

Towards a society without money: theory and simulation

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From COMMONISM to COMMONSIM

Commonism – the utopia

- Possible future society beyond money, market and state based on commons theories
- „Commons“ instead of „commodity“ as basic social form of re/production
- Absence of hierarchical or monetary power creates inclusive social prompts
- Inclusive mediation and institutionalisation processes
- Mediation of needs, coordination & collective decision making based on social prompts
- Comparison of different types of mediation of needs:
 - **Capitalism:** ex post market coordination via exchange based on money
 - **Socialism:** ex ante state coordination and central planning; replaces market exchange, but keeps money, wage labour and need satisfaction by performance
 - **Commonism:** ex ante network coordination „in kind“
 - no need for the money form – overcoming the logic of exclusion
 - no separation between economic and social reproduction
 - based on inclusion & voluntary motivated contributions

From COMMONISM to COMMONSIM

Commonsim – the simulation

- Agent-Based Modelling as an algorithmic bottom-up approach (NetLogo)
- Two types of agents: persons and groups
- Experimental design of large-scale artificial societies
- Explore internal mechanisms & processes
- Identify blind spots & vague definitions
- Sharpe utopias via modelling and simulation

Domains of the simulation

- Biophysical environment
- Social structure (groups)
- Complex individuals (persons)
- Provisioning processes
- Resulting socio-economic structure

Biophysical environment



Stock of natural resources & sinks

- Basis for the mining of raw materials & sequestering of pollutions
- Mining diminishes natural resources
- Mining destroys sinks

Pollution

- Outcome of almost all production processes, including mining
- Accumulates over time (no self dissolution)

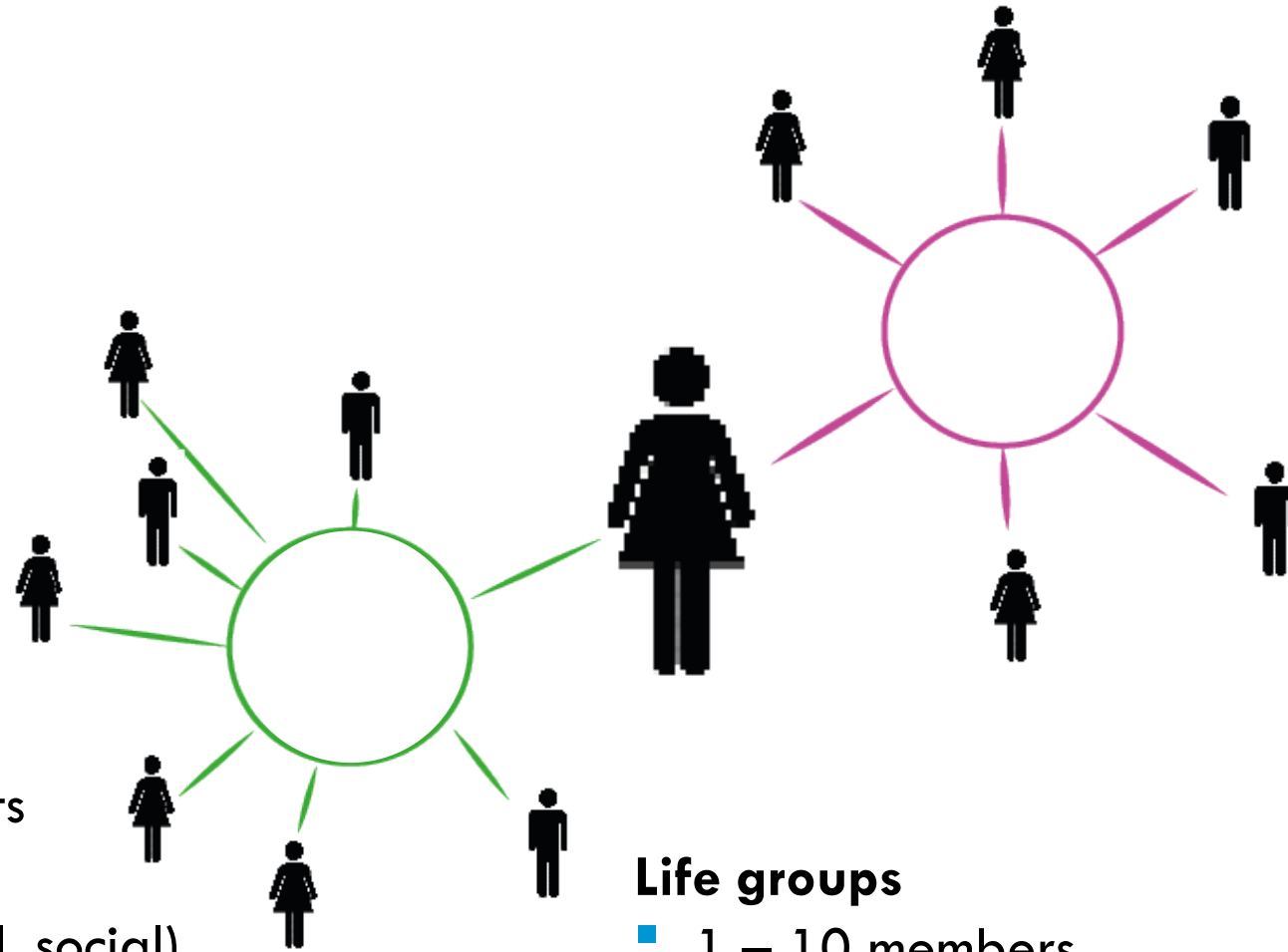
Sinks

- Stability over time, no depletion by constant/decreasing pollution
- To meet rising pollution and sink destruction, sinks have to be reproduced

