Parking Downtown

Fall 2019 ● Phil 222● Environmental Ethics

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About Office of Online and Education Outreach

The Office of Online and Education Outreach enriches the economic, cultural, personal and professional lives of a diverse society, eliminating barriers to expand the educational resources of SIUE. We promote learning by providing accessible educational opportunities through the agile development of relevant, collaborative programs and partnerships.

The Office of Online and Education Outreach provides a broad array of services in support of academic units, community partners and all learners.

Besides professional and personal development courses offered both on-campus and online, the Office of Online and Education Outreach provides:

- Workshops for licensed professionals
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- Support for corporate partnerships
- Support for the SIUE Successful Community Collaborative
- Support and registration for SIUE summer camps

Please explore our pages to learn more about how we extend the reach of SIUE by serving the broader community with continuing education, workforce training, personal development courses and much more.

About SSCC

SIUE Successful Communities Collaborative (SSCC) is a cross-disciplinary program that supports one-year partnerships between the University and communities in Illinois to advance local resilience and sustainability based on community-identified environmental, social, and economic issues and needs. Our mission is to connect communities with the students and faculty of SIUE.

SSCC selects a single partner community (generally a city or county) through a competitive application process. Working with administrative staff and stakeholders in the selected community, the collaborative helps identify 10–15 projects that will advance local resilience and sustainability based on community-identified needs. Each project is connected with one or more key courses at SIUE that can provide research or technical support and move the project forward.

For communities SSCC provides innovative strategies to move community-identified, high-priority sustainability goals forward. Communities often face limited resources to explore sustainability and quality of life questions. SSCC seeks to reduce those obstacles by linking existing graduate and undergraduate courses at SIUE to explore innovative solutions to community-identified projects. Graduate, professional and advanced undergraduate students participate in SSCC by enrolling in a related course. The one-year partnership could engage 10-15 courses spanning up to 10+ academic departments. Projects may include engineering, urban design, planning, cost-benefit analysis, economic development, legal and policy analysis, community engagement, marketing or public relations campaigns.

SSCC staff work closely with faculty to incorporate community projects into their courses and connect students with community partners. Staff and stakeholders from the community work closely with SIUE faculty and students to provide local knowledge and deeper understanding into the issues, guaranteeing projects are not only innovative, but also suitable to the community.

SSCC Directors and Staff

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About the Partner

The [City of Edwardsville](#) was incorporated in 1818, and is located 23 miles northeast of St. Louis, Missouri. It is part of the Metro-East region of the Greater St. Louis metropolitan area and is the county seat of [Madison County, Illinois](#).

Home to about 25,000 residents, Edwardsville is a great place to live, work, and raise a family. The city's rich architectural history can be seen in its charming downtown business district and its many tree-lined streets of historic homes. Edwardsville's residents can access more than 80 miles [of Madison County Transit walking and cycling trails](#), hundreds of acres of municipal [nature preserves](#), 17 [public parks](#), and recreation facilities including two [YMCA](#) locations. The [Edwardsville School District](#) and several private and [parochial schools](#) provide area children with a top-rated education. The public school district boasts a 97% graduation rate, with 86% of students completing a college education. Higher education is easily accessible to residents, with [Southern Illinois University Edwardsville](#) and the [N.O. Nelson Campus of Lewis and Clark Community College](#) within city limits.

Large employers in Edwardsville include the [Hershey Company](#), Dial Corporation, [Procter & Gamble](#), [OHL](#), [Unilever](#), [Walgreens](#) Distribution Center, and [Save-a-Lot](#) Distribution Center. Edwardsville residents enjoy a [thriving food scene](#) and a bustling [downtown shopping district](#) with many locally owned small businesses.

Edwardsville is hometown to five past Illinois governors, including its namesake[, Ninian Edwards](#), who served as governor of Illinois Territory from 1809 – 1818. Other residents of note are [N.O. Nelson](#), founder of Leclaire, once a company, now an Edwardsville neighborhood; [Mannie Jackson](#), former player and current owner of the [Harlem Globetrotters](#); [Laurie Metcalf](#), Tony Award-winning actor; [Lucille "Billie" Poole](#), jazz singer, and [Sam M. Vadalabene](#), renowned Illinois legislator.

