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FOR ENGINEERING AND SCIENCE

Hatch Discussant Remarks - APPE 2010

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Description

Discussant remarks from a 2010 conference by Hank Hatch looking at sustainability-related activities of the American Society of Civil Engineers.

Body

I would like to first respond briefly to the questions in the title of this panel – what are the difficulties and what are the possibilities. I will then describe some of the sustainability- related activities of the American Society of Civil Engineers (ASCE).

First the difficulties –

1. There seems not to be a broadly accepted and understood definition of social justice. For a dialog such as this to focus on the topic at hand, the topic needs definition. A check with Wikipedia for example shows that the term itself is defined in many diverse ways. So the first difficulty I see is simply “what is it?” By the way, related terms often used in this context also need definition – global and environmental justice for example (although the latter is fairly clear to most).
2. There is still not a meaningful dialogue among the stakeholders in the topic of engineering and social justice – a dialogue that includes the engineering professional societies (AAES, ASCE, ASME, IEEE, ASEE, AIChE, etc.) and industry

associations (ACEC, AGC, etc.). This is my second of these workshops/conferences and the dominant participants are academics. For example, by my count, at the October 2008 workshop there were 94 attendees. Included were 58 academics, 8 NAE staff, 7 government (non-engineering), 6 NGO's, 6 professional societies (3 engineering, but not the "founder societies" such as those listed above), and 2 from industry. This conference has 11 academics among its 15 speakers/discussants. I suggest a different mix in the future.

3. Engineers tend to be practical and realistic. There is and will be a challenge in discussing the subject of social justice (however it is defined) in a context that can resonate with engineers, not in a philosophical way, but in terms that are meaningful in their work, their profession.
4. At this point in the discussion I see the greatest difficulty is the tendency of some to grossly generalize about engineers. I have just heard some generalizations that are exaggerated, out of context and downright insulting. If some of what I heard were before an audience of the boards of directors of the professional and industry organizations I mentioned above, any effort to productively engage engineers in the pursuit of social justice would be set back at least a decade.

Second, the possibilities -

1. From the "difficulties", define the terms. Do so in ways that are understandable by the stakeholders. Include measures of success.
2. Include engineers from the professional societies and industry in the dialogue. Academics provide richness to the discussion, but don't just continue the have "choir rehearsals".
3. Learn about, acknowledge, understand and openly recognize the good things done by engineers. When I listen to some of these talks there seems to be an ignorance of or disdain for the contributions of engineers and engineering to the social and economic well being of society.

I'd now like to mention some of the things ASCE has been doing in the area

of sustainability.

First the current ASCE definition of sustainability:

Sustainability is a set of environmental, economic and social conditions in which all of society has the capacity and opportunity to maintain and improve its life indefinitely without degrading the quantity, quality or the availability of natural resources and ecosystems.

ASCE recognizes the leadership role of Civil Engineers in sustainable development and their responsibility to provide effective and innovative solutions in addressing the challenges of sustainability. *ASCE Policy Statement 418 The Role of the Civil Engineer in Sustainable Development*

The ASCE Code of Ethics requires Civil Engineers to strive to comply with the principles of sustainable development in the performance of their professional duties

The global civil engineering profession has recognized...

1. The reality of shrinking resources;
2. The desire for sustainable practices and design;
3. The deficit in infrastructure performance and adequacy to support a desired quality of life and to effectively guide investments to where the greatest need exists and without unacceptable social and environmental impacts;
4. The need for social equity in the consumption of resources.

ASCE – The Vision for Civil Engineering in 2025

Sustainability Activities at the ASCE National Level...

1. Modified its Code of Ethics to include "...improving the environment by adhering to the principles of sustainable development..."
<http://www.asce.org/inside/codeofethics.cfm>
2. Adopted a Policy on the Role of the Engineer in Sustainable Development which defines sustainable development and provides working principles for implementation (Policy Statement 418)
<http://www.asce.org/pressroom/news/policy.cfm>
3. Adopted a policy on Capacity Building, which promotes the building of indigenous capability in the developing world (Policy Statement 506)
<http://www.asce.org/pressroom/news/policy.cfm>
4. Adopted a policy on the Millennium Development Goals, which supports the Goals as related to improving the quality of life through science and engineering. (Policy Statement 517)
<http://www.asce.org/pressroom/news/policy.cfm>
5. Described the critical role of engineers in a sustainable world in its report on "The Vision of Civil Engineering in 2025"
<http://www.asce.org/files/pdf/professwional/summitreport12jan07.pdf>
6. Included as a goal in its Strategic Plan that the Society will, "Facilitate the advancement of technology to enhance quality, knowledge, competitiveness, sustainability, and environmental stewardship." <http://www.asce.org/inside/nextplan.cfm>

For more information on what ASCE has been doing concerning sustainability and engineering in the broad social context, see the following:

[The Vision for Civil Engineering in 2025](#) (Where we are going)

[Achieving the Vision for Civil Engineering in 2025](#) (How we plan to get there)

[Civil Engineering Body of Knowledge for the 21st Century](#) (How civil engineering education can fulfill our new standard that will require a masters degree or equivalent to practice civil engineering at the professional level.)

In closing, I lived through the dark ages of gaining engineers' awareness, understanding and finally full acceptance and application of the principles of sustainability. It has taken over two decades. The parallel challenges facing social justice will be more daunting – are we up to it?

Discipline(s)

Engineering

Civil Engineering