Outlook

- More complex sink dynamics, e.g. depreciation, thresholds, etc.
- Feedback to society, e.g. damage on people, machinery, facilities, and/or infrastructure

Social structure



Productive groups

- More than 20 members
- Production oriented social contacts
- Produce means:
 - Life means (material, immaterial, social)
 - Production means (machines etc.)
 - Transpersonal care means (hospitals etc.)
 - Resources
 - Sinks
- Culture → majority of the individual cultures

Life groups

- 1 – 10 members
- Reproduction oriented social contacts
- Procure life means and distribute them among members
- Produce interpersonal care means for own members (child care, cleaning, ...)

Complex individuals (persons)



Needs

- Sensual-vital needs (food, shelter, care, etc.)
- Productive needs (time to spend)

Emotions & Motivations

- Evaluation of current and expected future situations

Priorities

- Regarding needs, livelihood, production, society

Personal characteristics

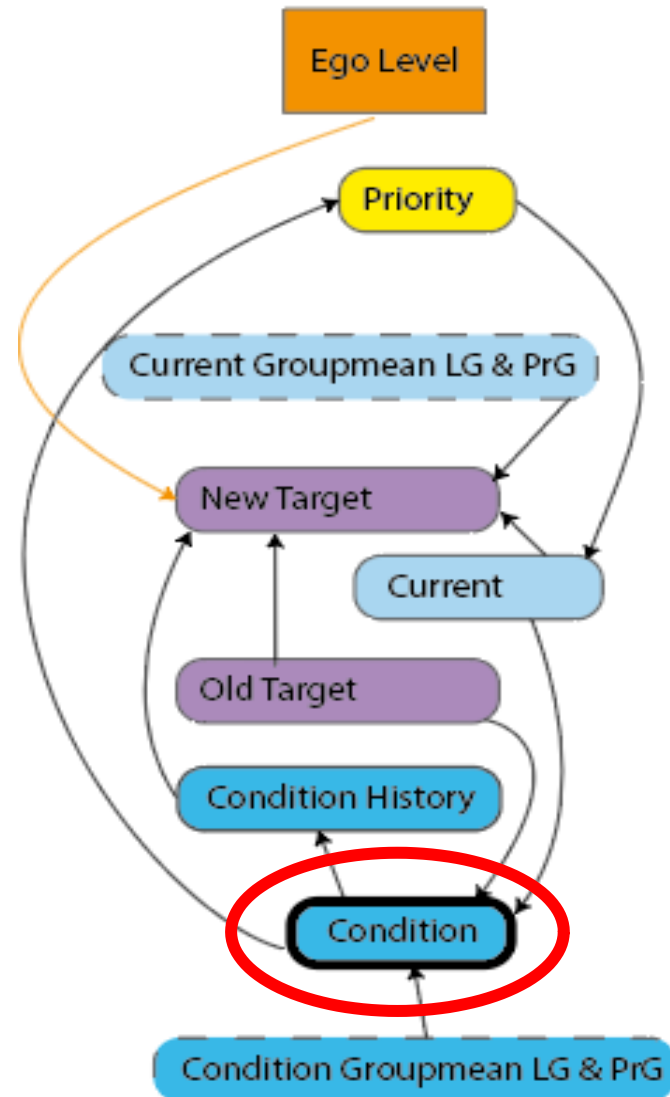
- **Ego**: spectrum between egoistic and altruistic behaviour
- **Leisure**: spectrum between weak and strong activity-focus
- **Eco**: spectrum between indifference and concern about environment
- **Productiveness**: spectrum between indifference and concern about output

