Urban Renewal Redux  Ask the merchants on Seventh Avenue in downtown Phoenix when they first began to notice a downturn in business, and they're likely to point to the year 1964. That is when the city took out the street trees, bus-stop benches, and most of the sidewalk in front of their stores to widen the street. Already struggling against a growing suburban competition, the merchants lamented that the expanded thoroughfare only made it easier for motorists to speed past their shop windows on their way to the tidy neighborhoods and shiny new strip malls that were cropping up all around the urban fringe.

Like so many other downtown neighborhoods across the United States, Seventh Avenue seemed destined for the urban dustbin. But Darren Petrucci believes that design can help reverse the fortunes of this embattled commercial strip.

Petrucci is an assistant professor in the School of Architecture at Arizona State University. In November 2002, supported by more than $1 million in combined federal and municipal grants, the City of Phoenix broke ground on a pilot project designed by Petrucci to breathe new life into a one-mile section of Seventh Avenue.

The goals of the project were set by a group of grassroots businesspeople known as the Seventh Avenue Merchant's Association. They were straightforward. The group asked that a redesign plan help create a distinctive identity for their commercial strip, provide guidelines for streetscape and building renovations, and make pedestrian connections to the surrounding neighborhood.

Their wish list would have sent a less intrepid and imaginative designer fleeing to his studio for cover. Seventh Avenue offered no historic waterfronts, no shabby-chic warehouses, and no quaint neighborhood parks to salvage. Instead, Petrucci encountered a sea of asphalt and concrete dotted with charmless, single-story bunkers that housed mom-and-pop dry cleaners, barber shops, liquor stores, restaurants, antique shops, and used furniture stores. The nondescript buildings were all but lost in a confusing thicket of store signs and billboard advertising.

In the past, urban renewal architects would have called out the bulldozers on sites like Seventh Avenue and then implemented a grand design scheme that often bore no resemblance to what came before. Petrucci's research specialty focuses on commercial corridors and public infrastructure. Instead of turning his back on the messiness of the Seventh Avenue strip, he actually looked to it for inspiration.

For years, the ASU scholar has prowled the corners of America's forgotten urban landscapes. He looks for the ingenious everyday solutions that ordinary people have improvised in order to humanize the harsh, anonymous landscapes in which they work and live. What Petrucci finds is not always pretty, but he values its honesty.

"Designing houses for rich people is not what interests me," Petrucci says. "I'm just really interested in the disenfranchised areas of the city because of the way they practice the city, the way they use it. It's not MTV telling them how to use it—it's more pure, more raw."

Petrucci sought to codify this authenticity using a design strategy that he calls iMenity Infrastructure (amenity infrastructure + identity infrastructure). iMenity Infrastructure, he explains, is essentially a site-specific "kit of parts." It is a collection of simple design tools and concepts that could be used by the Seventh Avenue merchants as well as the city to tame the street's urban unruliness.

Petrucci's iMenity package for Seventh Avenue, for example, includes a palette developed by urban colorist Cecelia Conover. She analyzed the harsh light of the desert sun in the district's paved environment and developed a set of compatible colors. The lettering style used in the district's signage was drawn from a typeface that recurred in many existing commercial signs.
Growing in Luxury  In urban and suburban areas of central Arizona, money appears to be just as important to plants as water and food. A team of researchers that includes several ASU scientists found that higher income level is associated with greater plant diversity.

This “luxury effect” is so pronounced that plant diversity at sites in neighborhoods with incomes above $50,750 per year were on average twice that found in landscapes of less wealthy areas. The researchers presented their findings in the online issue of Proceedings of the National Academy of Sciences in July 2003.

“In human-constructed systems, it’s as if money is just as important to plants as nutrients and water supply,” says Diane Hope, a researcher in ASU’s Center for Environmental Studies and lead scientist for the survey.

