

# Science as an actor

On the role of values and science in organic farming

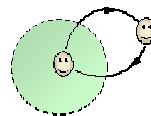
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([www.darcof.dk](http://www.darcof.dk))

*Presentation at UK Organic Research 2002, 27th  
March 2002*

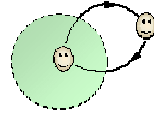


# Two key points

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- Science is an important actor in the development of organic agriculture
- In order to fulfil this role as an actor, science needs to be able to handle values





## What is a systems approach?

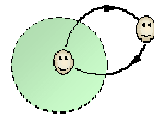
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Two perspectives:

### 1. Agriculture as a system

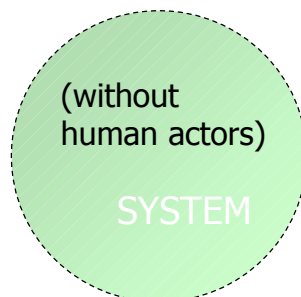
- Without human actors
- With human actors (often farmers)

### 2. Agricultural science as a system



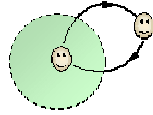
## Science as an observer of systems

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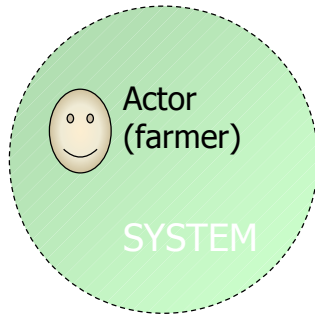


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## Observing actor systems

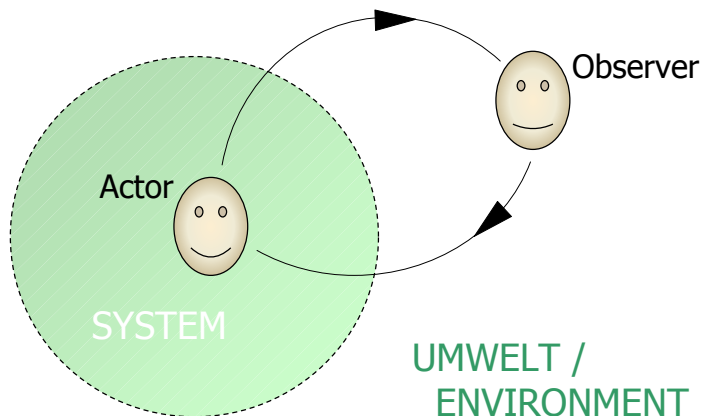


Observer  
(researcher)

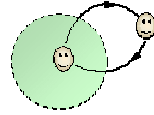
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## Science as actor and observer



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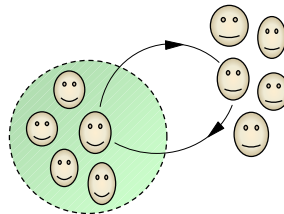
## Two groups of scientific activities

- Actor stance:
  - Engage
  - Interact
  - Experiment
  - Intervene
  - Communicate with other actors
- Observer stance:
  - Disengage
  - Observe
  - Abstract
  - Reflect
  - Communicate with other scientific observers



## Communicating values

Decide on values to be employed in ...



identification of problems  
design of methods and experiments  
model assumptions

Reveal the values embedded in ...

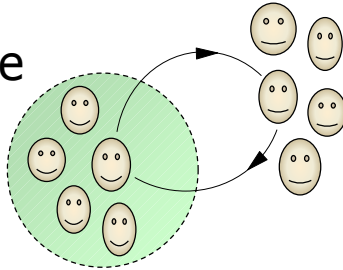
- use of concepts
  - Sustainability
  - Food quality
  - Soil quality
  - Nature quality
  - Animal welfare
  - Farm well-being
  - Rural development
  - Human well-being



# Criteria for doing good science

## Relevance

Value inquiry  
Participation  
Transparency



## Reflexive objectivity

Communicating the cognitive context

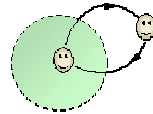
- societal
- intentional
- observational

Revealing ignorance and uncertainties

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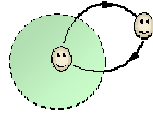
# Conclusions



- Values play a key role in 'a systems approach' to agricultural research
- Science is an actor in organic farming
  - Do we employ values that correspond with the spirit of the movement?
  - Should we always?

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## More information

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- [www.alroe.dk/hugo/](http://www.alroe.dk/hugo/)
  - Alrøe and Kristensen (2002) Towards a systemic research methodology in agriculture
  - and other related papers
- DARCOF ([www.foejo.dk](http://www.foejo.dk))
  - Biennial report 1999-2000