Cultural orientation

- Traditionalist
- Ecologist
- Modernist

Individuals – Computation examples

- Computation of **conditions**

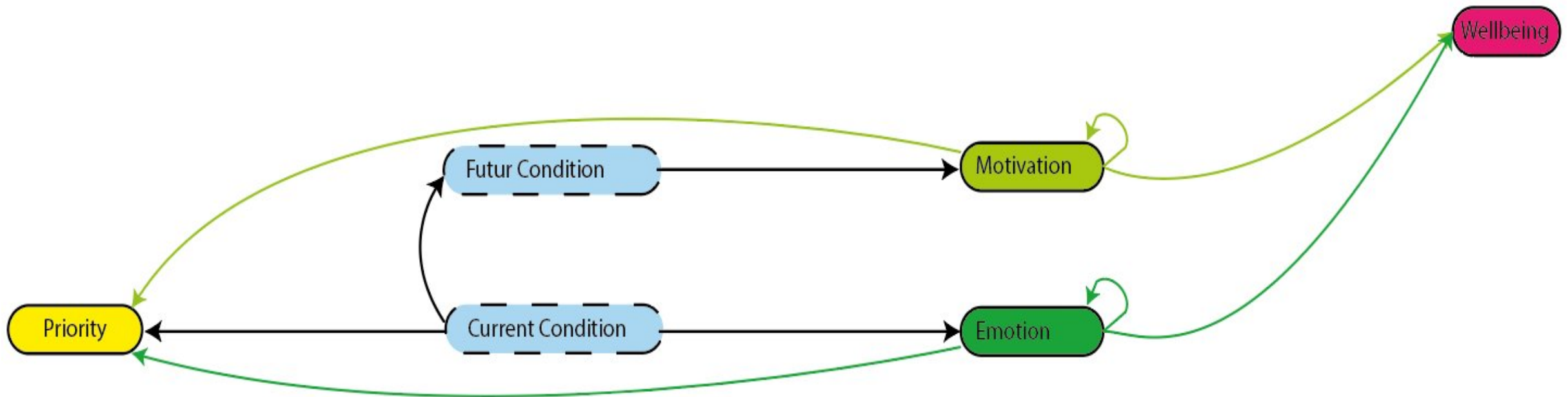


Individuals – Computation examples

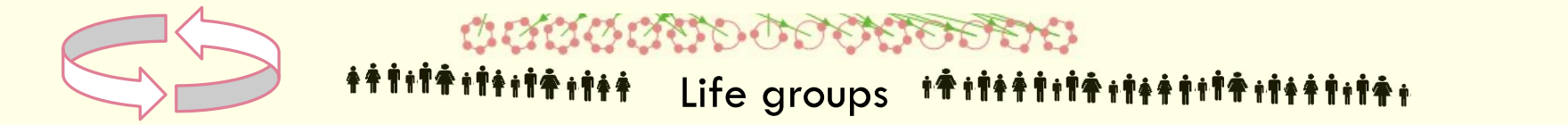
- Computation of **conditions**
- Adaption of **needs, emotions, motivations, priorities** based on previous experiences & social influences (local neighborhoods)
- Adaptation of **personal characteristics**

Individuals – Computation examples

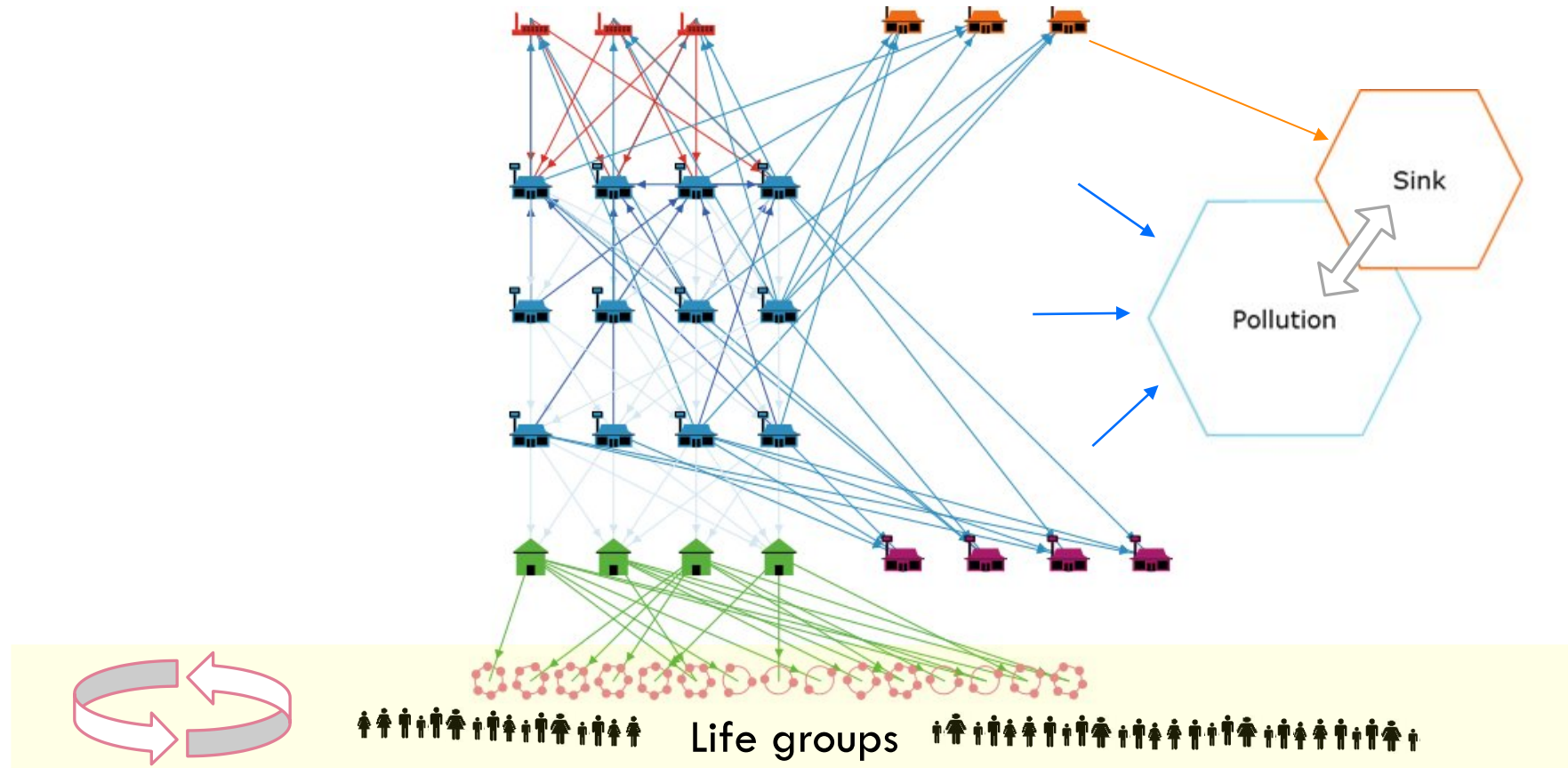
- Computation of **conditions**
- Adaption of **needs, emotions, motivations, priorities** based on previous experiences & social influences (local neighborhoods)
- Adaptation of **personal characteristics**
- Computation of personal **wellbeing**



