

Culture of prediction

No explicit course content

How science works

Visions

Interaction with society and critical reflection

Scenarios and manipulation

Society and policy

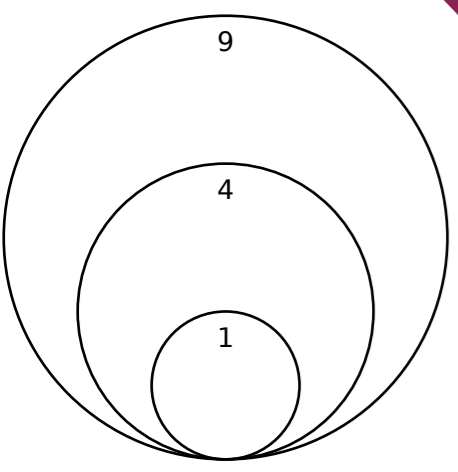
Human influence

Climate model developments

Modeling the climate system

Complexity and model problems

Uncertainty



Desire to predict is human  
We cannot see climate models' influences  
Power of predictions  
We try to use predictions to adapt actions  
We are in CoP  
CoP is part of everyday life  
CoP is a hypothesis  
Conflicts around modeling visions  
There are multiple modeling visions  
Different views lead to more diverse science  
Relation between computing power and certainty?  
Representation of future influences society  
Does CoP matter?  
How can we improve models?  
Data can be portrayed differently for a different message  
Small choices may have large influences  
Results are adjusted  
Future is uncertain  
Scenarios can be used to manipulate  
Silence about deviating results  
Do better models influence action?  
Models influence decisions  
Trust in climate models  
Values in science can be positive  
Understand where science communicated in public comes from  
How would life be without climate models?  
Communication missing from science to society  
Society and science coevolve  
Models need good communication for decision support  
Values and human influence on model building  
Values enter science

Scientists have diverse goals  
Science in practice or as a job  
Exchange  
Science is not objective  
Science looks for profit  
Combine science with social science  
How useful are climate models?  
Human work  
Think we build own climate model  
Specialisation  
Where does climate science develop in the future?  
In science, results should count  
How good can a climate model be?  
Computing power  
Trained with historical data  
Climate models have a large potential  
Parameterisation  
Differential equations  
Genealogy  
Structure  
Surprised: old language and old code  
Why go for more precise models?  
Development is irregular  
What is logical and easy?  
Much model code and many parameters  
Structural model problems, e.g. parameterisations  
Errors come from various sources  
Complexity makes the model error prone  
What are differences between models?  
Future development  
Model weighting  
Climate models have a large potential  
Large extend of uncertainty  
How certain can a model be?  
Measurement uncertainty  
Initial conditions become less important with simulation time  
Many different uncertainties  
Uncertainties influence results