Editorial

Editor's Introduction

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This is the third issue of the *International Journal of Engineering, Social Justice, and Peace (IJE/SP)*. We are now back to a regular issue after the prior special issue offering critical perspectives on the US National Academy of Engineering's "Grand Challenges for Engineering" project.¹

In the first article of this issue, Robert Muscat, of Global Peace Services USA, discusses the role and impact of engineers and engineering projects in relation to (social) conflict. Muscat stresses the importance of acknowledging and actively engaging with the reality that engineering projects are embedded in wider and much more complex contexts than just technical problems and solutions. This becomes especially important in contexts of conflict. Muscat illustrates his argument with several case studies. The article concludes by offering a checklist of factors to take into account when designing and locating power, irrigation, mining, transport, and other types of engineering projects in areas of conflict or potential conflict. Muscat offers a useful perspective on how engineers can and should engage with issues of social justice and peace in the specific context of conflict zones, which can be applied directly by practicing engineers.

In the second article, Caroline Baillie and Michael Levine of the University of Western Australia use a social justice perspective to critique current ideas about engineering ethics and consider how engineering ethics needs to be enlarged to break through the dominant paradigms of the profession. By drawing on ideas about justice from philosopher John Rawls and economist Amartya Sen, Baillie and Levine problematize issues of diversity and equity in engineering as well as participatory engineering to make their case. The authors highlight critical reflection as a key component of moving toward engineering based on justice and fairness. The article concludes with some thoughts on developing this capability in engineering students and a rare example of an attempt to develop this kind of actual engineering practice. Baillie and Levine offer a more theoretical perspective on how engineers can and should engage with issues of social justice by unpacking and challenging some of the underpinnings of what might be considered an ethical, fair and just engineering practice.

In the third and final article, Wendy Cumming-Potvin of Murdoch University and John Currie of the University of Sydney partly continue where Baillie and Levine left off in terms of developing reflective capability in engineering students. Cumming-Potvin and Currie put forward the concept of literacy, or more specifically multiliteracies, as an analytic tool for framing critical reflection and awareness of social context. Engineers need to be literate both in terms of technical and social dimensions of engineering practice and its multiple contexts. By drawing on the work of the New London Group, the authors present *pedagogy of multiliteracies* as a framework for educating engineering students about both technical subjects and social context and impact. Cumming-Potvin

¹ This editor's introduction has been further developed and refined thanks to feedback and input from Dean Nieusma and Donna Riley on earlier drafts of the text.

and Currie conclude the article by putting forward an emerging model that tentatively explores a holistic approach, integrating elements of design, multimodal texts, authentic learning and critical thinking. This educational model can be helpful and inspirational to engineering educators teaching students to develop for themselves capability formulating and critically reflecting on social justice questions.

Each of the three articles can be seen to highlight a different dimension of the concept of praxis. Muscat emphasises *action*, Baillie and Levine exemplify the use of *theory as a basis for unpacking dominant paradigms and assumptions*, and Cumming-Potvin and Currie emphasise *critical reflection*. Taken together, these articles provide a robust foundation for understanding the nature of praxis as engineers engage with issues of social justice and peace.

This issue concludes with Julian O'Shea's review of the book *Out of Poverty: What Works When Traditional Approaches Fail*, by Paul Polak.

As always, the editors invite manuscript submissions on topics at the intersection of engineering, social justice, and peace from a wide range of perspectives. If you are working on something you think might be a match for *IJESJP*, please inquire with us. We will work with you to ensure there is a good fit and to enhance the likelihood of your submission's publication.