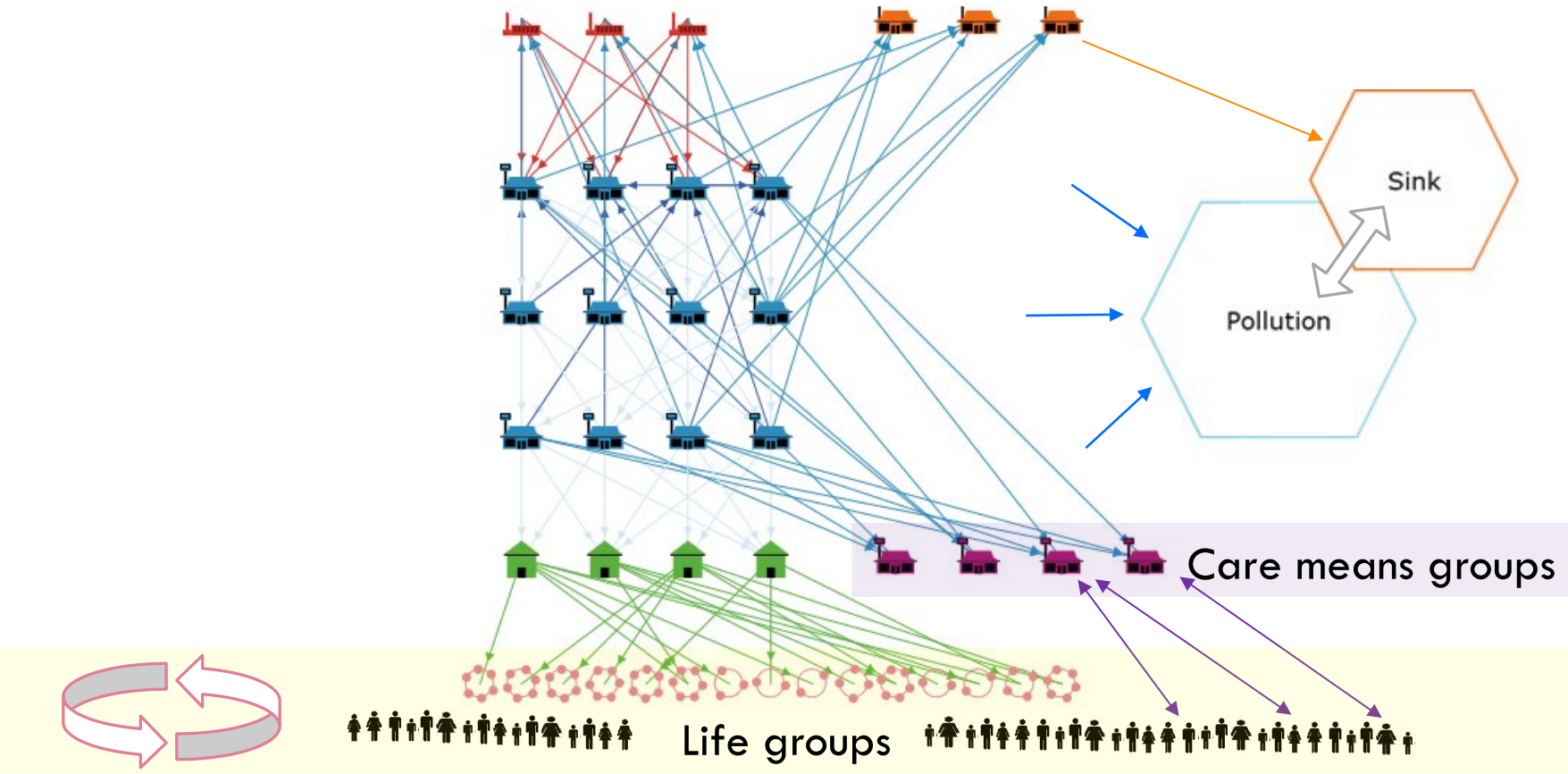
Provisioning Processes



Provisioning Processes

