/archive/00000292>

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## Key points

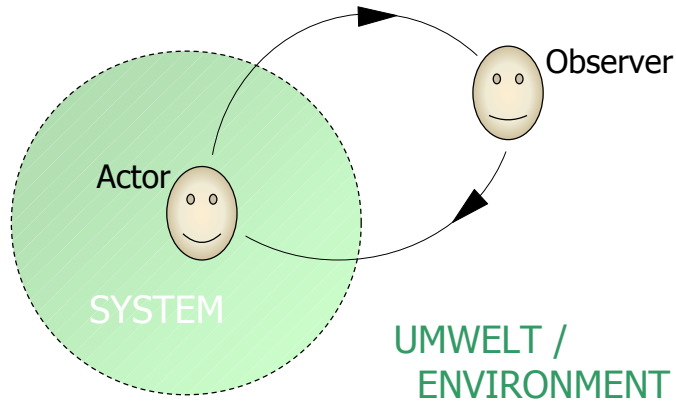
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- A systemic science is a science that influences its own subject area
- Research is an important actor in the development of organic agriculture
- In order to do good systemic research, science needs to be able to handle values

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# The self-reflexive learning cycle in systemic research

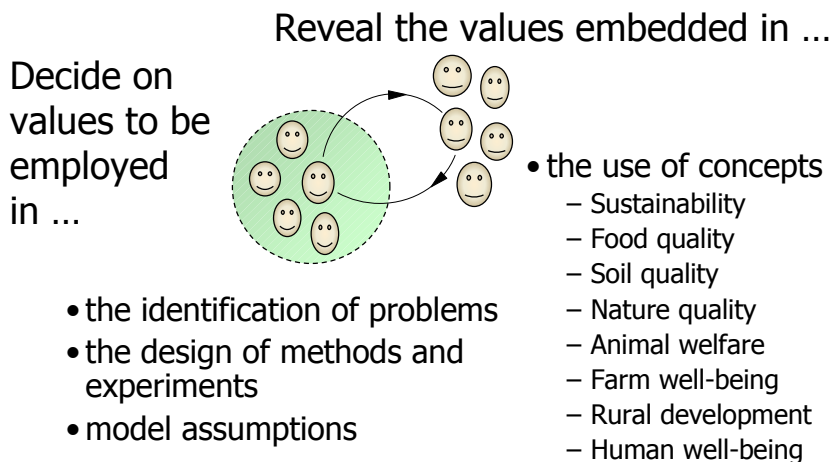


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See <http://www.orgprints.org/archive/00000005/>

## Communicating values



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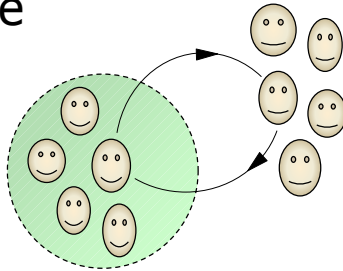
# Criteria for doing good science

## Relevance

Value inquiry

Participation

Transparency



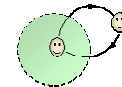
## Reflexive objectivity

Communicating the cognitive context:

- societal
- intentional
- Observational

Revealing ignorance and uncertainties

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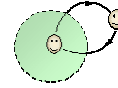


## Examples

- Knowledge syntheses
- Scenarios for an all-organic Denmark
- Normative principles for organic agriculture
- Criteria for evaluation of organic research
- Organic Eprints

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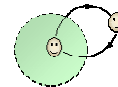


# Knowledge syntheses

Before initiating research projects - in areas where there is a lack of clarity of problems, concepts, etc.

