Christian Humanitarian Engineering

2013 ASA Annual Conference
Nashville

Author

- William Jordan
  - Mechanical Engineering

Background

- My interest in using engineering skills to help poor people in the developing world
  - Have done engineering missions projects in:
    - Kenya
    - Tanzania
    - Honduras
    - Rwanda (five times)
    - Haiti

Background

- My interest in theology
  - After becoming a Christian while in college I obtained a seminary degree
    - M.A. from Denver Seminary

Current thinking

- Much of this presentation is a result of my trying to integrate two very different sets of concepts
  - Themes developed in **Humanitarian Engineering** by Carl Mitcham and David Munoz
  - Themes developed in **Christ and Culture** by H. Richard Niebuhr

Humanitarian Engineering

- When I read this short book I was astounded
  - They were describing much of what I was trying to do with international engineering missions projects at Baylor

Humanitarian engineering

- Mitcham and Munoz have developed a Humanitarian Engineering minor at the Colorado School of Mines

- As part of this process they have developed several important definitions of terms

Terms as defined by Mitcham and Munoz

- Humanitarian
  - To promote present and future well-being for the direct benefit of under-served populations
- Engineering
  - Design under physical, political, cultural, ethical, legal, environmental, and economic constraints

Terms as defined by Mitcham and Munoz

- Humanitarian engineering
  - Design under constraints to directly improve the well-being of underserved populations

Concepts are not new

- While their formulation of this discipline is new, many of its concepts are not
- Many engineering codes of conduct by the 1960's had in them statements about protecting the "public safety, health, and welfare of the public."

President Truman's 1949 Inaugural Address

- "I believe we should make available to peace-loving peoples the benefits of our store of technical knowledge in order to help them realize their aspirations for a better life.

- Our aim should be to help the free peoples of the world, through their own efforts, to produce more food, more clothing, more materials for housing, and more mechanical power to lighten their burdens."

Humanitarianism and humanism

- Humanitarianism is not humanism
  - Though humanists can be humanitarians
- Humanitarians come from a wide variety of backgrounds
  - Christian
  - Secular

People who have influenced this development

- **Frederick Cuny**
  - Civil engineer who did work in Guatemala, Iraq, Sarajevo, and Chechnya
- **Maurice Albertson**
  - Engineering professor who contributed greatly the founding of the U.S. Peace Corps
- **Bernard Amadei**
  - Professor at the University of Colorado and founder of Engineers without Borders USA

Maurice Albertson

- "We need to be motivated by service as well as profit. We serve best by finding out what people want and helping them work to realize their dreams, not by going into a country and telling villagers what they need". (Quoted in **Humanitarian Engineering**)

Many times technology breaks down because other issues were not examined

- Bernard Amadei (in July 2013 Mechanical Engineering)
  - "I'm not going to dump another technology on the poor people of the world. That is a crime against humanity and we do it all the time. It is not about technology; it is about empowering the poorest people in the world to get back on their feet. It is about teaching them to fish and ensuring a market for their fish."

Christian perspective on this

- May be more in the area of motive than specific actions
- May influence which groups we choose to help
  - Emphasis on helping indigenous Christian groups

Biblical Mandate

- "Then the righteous will answer him, 'Lord, when did we see you hungry and feed you, or thirsty and give you something to drink? When did we see you a stranger and invite you in, or needing clothes and clothe you? When did we see you sick or in prison and go to visit you?'

- "The King will reply, 'I tell you the truth, whatever you did for one of the least of these brothers of mine, you did for me.'
  - Jesus in Matt 25:37-40

Biblical Mandate

- **From everyone who has been given much, much will be demanded; and from the one who has been entrusted with much, much more will be asked.**
  - Jesus in Luke 12:48

Broader Christian perspective

- Quoting appropriate Bible verses may not be enough for many Christians

- How (or whether) we are motivated to help may be a result of our theology of the church

- Significant insight can be gained from Niebuhr's book **Christ and Culture**

Christ and Culture

- No categorizing system is perfect
- Niebuhr concludes that we should still try to do this, for:
  - "To define typical partial answers that recur so often in different eras and societies that they seem to be less the product of historical conditioning than of the nature of the problem itself."