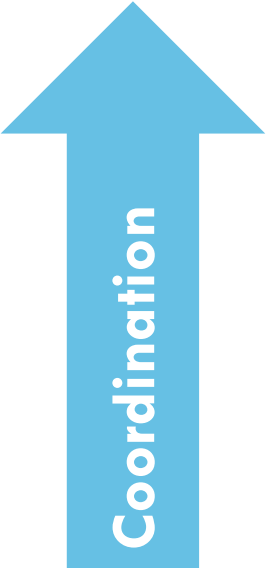


Provisioning Processes

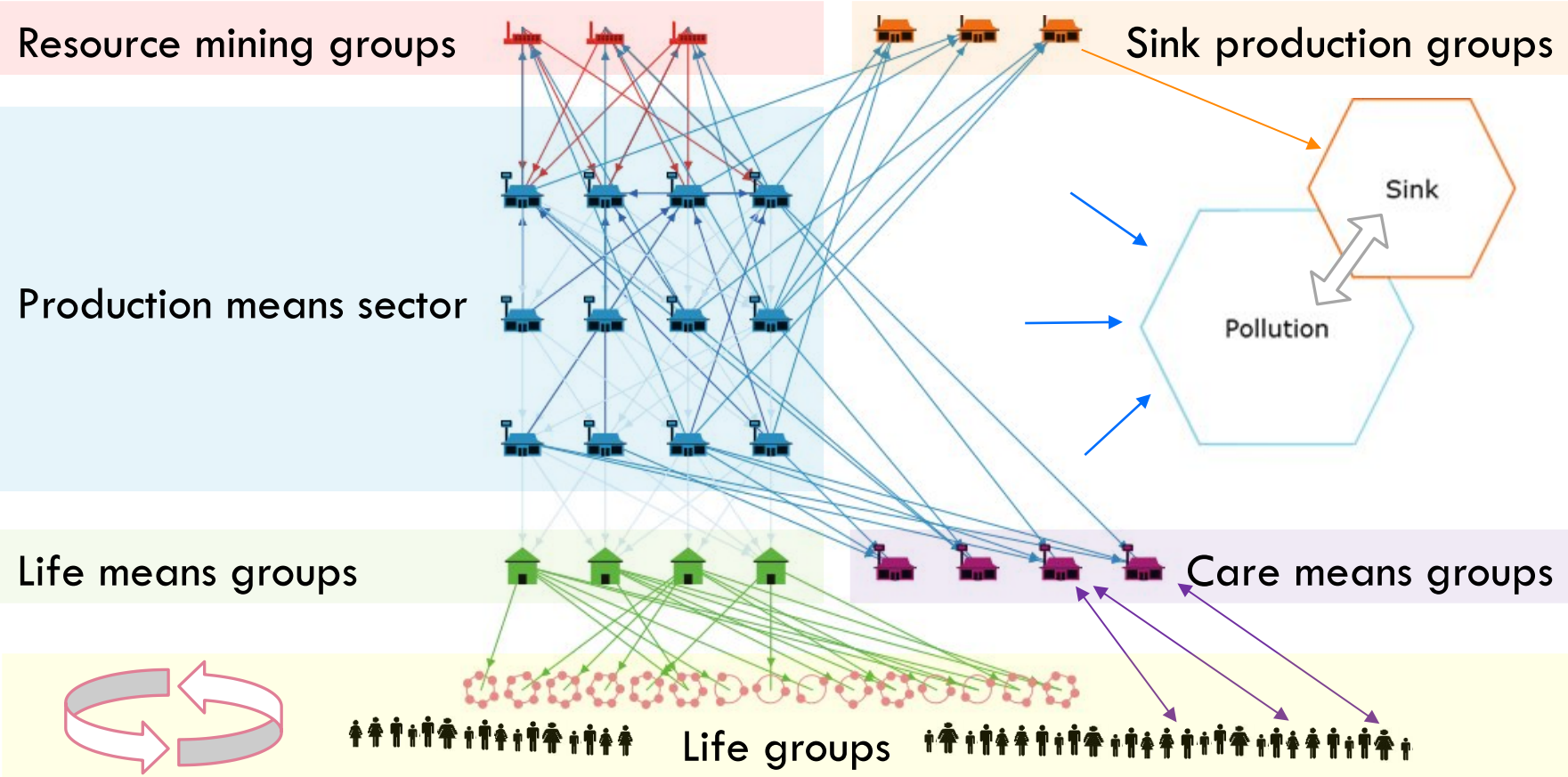


Provisioning Processes