- Nitrate leaching
- Health and welfare in milk production
- Nature quality
- Pig production
- Organic seed production
- Consequences of GMO production
- Energy use

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# Different views of nature quality

## Separative:

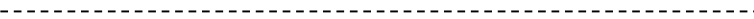
Man separate from nature

Controlled, ordered cultivated nature

*Culturist view of nature*

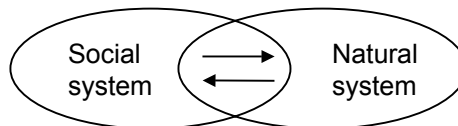
Wild, authentic, uncontrolled nature

*Naturalist view of nature*



## Systemic:

Human a part of nature

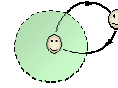


*Ecologist view of nature*

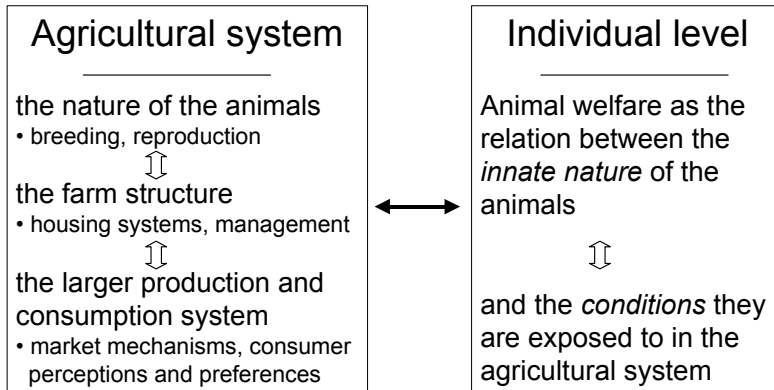
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See e.g. <http://www.orgprints.org/archive/00000010/>



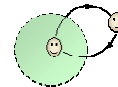
# A systems view of animal welfare



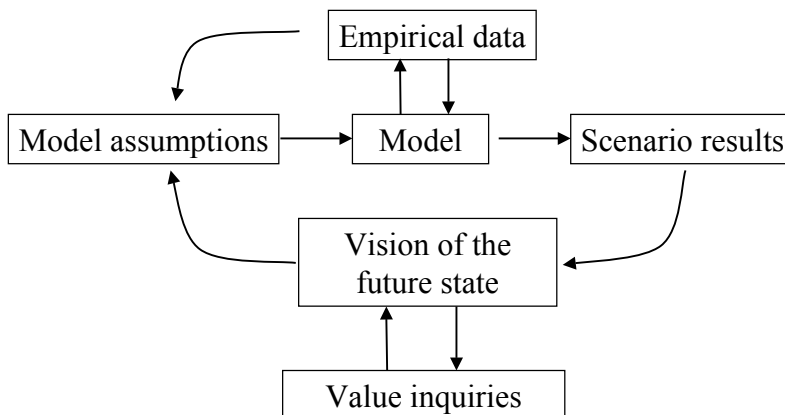
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See <http://alroe.dk/hugo/papers/orgwelfa.html>



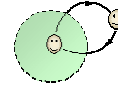
# All-organic scenarios for Denmark



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See <http://www.orgprints.org/archive/00000209>



## Three normative principles



Ecological principle

- Human integrated part of nature
- • Cooperation with nature
- Emulation of natural processes



Precautionary principle

- Scientific knowledge is limited
- • Stop unforeseeable technology
- Cleaner and safer technology



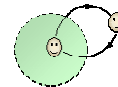
Nearness principle

- First hand experience important
- • Communicative experience
- Transparency and participation

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See also <http://www.darcof.dk/discuss/index.html>

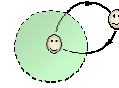


## Evaluation criteria for organic research

- Quality of research process  
(following and adjusting plans, cooperation, etc.)
- Number and quality of different research products  
(papers, public meetings, etc.)
- Reflexive objectivity  
(e.g. how context and values are handled)

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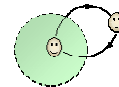
# Organic Eprints

Organic Eprints is an electronic, open access archive for papers related to organic agriculture.

<http://www.orgprints.org>

A discussion on context and values can take place by way of linking comments to papers.

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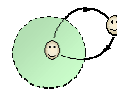
# Conclusion

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- Values and context should play a key role in systemic research
- Hence the criterion of reflexive objectivity
- Questions to research in organic farming:
  - Does it employ values that correspond with the spirit of the organic movement?
  - Should it always?

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## More information

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- My workpage -- [http:// www.alroe.dk/hugo](http://www.alroe.dk/hugo)
- DARCOF -- <http://www.darcof.dk>
- Organic Eprints -- <http://www.orgprints.org>

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