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Executive Summary

This report discusses ethical theories to help make recommendations for the City of Edwardsville in their plan to build a parking garage in the downtown area. The recommendations given will provide the City with environmentally ethical and ecofriendly ideas that can be implemented during the planning of their project. The overall recommendation in this report suggests the parking garage should be built specifically for the purpose of adaptive reuse and discusses the benefits this idea offers. By building structures with adaptive reuse in mind, the City of Edwardsville will help to reduce humanity's ecological footprint, lessen intergenerational buck-passing, and decrease the mass of technological momentum.

Downtown Parking

The Proliferation of Parking Garages

Often, cities that see one parking garage built see many more built soon afterwards. This trend does not bode well for environmental concerns across the city, as garages eat up space that could be much needed greenspace and are overall unsustainable.

Aesthetic Preservation

Aesthetics is the branch of philosophy concerned with the nature and appreciation of art, beauty and good taste. This opens up a way to justify the preservation or conservation of nature. That is, simply due to its beauty, nature should be treated respectfully.

IMAGE 1: PHILOSOPHY STUDENTS PRESENT TO A COMMUNITY MEMBER

Think about places such as Yellowstone or Yosemite. These places have been conserved solely due to their aesthetic appearance. Unlike these national parks, other places that were once green spaces have now been turned into commercial real estate. What separates them? Beauty.

Some things that are not defined as beautiful to humans still deserve to be treated respectfully. Downtown Edwardsville has limited green space, which ultimately decreases its natural beauty. To make something aesthetically pleasing, furthermore, can be costly to the environment. For example, landscaping choices preferred by homeowners tend to use more water and other natural resources than would native flora and fauna.

The proliferation of parking garages is a real issue. This means that more and more green space will be removed. To offset this, we need to conserve as much of the green space that is available. Additionally, we recommend introducing more green space, if possible, as this will increase the aesthetic value. When something is aesthetically pleasing, people are drawn toward it and this is exactly what downtown Edwardsville needs.

Sustainable Practice

Sustainability is the idea that what people need today can be given without taking away from what people may need in the future. A prime example of this would be the use of fossil fuels and other nonrenewable resources. These resources are being consumed at a pace which

leaves next to nothing for what future generations may require. This may be something convenient for people today to do, but the pollution and lack of resources being used are very detrimental to the future. Sustainability would mean that people do not use more resources than what they require as they could potentially harm the needs of the future.

Sustainability comes into play with the construction of parking garage. While these garages may be more efficient at creating more parking while taking up less space, they require a plethora of resources to make them and in addition to being costly, they are often harmful to the environment. The proliferation of parking garages to create more convenient parking is the opposite of what sustainability is. Instead the focus needs to move away from convenience and towards preserving the nature that we have and making things more sustainable.

One way to help make places like downtown Edwardsville more sustainable is to introduce green spaces like community gardens to help offset the damage caused by parking garages and other modern constructions. One example of this could be the sustainable land lab in St. Louis. They are growing crops of sunflowers and winter wheat in a previously vacant lot in order to beautify the surrounding area in addition to extracting harmful chemicals such as lead. One other benefit of introducing spaces like this is that having pleasant surroundings may make people more inclined to walk further to their destination, reducing the need for a parking garage. In addition to implementing green spaces, another possibility for introducing more sustainable practices is in the construction of the parking garage itself. By using more sustainable materials, the damage caused by parking garages can be lessened. (See also Earth Edwardsville: A Pocket Park Feasibility Study.)

Green Parking

Taking the environmental impact of a parking garage into consideration is a necessary part of the planning process. Technological momentum, sustainability, and economics create an opportunity to plan a parking garage that can become a model for environmentally-focused urban planning.