“It’s not the money per se, because you don’t go and pour money on the ground and plants grow,” Hope says. “Rather, it’s the things that money enables people to do and the way that they live that affects the plant diversity in urban areas.”

The findings are the result of a large field survey and analysis of data gathered in the Central Arizona-Phoenix Long-Term Ecological Research site. The project is a major ongoing study to investigate the ecological characteristics of the Central Arizona-Phoenix region and how urbanization is affecting that character.

The results provide a comprehensive “snapshot” of the ecological characteristics of the Phoenix metro area and surrounding agricultural and desert lands. The survey will be repeated in five-year intervals to monitor long-term changes.  

To learn more about the project, visit the Center for Environmental Studies at http://ces.asu.edu/ces

Inexpensive multipurpose canopies of steel and translucent polycarbonate panels, what Petrucci calls urban Lampshades, have been designed to mimic the simple, no-nonsense profiles of the district’s commercial buildings. They can be used to shade a bus stop or for curbing an outdoor “room” out of the leftover space of an unoccupied street corner. The Lampshades’ lighted roofs also double as spaces for public art, advertising, or store signs.

Petrucci says the Seventh Avenue project does more than supply a practical design lexicon for enhancing the visual connectivity and coherence of the street. It provokes a rethinking of the larger urban landscape.

For example, it examines opportunities for reconfiguring rights-of-way such as parking lots and service alleys to accommodate a greater range of human uses.

In the process, such changes challenge existing ordinances that keep these and other large segments of the landscape in a drab and lifeless condition.

The ASU professor’s iMenity Infrastructure has begun to attract the attention of other cities that are struggling to reinvent their own aging commercial strips. In 2000, neighboring Scottsdale invited Petrucci to study a sagging 2.5-mile commercial strip at the city’s heart. Two years later, the Scottsdale project, known as GLUE (Generic Landscapes/Urban Environments), won a prestigious Progressive Architecture Award from Architectural magazine.

Gregg Pasquarelli was a juror for the PA Award. Such projects, he says, will begin “reclaiming the urban wasteland, the strip mall parking lot. This is something that has to be done. There are huge voids in our cities and we have to come up with ways of reattaching these things.”  Adelheid Fischer

Zen and the Art of Golf  Does your golf game suffer from the “yips” – sudden jerks and twitches that ruin a shot? Maybe you’re a little mentally unbalanced.

Don’t worry–you’re not crazy. You just might have more activity on one side of your brain than the other.

Debbie Crews is an assistant research professor in sport psychology at ASU. She studies the brain activity of golfers. Results from her research indicate that people plagued by the “yips” actually show more activity in the brain’s left hemisphere than in the right.

During testing, golfers who performed well were able to quiet the left side of their brains. Their left brain activity, associated with logic, analysis and verbal reasoning, was balanced with that of the creative and intuitive right hemisphere.

Crews’ findings support the notion that getting into a “zone” of relaxed awareness promotes better sports performance. The information may be of value to other athletes, musicians, and even surgeons. “We’re talking about a state of synchrony,” says Crews. “When we have a problem with how we are performing, so often we turn to mechanics. But the mental and emotional side is just as important.”  Diane Boudreau

Comparing Vertebrate Genomes  Remember the time wacky old Aunt Agnes embarrassed you at a holiday gathering? Don’t worry, there are probably much stranger relations lurking in your evolutionary past. Recent work by a group of scientists, including ASU biologist Jeff Touchman, shows that, among other things, humans are actually more closely related to rodents than to dogs or cats.

The researchers completed the first large-scale comparison of the human genome to 12 other vertebrates. Their work is an important step in understanding how vertebrate species are genetically similar or different, and provides a glimpse into the evolutionary past of humans.

Touchman also is director of the sequencing facility at the Translational Genomics Research Institute in Phoenix. The group published its findings in the Aug. 14, 2003, issue of Nature.

The scientists took a close look at segment of the human chromosome 7, which includes the gene mutated in cystic fibrosis.

