

# Engineering textbook promotes social justice

June 28 2010

---

Imagine you're an engineer charged with designing an SUV to sell in a third-world country. What sorts of questions might you consider before creating a prototype?

This is a case study from Binghamton University faculty member George Catalano's latest book series, *Engineering and Society: Working Towards Social Justice*. The books, which Catalano co-authored with Caroline Baillie of the University of Western Australia, encourage engineers to think about the long- and short-term implications of their projects.

"Engineers tend to be good employees," Catalano said. "If people need things designed, we tend to just design them without giving a lot of thought to their applications."

For example, in the SUV scenario, a typical engineer might consider gas prices, current supply and demand, cultural preferences and regional geography to make the product marketable. But Catalano, a professor of [bioengineering](#), believes that it's not enough to consider only such practical factors.

"Our goal is to present a different kind of paradigm for making decisions — one that includes all the different parts of society, including the environment, that too often are ignored," he said.

In the case of the third-world SUV, the book asserts that a responsible engineer would ask himself, "Will having SUVs make the citizens more

or less able to live their lives freely? Will SUVs affect native or other subpopulations? Will the increased congestion, pollution and dependence on fossil fuels be acceptable? And how will SUV production and use impact ecosystems?"

By considering such questions, Catalano and Baillie write, engineers can create the greatest good for the greatest number of people.

Engineering and Society is a three-book series published this year by Morgan & Claypool as part of a larger compilation of books dealing with engineering and society. The books' authors are leading an effort to emphasize humanity and social as well as environmental justice in engineering decision-making.

The movement began in 2004 when Catalano became concerned about the use of engineered devices in the Iraq war, the impacts of engineering on the environment and the lack of very much attention paid to alleviating poverty in the world. Catalano joined with Baillie, then at Queens University, who had been having similar concerns about engineering.

Since then, Catalano has written two other ethics-related books, called Engineering Ethics: Peace, Justice, and the Earth (2006) and Engineering, Poverty, and the Earth (2007).

Provided by Binghamton University

Citation: Engineering textbook promotes social justice (2010, June 28) retrieved 18 April 2024 from <https://phys.org/news/2010-06-textbook-social-justice.html>

This document is subject to copyright. Apart from any fair dealing for the purpose of private study or research, no part may be reproduced without the written permission. The content is

provided for information purposes only.