Ex ante coordination

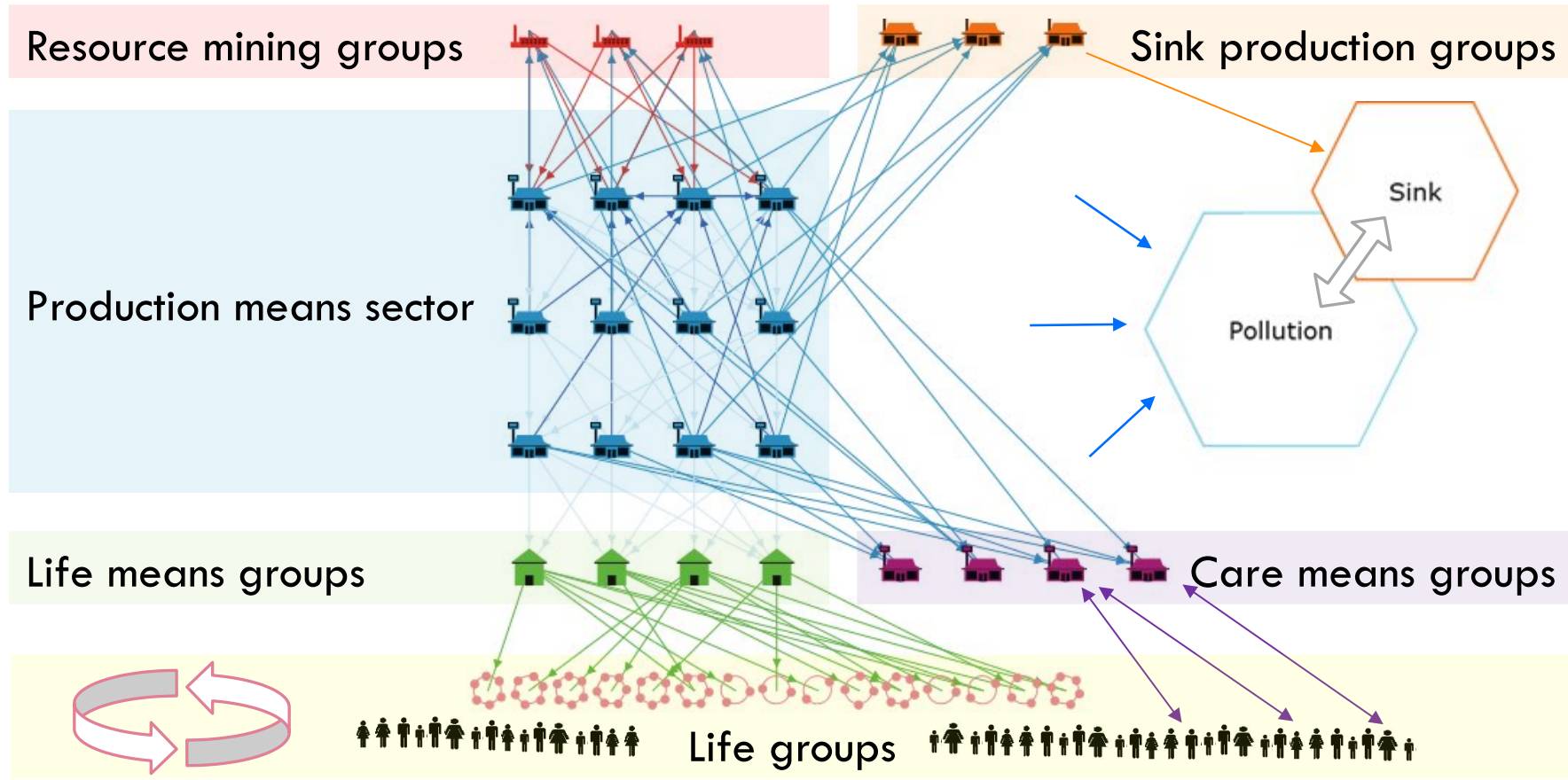
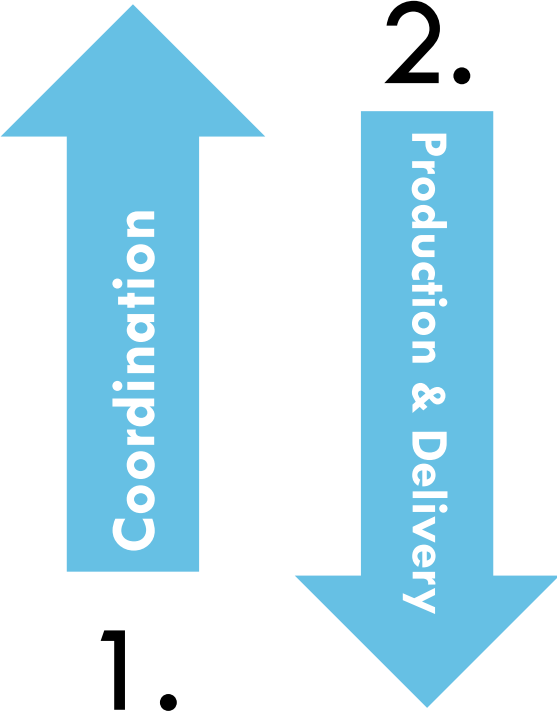