The report details the comparison of that segment to the same region in the genome of the chimpanzee, baboon, cat, dog, cow, pig, rat, mouse, chicken, two species of puffer fish, and the zebra fish. The research team included 71 scientists from 10 institutions.

“One of the things we examined was how much of the genome sequence was ‘conserved’ across organisms,” Touchman says. Sequences that were conserved, or selected for retention in the genome, are thought to be strong candidates for being biologically significant to the survival of that species.

Also, by studying the differences in the genome of humans compared to other vertebrates, the researchers could determine when organisms split off and headed in different evolutionary directions.

“The work provides a first glimpse of the type of genomic studies that will occur in the future as more and more whole genomes are sequenced,” Touchman adds.

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Arizona has a big problem. More high school students leave the classroom and never come back in Arizona than in any other state. For example, during any given year, approximately 700 freshmen enroll at Camelback High School in Phoenix. Four years later, less than half will graduate. Some will transfer to other schools, some will drop out, and some will simply disappear.

Many high schools throughout the state and across the nation struggle—just like Camelback—to hold on to their students. What is causing America's teens to give up on their education? And what is the best way to solve this serious social ill? A select group of students from the W.P. Carey School of Business at Arizona State University believe they have found an answer—and they found it by talking to Camelback's at-risk students.

Each year, the Rodel Community Scholars Program assembles three ASU consultant teams comprised of six students. The teams are paired with teens at three Phoenix-area high schools. The goal is to find out what factors influence the teens' educational decisions. The younger students are sophomores and have been identified as academically talented, though potentially at-risk for cutting their education short, either by dropping out of high school or skipping college.

The Rodel teams spend an entire semester doing on-site research. They use their findings to formulate comprehensive, customized business plans. The plans are designed to improve student retention rates at each high school. The teams then present those plans to an advisory council made up of local business leaders, public school administrators, and foundation representatives.

The program was born when philanthropist and retired businessman Don Budinger offered the support of the Rodel Foundation. The objectives are twofold: to develop viable business plans to help improve high school student retention and to encourage interest in civic leadership among ASU's business students. The Rodel program began in 2001. It already has generated several viable business plans that are being implemented either in part or in full at the pilot high schools, including Camelback.

Raul Cardenas is director of the program. "When we first launched the program, I never thought that these business plans would receive so much attention and so much credibility," he says. "I thought of this more as an opportunity to engage some college students in helping high-risk teens; as a way for the college students to learn about the impact that dropouts have on the community. I didn't envision that they'd actually create a potential solution to a piece of the retention problem."

The concept of solving complicated social problems with proven business applications is unique, especially in the area of high school student retention. But it makes perfect sense. Professor Bob Cardy is the Camelback team's faculty advisor. He says that many business models in areas such as human resources and customer service have the potential to work effectively in an educational setting. "For example, an approach found to help reduce employee turnover might also help to reduce student dropouts," Cardy explains. "Obviously these are students and not employees, but you're still challenged by the same types of issues such as performance, retention, communication, and motivation."

A significant portion of the program's success—and much of its magic—can be attributed to the relationships that form between the college students and their younger counterparts at Camelback. Each of the past two years, an ASU team worked primarily with one class, visiting the school once or twice a week throughout the fall and spring semesters. Teams developed a rapport with students and a clear picture of the school's most critical issues. To find answers, they used a process of written surveys, focus groups, one-on-one interviews, interactive activities, and other research techniques.

"That's when everything really started to take off, when we got in the classroom with the students," says Andrew Bain, an ASU graduate and Rodel scholar at Camelback in 2001-2002. "Significant portions of our gains were from simply speaking with these students like peers and fellow adults. It was not something that many of them were used to, and they really responded to it in a positive way."

Each Rodel team worked with a different group of teens and approached their projects from a different business angle. But the raw data they collected at the school was fairly consistent. In fact, both teams uncovered a handful of underlying issues that contribute to the dropout problem and the generally negative image students have of the school. The teens frequently expressed that their classes were boring. They also thought that much of what they were learning in class was not relevant to their lives.

