How Corporate Leaders can Learn from Beavers and Termites

Hailey Campbell, B.S. Sustainability – Ecosystems Track
Faculty Supervisor: Shirley-Ann Behravesh

Introduction
Corporations both create sustainability challenges and offer key leverage points for solutions due to their influence on the supply chain, consumption and production patterns, and waste disposal. For a corporation to successfully transition to sustainable practices, sustainability principles should be embedded within their organizational culture.

Transformational Change Theory explains that organizational change requires that people change their perceptions of their roles, responsibilities, and relationships in an organization and requires altering the norms, values, and assumptions under which an organization functions. Within industry, such transformative change is typically observed when leaders demonstrate ‘transformational’ characteristics such as being positive, upfront with others, selfless, and charismatic.

The emerging field of biomimicry, defined as the process of emulating biological processes to find innovative solutions to complex challenges, offers an opportunity to learn from nature’s transformational leaders – termed ecosystem engineers – to better design strategies for positive change in organizations. Specifically, my research aims to connect transformational leadership and biomimicry by investigating the following question:

What lessons, if any, can be learned from ecosystem engineers to inspire and facilitate transformational leadership toward corporate sustainability?

Leadership Strategies from Transformational Leadership Literature

<table>
<thead>
<tr>
<th>Leadership Approaches</th>
<th>Attributes</th>
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<tbody>
<tr>
<td>Idealized influence, inspirational motivation, intellectual stimulation, and Individualized consideration</td>
<td>Agereableness, extraversion, and openness to experience</td>
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<tr>
<td>Charismatic, risk-taking, trust building, and collaborative</td>
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Methods – Analysis of Literature

**Transformational Leadership Analysis**
- Collect transformational leadership literature
- Compile literature resources
- Review transformational leadership strategies

**Ecosystem Engineer Analysis**
- Assess AskNature.org (7)
- Search ‘ecosystem engineers’
- Select ecosystem engineers and review transformational strategies
- Examine intersection between transformational leadership in corporations and in nature
- Translate ecological knowledge to leadership language

Transformational Leadership
A leadership approach designed to inspire change across individual and social systems

Ecosystem Engineer
Non-human, biotic organisms that create, alter, destroy, or preserve an ecosystem within which they live

Lessons Learned From Nature

<table>
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<tr>
<th>Ecosystem Engineers</th>
<th>Transformational Strategies of Ecosystem Engineers</th>
<th>Application of Nature’s Strategies to Transformational Leadership</th>
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</thead>
<tbody>
<tr>
<td>Modify resources to create novel habitats</td>
<td>Initiate change by creating novel ideas and productive spaces for work</td>
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<tr>
<td>Build dams that are useful after they’re abandoned</td>
<td>Change now can create the space for a legacy of sustainable practices into the future</td>
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<tr>
<td>Engineer the ecosystem across temporal and spatial scales</td>
<td>Think ahead to future generations and consider ideas which can be scaled</td>
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<tr>
<td>Create a network of indirect links between organisms</td>
<td>Recognize and foster diverse connections that exist within and outside of the organization</td>
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<tr>
<td>Destroy some niches, but creates others</td>
<td>Reasses and remove current organizational practices that might inhibit a transition to sustainable practices</td>
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<tr>
<td>Construct colonies that are useful after they’re abandoned</td>
<td>Change now can create the space for a legacy of sustainable practices into the future</td>
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<tr>
<td>Enrich the nutrients in the soil through the construction of their mounds</td>
<td>Make goals/visions public only when strategies are mature and accepted by the entire organization</td>
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<td>Generate soil porosity by modifying soil to create resilience to droughts</td>
<td>Connect business operations to efforts that build resilience in socio-ecological systems</td>
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<tr>
<td>Initiate landscape level successional sequences</td>
<td>Use modular approaches to achieve large-scale goals</td>
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Conclusion & Future Research

The literature on both transformational leadership and biomimicry have been disparate to date. Through analyzing these two areas of research and practice, I found that nature offers insight into new strategies corporate transformational leaders can adopt as they seek to transition to more sustainable practices.

Future research could focus on how corporate leaders apply nature’s transformational strategies in practice to determine if they do in fact aid the organization’s transition to more sustainable practices.

Resources