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Provisioning Processes

Ex ante coordination



Provisioning Processes: Cultural Influences

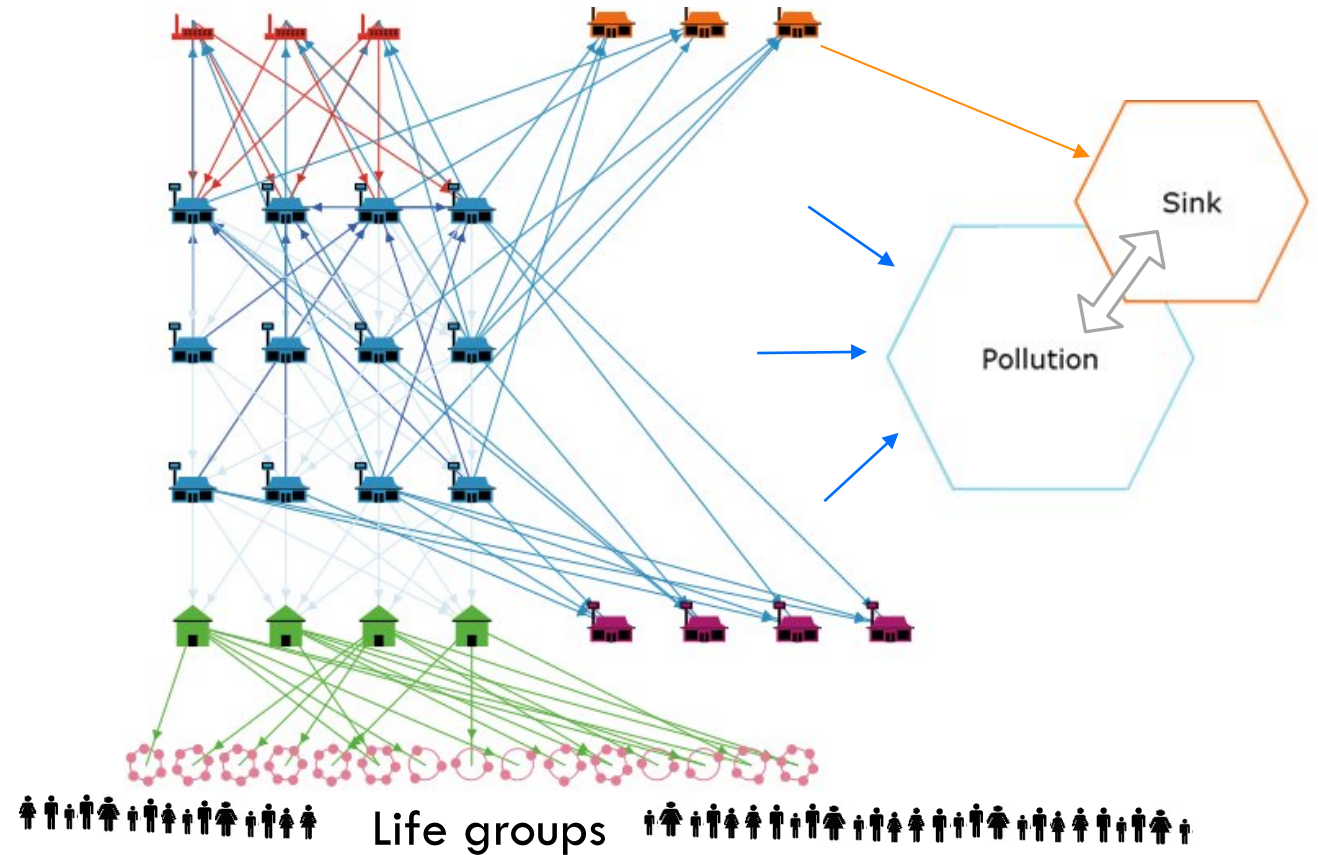
Provisioning influenced by culture

- Distribution of goods preferably to groups with the same culture

Accept & Reject persons...

