

The face of America is changing, and changing in ways that not only invite but demand the participation of creative and caring young people. It's anyone's guess, for example, how much longer petroleum-based energy will remain cheap and abundant. But there's no debating that we are heading into a "post-fossil" world, a world in which fossil fuels will become either too scarce and/or too environmentally dangerous to remain in widespread use.

America's population is changing as well. Conservative estimates project 100 million more Americans by the year 2050, a 33% increase from today's level. Soon there will be not only many more Americans, there will be far fewer energy resources to support them.

Far fewer *traditional* energy sources, that is. While currently more expensive than traditional energy sources, renewable energy-wind, solar, biomass-hold great promise for meeting the increasing energy needs of an increasing population. It seems only a matter of time, through, until technological advances and rising fossil fuel costs make renewable energy the predominate source of power in the decades ahead.

And while there will always be the need for energy, the need for energy to heat and cool homes and businesses - estimated to account for 40% of total energy use - can in many situations be met with passive solar and other "green" building techniques.

"Cheap," whether referring to energy costs or anything else, is a relative term. Energy remains comparatively cheap in America, but not for everyone. Many states are forced to subsidize the heating and cooling costs of their low-income and elderly residents during the hottest and coldest months of the year. Isolated reports of people dying from the effects of heat or cold surface every summer and winter.

Rural communities, many of which are struggling to retain their viability in an increasingly urbanized world, are particularly vulnerable to rising energy costs. Many of the older buildings which dominate the rural architectural landscape were either built without concern for energy costs or worse yet, were extravagantly designed to demonstrate that the newly-acquired wealth of their builders separated them from a not-too-distant past when heating required the daily gathering of firewood (or even dried buffalo manure) by every household on the frontier.

In an attempt to address the cost of heating and cooling existing buildings as well as to prepare in advance for the coming "post-fossil" world, Boone County, a small, rural county in northeastern Nebraska, reached out to internationally-respected eco-architect Martin Despang.

Professor Despang's previous studios brought a wealth of green building designs and techniques to an area unfamiliar with such things. They also brought a badly-needed youth perspective back to a rural county.

Since the time of World War I rural communities across America have been losing their young people to the outside world. One of the highest priorities of rural development efforts has been to engage talented young people in planning for the future. Generally, however, these efforts have been unsuccessful.

With the help of Professor Despang there developed a new appreciation for the potential of

rural communities: potential for growth, potential for participation in the global community while still preserving their remarkable quality of life, potential to become leaders in creating a new American landscape, one which combines the best of yesterday with the best of tomorrow. From the excitement and enthusiasm generated there has been an emerging desire to “re-pioneer” rural areas. A desire to combining the optimism and drive of the initial pioneers with modern technology to reshape the rural landscape into a once-again vital and integral component of America’s identity.

In working with rural communities it quickly became apparent that not only were they suffering from economic decline, they were dealing even more so with a cultural decline. Agri-culture - the “culture of the soil” - has been replaced by Agribusiness - the exploitation of the soil for maximum short-term profit. This has led to dramatic changes in rural society. The holistic approach to production, the environment and community that characterized traditional agriculture fell away as farmers were forced to either focus exclusively on profit or leave farming - and the communities they were an essential part of - forever. The shift from agriculture to agribusiness has led to increases in food production capacities and hence profits. Yet at the same time as profits have risen, rural communities floundered - economics is demonstrably secondary to culture as a foundation of rural viability.

Rural culture is sustained primarily through the social interaction of residents. And to interact, rural residents need places to meet. This soon became obvious to Professor Despong and his students; they devoted most of their efforts to developing places for community members to gather. These included a community center, a performing arts center and even a green grocery store.

And while it has been argued that one cannot cure social ills through architecture, one can make significant inroads in addressing rural cultural/social issues by designing attractive, inviting community buildings that are economical for rural residents to both build and maintain (a traditional building in rural area costs 8 times as much to maintain over its lifetime as it costs to build...).

The potential of “re-pioneering” rural areas isn’t limited, through, to what’s been done so far. There are a myriad of areas yet to be explored. Among these are ways to re-define small-scale farming so that vegetables and even some fruits can be locally produced all year long. Addressing the humanitarian and health concerns of current livestock production is another area where young minds are being asked to develop alternatives. And finding new approaches to education is of central concern. Rural schools need to teach their students about not only the accomplishments of the original pioneers but also inspire them to take up the never-ending work of pioneering. And the best way to teach anything is by demonstrating it.

Re-pioneering is about to developing alternatives to the out-worn conventions that have kept many rural communities mired in the obsolete approaches of the past. Likewise, traditional approaches to education and the buildings needed to carry out these approaches need a pioneering re-visioning. 21st Century America is going to face challenges unlike any in its past. The most important thing society can do to ensure that these challenges are successfully met is to give out young people - wherever they happen to live - the best education possible. In designing new approaches to educational facilities, you will be

helping shape the face of not only education but of a new era in American growth.

Through this course you will be afforded an opportunity to take a pioneering new look at schools in Boone County (a microcosm for schools in general). Schools in both urban and rural areas tend to mirror the institutional characteristics of our modern educational system. Unfortunately, many are architecturally little more than facilities for “institutionalizing” a community’s young people so their behavior can be regimented and controlled.

But schools can and should be much more than structurally convenient ways to confine the most impressionable members of society – schools can and should provide the structural foundation for active learning. Like the buildings the UNL students designed to invite adult populations to gather and interact, school buildings should invite children to grow and explore.

And while power will always be needed for supplemental lighting and to run computers, the schools of the future need to be as sustainable as possible as a hedge against sure-to-rise energy costs.

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As the people who initially asked Professor Despang for his help in charting Boone County’s future, my wife Lori and I have been honored to facilitate his work in this area. We cordially invite you to join with us this semester; technology can do much to compensate for the physical distance between us. Via the Internet, Lori and I can serve as your “eyes and ears” in Boone County.

Part of the re-pioneering approach is to use technology to help rural areas interact with the wider world. By using technology to expand your classroom into our county, we are re-pioneering not only the shape of education, but educational techniques as well.

Thank you for your interest in this course.

Sincerely,

Paul Hosford  
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