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Reports: Big Hearts and Lopsided Brains: Giving Engineering a Compassionate Context

Jim F. Chamberlain

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BIG HEARTS AND LOPSIDED BRAINS

Giving engineering a compassionate context

Jim F. Chamberlain

Technology is designed in an isolated laboratory or shop, but its impacts are contextual. That context may include externalities of environmental degradation, social disruptions, or cultural incongruity. Engineers have always been trained to design for *function*, but not necessarily *context* or *environment*. Nearly a dozen U.S. Jesuit colleges currently offer engineering programs, and that many others offer a dual-degree program with an external engineering school. These colleges offer a unique contribution to the engineering profession that is now being desired at other liberal arts colleges. Opportunities for service learning, which takes place within Engineers Without Borders and Marquette's Engineering Service Concentration, are best augmented by prayerful reflection upon cultural and societal impact. In the words of Fr. General Nicolás, these students have "both professional competence *and* ...a depth of engagement with reality that transforms them at their deepest core."

Because of their core curriculum, Jesuit students will already be inclined to ask the questions that secular students are just now learning to ask in enlightened programs. In

addition to "What is the correct answer / solution?" they also ask "How might the solution be different in different populations?" and "How can a more sustainable design be achieved?" The standard technical knowledge is now supplemented by the *magis* of deliberate consideration of people, culture and environment.

In short, engineers are people with big hearts and lopsided brains. The sublime logic of computation must be balanced with the compassionate nuances of reality. Fr. General's recent message is to answer the "globalization of superficiality" with "real creativity (which) is an active, dynamic process of finding responses to real questions." Jesuit schools that offer either engineering or pre-engineering are meeting a need that will only increase in the coming decades. ■

Rev. Jim F. Chamberlain, P.E., is an engineer and diocesan priest (Austin) who taught environmental chemistry and worked in campus ministry at Spring Hill College, 2004-2005. He is currently completing his Ph.D. in environmental engineering at Clemson University.

THE IGNATIAN SPIRIT AT A NON-JESUIT UNIVERSITY

Christina A. Astorga

Editor's note. *We invited a brief report on Duquesne's Center for the Study of Catholic Social Thought as an example of another Catholic institution that shares the Ignatian vision.*

Most of the members of the Center's Board of External Consultants, as well as its speakers, are Jesuit-related. I myself have a long and deep connection with the Jesuits having been trained by them, and having been the first layperson chair of the theology department of the Ateneo de Manila University and a professor of moral theology at the Loyola School of Theology in the Philippines.

In a pluralistic and globalized world, the church can only be heard through persuasion, engagement, and most importantly through its genuine prophetic witness. The Center is engaged with the social and natural sciences so that Catholic social thought can influence scholarship in the pursuit of the university's social justice mission, and that the results might benefit the poor and marginalized. Through its conferences, faculty research awards, and student article awards, the Center was not at the margins, irrelevant, and without voice; it was, in the words of President Charles J. Dougherty, changing the culture of the university.

A student wrote after the this year's Article Award conference on torture: "I was required to attend for a class, but unlike most other requirements, I loved this. I was sad and sorry to see it end." Faculty who participated incorporate the conference's results into their courses and scholarship. The Center has also become a vital part of the Pittsburgh community and was selected by the Association of Catholic Colleges and Universities as one of the six, out of hundreds of centers/institutes at Catholic colleges and universities, to make a presentation at the national convention. ■

Christina A. Astorga is founding director of the Center for the Study of Catholic Social Thought at Duquesne University.

THE APPALACHIAN INSTITUTE: BALANCING THE SCALES

Mary Ellen Cassidy

The mission of the Clifford M. Lewis, S.J. Appalachian Institute at Wheeling Jesuit University is to initiate programs and collaborate with both local and national partners to solve problems facing the people of central Appalachia. These programs embody the spirit described by Fr. Adolfo Nicolás, S.J., in his April 2010 address. Each has an opportunity for "a profound engagement with the real" to promote the "universal good."

The Institute's experiential learning trips through southern West Virginia offer participants from all over a chance to interact with academic experts, community members and leaders from government, corporate and civic organizations to learn about water quality, energy and public health issues. They are challenged to reflect, analyze and then act to build sustainable and healthy communities. The Institute's service immersion trips give participants the opportunity to work with disenfranchised Appalachian neighbors at clinics, soup kitchens, head start and other community programs.

Along with trip programming, academic research projects "engage the creative imagination and academic rigor" of students and faculty to solve problems facing Appalachia today. In addition, educational forums and conferences allow the Institute to network with other universities and community partners to share resources and exchange ideas. The Institute's advocacy programs balance the scales of justice by engaging citizen advocates to change political and economic systems that block efforts towards healthy, sustainable communities. ■

Mary Ellen Cassidy is director of the Appalachian Institute at Wheeling University.



A Fairfield University student completes a log of her service trip to the Pine Ridge reservation in South Dakota.

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