... dependent on culture of the group:

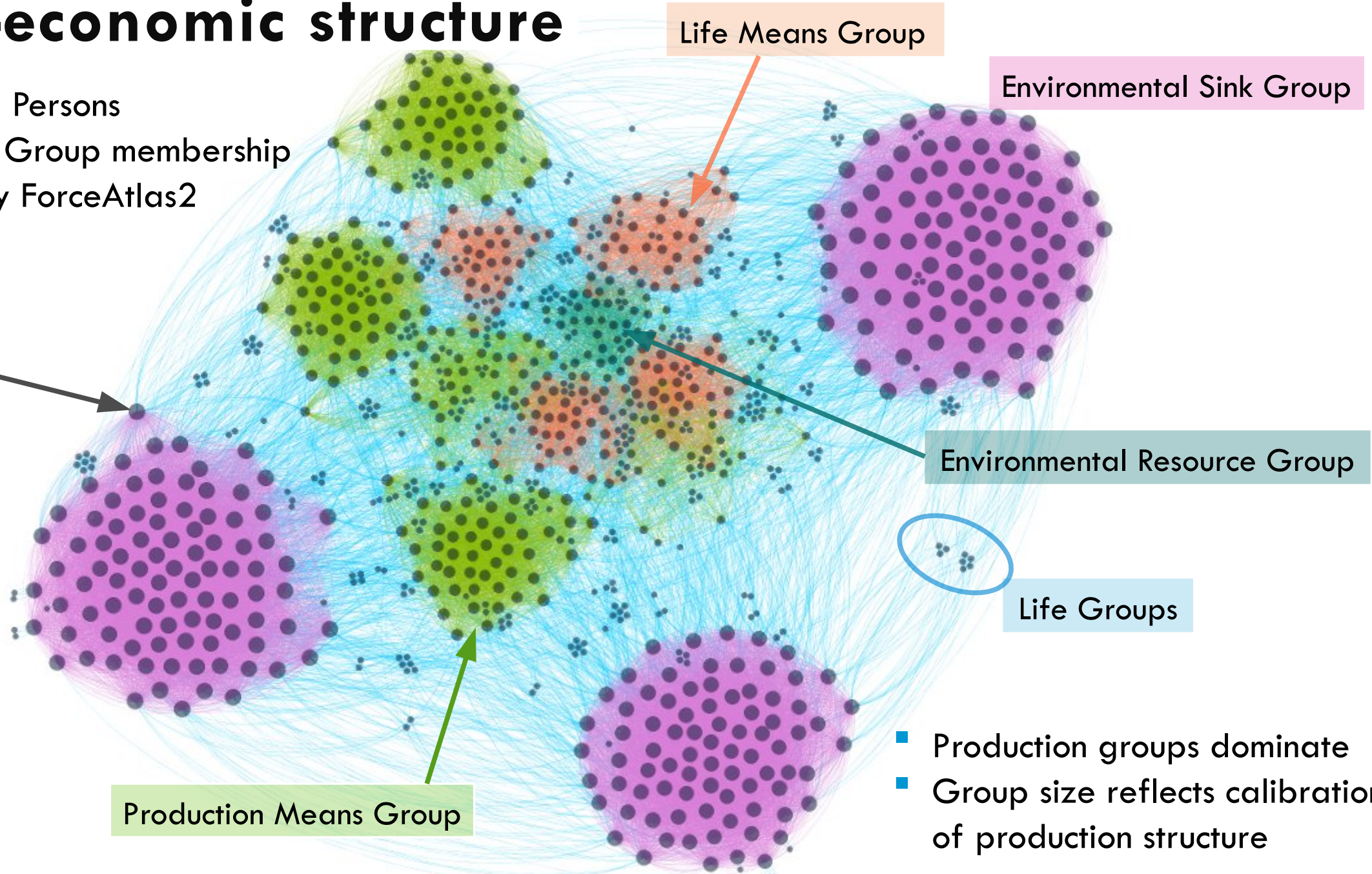
- Traditionalists: only accept traditionalists
- Ecologists: prioritize ecologists, but also accept others
- Modernists: agnostic about person's culture



Socio-economic structure

- Nodes → Persons
- Edges → Group membership
- Graph by ForceAtlas2

Person



- Production groups dominate
- Group size reflects calibration of production structure

Research questions

Basic Stability

- Does inclusive behavior emerge from voluntary motivated contributions?
- Will an overall wellbeing with low bandwidth emerge?
- Does the society develops coherently despite different cultures?
- Are all societally required activities sufficiently covered?

Conflicts & Crisis

- What is the influence of different conflict resolution types: inclusive, meritocratic, racist?
- What degree of free-riders can society tolerate?
- How does the system reacts on climate/ecological crisis?

Model enhancements

- What is the effect of institutional and/or technological change in the model?
- What results emerge if negative crisis feedbacks partially destroy productive infrastructures?

The background is a complex, colorful abstract pattern. It features a dense network of thin, light blue lines that form a web-like structure. Overlaid on this network are several clusters of dots. The dots are primarily in three colors: green, orange, and purple. The green clusters are located in the upper-left and lower-left areas, the orange clusters are in the upper-right and lower-right areas, and the purple clusters are in the bottom-left and bottom-right corners. The overall effect is a vibrant, multi-colored network of connections and nodes.

Thank you!