ZQ35 Letters

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Norbert Hoeller Recent Initiatives: ZQ Letters and Lab Relationships

Norbert Hoeller (submitted 2025-03-14)

The Zygote Quarterly team launched two initiatives in conjunction with the publication of ZQ35. The ZQ Letters section is based on a 'letters to the editor' model, enabling timely delivery of discussions about ZQ articles or current issues relevant to Zygote Quarterly. Our first letter was contributed by Pete Foley (https://zqjournal. org/letters/foley-20240504.html) who provided an update on Las Vegas water management previously discussed in the ZQ34 "Water in the Southwest USA" interview with Ray Lucchesi and Michael Ogden. Since ZQ Letters are published outside of the normal publication schedule, Zygote *Quarterly* now includes an RSS feed, allowing you to use an RSS feed reader to keep you informed of changes as they are posted. I use Feedly (https:// feedly.com), a free, easy to use, and functional feed reader that consolidates multiple RSS feeds via its desktop and mobile interfaces. If you have ideas for ZQ Letters, please send them to info@ zqjournal.org.

We also initiated relationships with two labs doing projects relevant to bio-inspired design. Objectives include helping the labs share their work with a broader audience and providing lab students with an opportunity to improve their skills at communicating with people outside of academia. *ZQ35* highlights the work of Shoshanah Jacobs' Manufactured Ecosystem (<u>https://www. manufacturedecosystems.com/</u>) project at the University of Guelph and Astrid Layton's Bio-inspired Systems Lab (BiSSL, <u>https://astridlayton.</u> com/) at Texas A&M University.

Nature as a Blueprint for Resilient and Sustainable Engineering Systems by Hadear Hassan, Abheek Chatterjee, and Astrid Layton described three areas of BiSSL research where "adopting characteristics from biological ecosystems can enhance both sustainability and resilience across various engineering system scales." Hadear found the writing process smooth and enjoyable, with good initial guidance, autonomy to be creative, and constructive feedback as writing progressed. She felt that the amount of time required was reasonable. The article created an opportunity to practise writing in a more accessible style that focuses on the larger picture for a general audience. It also helped increase her awareness of sustainability issues. Overall, Abheek found the questions and comments about the first draft useful, helping him organise his thoughts not just when communicating to people outside of academia but also with academics who are not experts in his field.

For years, Abheek and Prof. Layton had wanted to write a perspective article about this new and emerging field but never had the opportunity. The Zygote Quarterly article highlights what BiSSL is doing and discusses future directions. Abheek suggested future articles that focus on one aspect of BiSSL research with a greater emphasis on practitioners at the translation of research into real-world innovation in areas such as supply chains, manufacturing, and energy systems. These articles could explain what inspired them in ecology, what ecological principles are relevant to engineering, and when one should be careful because of the differences between natural and engineered systems.

Can Manufactured Ecosystems fully replace ecosystem services? was a 20-person team effort led by Prof. Shoshanah Jacobs. The team was diverse with members from design, community, media, and science backgrounds. Although the deliverable was an initial update on the project, a key goal was using the article to bring the team together under a big umbrella to collectively establish the overall purpose of the project and the key questions that it would explore.

A key step was creating a transdisciplinary space that recognised members as experts in their field and encouraged them to contribute their unique expertise, insights, and skills. Rather than aiming for consensus and compromise, the goal was to create a team dynamic that broke down silos, bridging and enhancing knowledge fields. Developing the article asynchronously on Google Drive worked well for most of the team members. Despite some initial concerns, it allowed everyone to express their perspectives and at the same time

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come together on a common deliverable better than any one individual could deliver. A final editing phase delivered a clean draft and helped the team shift from individual edits to focusing on the article as a whole. The team members were delighted with the final text and supporting imagery.

The <u>Manufactured Ecosystems team</u> is forming six groups, each with a scientist, an artist, and a writer. Guided workshops will help encourage team building and collaboration. Over the next eight months, each group will focus on a technology of the future for climate adaptation.