Visions of Bioeconomy and Discourses on Agricultural Development – A Comparative Analysis with Focus on Tanzania
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• Bioeconomy and Agricultural Development
• Three visions of bioeconomy and three discourses on agricultural development in Tanzania
• A content analysis (Dryzek 1997)
• A discourse analysis
• The techno-political option space (Hausknost et al. 2017)
• Conclusion
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Bioeconomy and agricultural development
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Replacement: use of fossil resources → renewable resources → biomass as the raw material for production (Sillanpää & Ncibi 2017)
Bioeconomy and agricultural development

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Do the three visions of bioeconomy (Bugge et al. 2016) and the three discourses on agricultural development (Aminzade et al. 2018) follow similar claims and are they based on similar human nature relationships?
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Discourses on agricultural development (Aminzade et al. 2018)
Visions of bioeconomy (Bugge et al. 2016)

- Bio-technology vision
- Bio-resource vision
- Bio-ecological vision

Discourses on agricultural development (Aminzade et al. 2018)

- Dominant domestic discourse
- Global discourse
- Subordinate domestic discourse
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Economic Rationalism (Dryzek 1997)

Visions of bioeconomy (Bugge et al. 2016)

Bio-technology vision

Bio-resource vision

Bio-ecology vision

Similarities

Dominant domestic

Global

Subordinate domestic

Discourses on agricultural development (Aminzade et al. 2018)
Content analysis: Results

Visions of bioeconomy (Bugge et al. 2016)

- Bio-technology vision
- Bio-resource vision
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Similarities

- Dominant domestic
- Global
- Subordinate domestic

Discourses on agricultural development (Aminzade et al. 2018)

Content Analysis ↓
“Ecological Modernization“ (Dryzek 1997)
Visions of bioeconomy (Bugge et al. 2016)

- Bio-technology vision
- Bio-resource vision
- Bio-ecology vision

Differences

- Dominant domestic
- Global
- Subordinate domestic

Discourses on agricultural development (Aminzade et al. 2018)
### Content Analysis:

Bio-ecology vision of **bioeconomy** and subordinate domestic discourse on **agricultural development** in Tanzania (Dryzek 1997)

#### “Green Rationalism”

<table>
<thead>
<tr>
<th>Bioregionalism</th>
<th>Environmental Justice</th>
<th>Eco-Communalism</th>
<th>Deep Ecology</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ecosystem boundaries</td>
<td>Egalitarian ideas</td>
<td>Ethical social life</td>
<td>Organic unity, holistic nature, ecological webs</td>
</tr>
<tr>
<td>Community self-control</td>
<td>Distributional aspects</td>
<td>Life in harmony with each other and with the local ecosystem</td>
<td>Biocentric quality</td>
</tr>
<tr>
<td>Trade with a local focus</td>
<td>Network of different stakeholders</td>
<td>Preserve and protect wilderness [biodiversity]</td>
<td></td>
</tr>
</tbody>
</table>
Visions of bioeconomy (Bugge et al. 2016)

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### Discourse analysis

<table>
<thead>
<tr>
<th>Bio-ecology vision</th>
<th>Subordinate domestic discourse</th>
</tr>
</thead>
<tbody>
<tr>
<td>10 documents: “Bugge articles” (published between 2006 and 2013),</td>
<td>12 documents: 5 “Aminzade articles” (published between 2011 and 2016), 7 additional documents (published between 2015 and 2019),</td>
</tr>
<tr>
<td>→ need for additional analysis</td>
<td>Distinction of three sub-types</td>
</tr>
</tbody>
</table>

→ need for additional analysis
Discourse analysis: Results

Overall category

Sub-categories

Values

- Local knowledge

- Ujamaa values complemented by SD and care

- Local justice systems, identity

Injustice

- Access to + control over land

Normative attitudes towards nature

- Use and control of (access to) nature + its products for human benefit (money)

- Nature as possession

- Social significance (→ no dependency) and cultural value

- Harmony: nature + humans → balance

Attitudes towards land use

- Perception + meaning of land (use)

- Access to + control over land

Agricultural methods

- “Modern” agriculture: GMO, agro-chemistry etc.
  - solution for hunger + malnutrition
  - health + environmental risk

- “Alternative” agriculture: permaculture, Zai etc.
  - harmony + balance:
  - people – nature and people – people

Green – Human benefit type
Blue – Sustainable Ujamaa type
Orange – Harmony type
Discourse analysis: Results

Visions of bioeconomy (Bugge et al. 2016)

- Bio-technology vision
  - Similarities
  - Dominant domestic

- Bio-resource vision
  - Similarities
  - Global

- Bio-ecology vision
  - Differences
  - Subordinate domestic

Distinction not possible

Discourses on agricultural development (Aminzade et al. 2018)

Harmony type
Sustainable Ujamaa type
Human benefit type
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“Planned transition”
- High (bio-) tech vision
- Sufficiency -> material consumption + resource use
- Advanced technologies on a large industrial level
- State-centered

“Eco-retreat”
- Ecological practices
- Socio-economic sufficiency
- Socio-ecological transition
- Changes in principles of production, consumption, distribution
  - ‘good life’ for all
  - Global economic + environmental justice
  - Democratic control

“Sustainable capital”
- Technology led
- Capitalist growth -> new + sustained
- Large scale industrial innovations
- Transition imperative
- Eco-efficient use of renewable resources
- No constraints

Hausknost matrix

- Bio-ecology vision
- Differences
- Subordinate domestic

- Harmony type
- Sustainable Ujamaa type
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“Eco-retreat”
- Eco-growth”
- Agro-ecological organic farming
- Growth-based capitalist economy
- Efficiency
- Small-scale farming
- Agro-ecological innovation
- Organic entrepreneurship
- Regional focus

“Sustainable capital”
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Hausknost matrix

Sufficiency | Capitalist growth
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Overarching research question:

Are the three visions of bioeconomy (Bugge et al. 2016) and the three discourses on agricultural development (Aminzade et al. 2018) follow similar claims and are they based on similar human nature relationships?

Conclusion I

- The two dominant visions of bioeconomy and the two dominant discourses on agricultural development in Tanzania go well in line with each other and their human-nature relationships demonstrate their stakeholders’ attitudes and values towards nature and land.

- The subdominant vision of bioeconomy as well as the subordinate domestic discourse on agricultural development in Tanzania do not go in line with each other.

- Even within the subordinate domestic discourse, three different sub-types exist which do not share the same goals or assumptions and are based on different human-nature relationships.
Conclusion II

- Whereas the harmony type and the sustainable *Ujamaa* type provide alternative visions of agricultural development, the human benefit type seems to develop in the direction of the global discourse.

- The bio-ecology vision of bioeconomy shows its closest similarities with the harmony type.

- However, to confirm this evidence from literature, fieldwork is needed:

  First, fieldwork should be conducted in Tanzania, to prove the three ideal types of the subordinate domestic discourse and their human-nature relationships discourse right or wrong.

  Second, fieldwork should be conducted in Germany to discover hidden bio-ecology visions of a bioeconomy which could fit to the three sub-types of agricultural development.
References

Thank you very much for your attention!

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