"They told us that teachers who constantly lecture throughout a class period or keep opinionated discussion completely out of the lesson plan were boring," says Elizabeth Edwards, a Rodel scholar who participated in the second team at Camelback. "Many of the students wanted to be challenged—instead of lectured—through group work, discussion, and debate. The strongest message we got from the students was that they wanted more input into their education. They didn't want to be told what to do all the time," says Edwards. "They felt that they had no voice."

Armed with this new insight, the Rodel teams faced the task of developing business plans that could alleviate a portion of the problems plaguing the school. In addition, the plans needed to be embraced by the school's teachers and administrative staff.

"There's a big disconnect between what they expect to be able to earn without a high school diploma and what kind of lifestyle they envision for themselves in the future."  

ANDREW BAIN, ASU RODEL SCHOLAR

Multilevel Mentoring  The Rodel Community Scholars Program has two primary goals. Participants aim to develop viable business plans that will help improve high school student retention. They also strive to develop the leadership skills of ASU's business students. The community advisory council plays an important role in both objectives. During the business plan review process, the council provides a real-word critique to ASU students. Council members also serve as a network of partners and advocates for the most feasible plans. Respected public figures like Dick Snell, retired chairman for Pinnacle West Capital, and Kino Flores, superintendent of Tolleson Union High Schools, represent a sampling of the influence the council holds. These individuals also serve as role models and mentors. They nurture the students' interest in social concerns and community involvement—an example that trickles down to the relationships forged. Robin Hanna is an advisory council member and retired chief financial officer for Bank of America's credit card division. She believes that is where the magic of the Rodel program lies. "When you have people who are looked up to—as college students are by high school students—making an investment of time in the lives and the future of younger students, the younger students really rise to that," she says. "And it's just amazing to see how much difference that makes."

Jessica McCann
What do ASU Rodel Scholar business students encounter when they enter a typical Camelback High School classroom for the first time? For the most part, a very different world from the one they had known in high school. Although Camelback is situated near one of the city's most elite neighborhoods, many students travel extended distances by city bus to get there. The student population is highly diverse. The breakdown is about 60 percent Hispanic, 9 percent African American, and 6 percent Native American and Asian American. Many students are considered low-income, and about 44 percent are on a reduced lunch program. Academically, the students struggle a great deal. The AIMS (Arizona’s Instrument to Measure Standards) tests completed by Camelback’s sophomores in 2000 demonstrated certain shortcomings. Only 13 percent of students met the standard in the writing portion of the test. Only 6 percent met the standard in mathematics. Not one student exceeded the standards in either area.

Elizabeth Edwards is an ASU student participating in the Camelback Rodel program. She says that low self-esteem and a lack of confidence in their own ability to succeed was prevalent among the students. “One kid in class kept saying to us, ‘You know we’re called a failing school, don’t you?’ There is very much a sense of being labeled, and it’s demoralizing for them,” she says.

In addition to their job of conducting research and creating a business plan, the Rodel scholars serve a vital role as mentors. They stand before the class, every week for an entire school year, as flesh-and-blood examples of what the young students could themselves achieve if they choose to shake off the labels and continue their education.

Jessica McCann

FOR MORE INFORMATION ABOUT THE RODEL COMMUNITY SCHOLARS PROGRAM, CONTACT PROGRAM DIRECTOR RAUL CARDENAS AT 480.965.8974. SEND E-MAIL TO RODEL@ASU.EDU. BUSINESS PROFESSORS BOB CARDY, JOSE MENDEZ, AND KURT PANY ADVISE RODEL STUDENT TEAMS. SEND E-MAIL TO THEM INDIVIDUALLY AT ROBERT.CARDY@ASU.EDU, JOSE.MENDEZ@ASU.EDU, OR KURT.PANY@ASU.EDU