Niebuhr's five different ways the church looks at culture

- Christ Against Culture
- The Christ of Culture
- Christ Above Culture
- Christ and Culture in Paradox
- Christ the Transformer of Culture

Christel against culture

- Fundamental opposition between Christ and culture
- Examples
  - Monastic movement
  - Some modern fundamentalists

The Christ of Culture

- Jesus is the hero of human culture
- To be in your culture and to be a Christian are largely the same thing
- Example
  - The "wide Church" view of some Anglicans. Being English and being Anglican really mean the same thing

Christ above culture

- Christ is separate from culture, but enters into it in many ways
- Example
  - Thomas Aquinas
  - Many modern Catholics

Christt and culture in paradox

- Christ and culture are different and they are in tension with each other
  - Neibuhr: "Life must be lived precariously and sinfully in the hope of a justification which lies beyond history."
- Example
  - Martin Luther

Christin the transformer of culture

- Christ needs to transform culture
- The can be done by:
  - Worldwide evangelism
  - Changing culture by being actively involved in it
- Examples
  - Augustine
  - John Calvin
  - Many evangelicals

Significance of your view of Christ and Culture

- How you see these two interacting issues effects how you wish to practice your profession

Practicing engineering

- If you are in the Christ against culture perspective, you may feel a need to be honest and ethical, but have no real calling to use engineering to change the lives of poor people

- If you are in the Christ of Culture you also may not see any need to change the way your culture deals with poor people.

Christs and culture in paradox

- If you are in the Christ and culture in paradox you may wish to help poor people or you may not care because you are hoping to just do your job with the least amount of daily sin in your life

  - Since I am not in this group, this conclusion is very tentative (and may be incorrect)

Christh above culture

- The Christ above culture engineer sees Christ sitting in judgment on a culture that does not always help poor people.
  - Will likely feel a need to help poor people

Christ transforming culture

- If your view of transforming culture is evangelism, you may only work to help poor people as a means to an end (successful evangelism)
  - I do not recommend this perspective

Christt transforming culture

- If you see your engineering skills as capable of helping to improve lives you will be motivated to help poor people as this is intrinsically the right thing to do
  - Evangelism will also result, but it is not the only goal

Christian humanitarian engineering

- Requires an engineer who wishes to help poor people because that is intrinsically the right thing to do.
  - This can lead to other good things, such as evangelism, discipleship, and church growth
  - You should be willing to do this type of engineering, even if these other things do not result.

Christian engineering

- Does such a thing exist?

- Is Christian Humanitarian Engineering a subset of this?

Important Distinction

- Christian engineers
    - Christians who practice engineering
        - Should be competent and hard working
        - Should help create things that are useful to people

- Christian engineering
    - Engineering practiced with the explicit goal of advancing God's agenda in the world
        - See example on next page

Is this a Christian water pump?

Was the person who designed and installed it doing Christian humanitarian engineering?

Engineering as Mission

- Contrast the terms **Engineering as Mission** and **The Mission of Engineering**
- The Mission of Engineering
  - From a Christian perspective it involves using our engineering skills in a way that will honor God.
  - All Christian engineers are called to do this
  - For many Christian engineers, this may be their main calling
    - Designing and producing useful things that will help our society

Engineering as Mission

- This is the practice of engineering with the intentional goal of helping to advance the world mission of the church.
  - This may involve working on projects that will directly benefit poor people who are in unreached people groups
- Christian humanitarian engineering is an example of engineering as mission that involves working with poor people

Christian humanitarian engineering

- This is more than just humanitarian engineering done by a Christian
- My definition:
  - **The practice of engineering with the intentional goal of improving the well-being of underserved populations as part of our Christian calling to transform the world**

Conclusions

- Developed the concept of Christian Humanitarian Engineering using insights from
  - Humanitarian Engineering
  - Christ and Culture

- This is a work in progress

Any Questions?

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