IMAGE 2 THREE STUDENTS PRESENT TO A COMMUNITY MEMBER

Technological Momentum

Central to Edwardsville's desire to build a parking garage, is technological momentum. A relevant philosophical concept, technological momentum shapes our transportation system which is a major contributor to climate change. Technological momentum refers to the
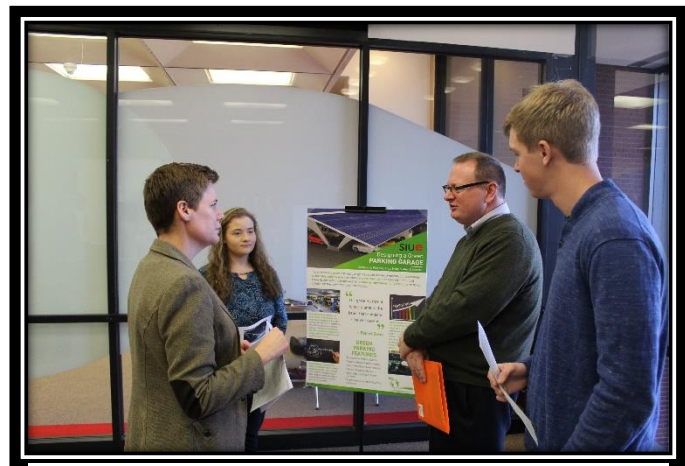
interaction of technology and society over time in one direction. Thomas Hughes introduced the concept to describe complex technological systems like transportation and suburbia. According to Hughes, technological systems are subject to momentum, which is mass x velocity. As technological systems mature, their mass and velocity increase. Consider a snow ball rolling down a hill. Stopping the snowball as it grows bigger and increases in speed becomes increasingly difficult because of momentum. The same is true when we consider our transportation system. Adding new infrastructure, like a parking garage, increases mass to the transportation system (Kirkman, 2004).
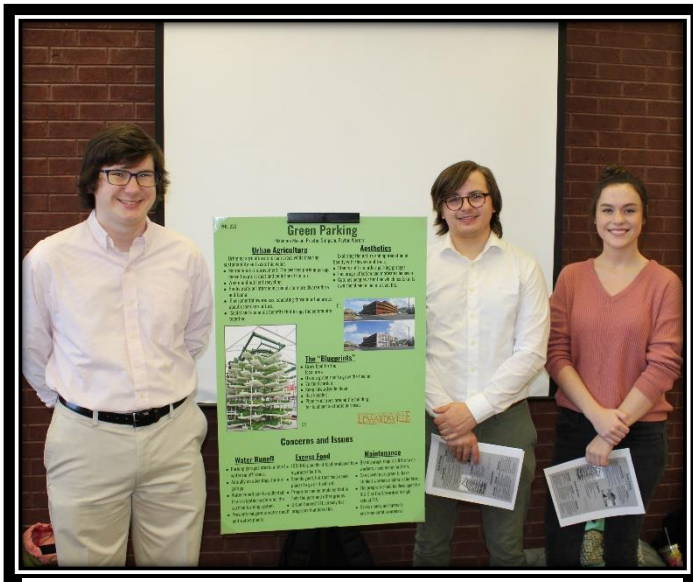

IMAGE 3 PHILOSOPHY STUDENTS AND THEIR POSTER ON GREEN GARAGES

To tackle climate change and leave an environmentally responsible legacy for future generations, we need to disrupt and redirect transportation system momentum. Ironically, technology is part of the solution. The introduction of computers and the internet represented technological advances in the last century. The 21st century has experienced the intersection of transportation with computers and the internet. "Today, automobiles are computers on wheels connected to the cloud." Autonomous driving advances will disrupt our transportation system and redirect momentum, creating opportunities to reshape transportation through ride sharing like Uber and Lyft, and car sharing by industry incumbents like Ford and robotic parking in garages (Boston University).

Environmental Economics

Environmental economics also plays a big factor in the design of a green parking garage. Environmental economics examines the relationship between economics and the environment. One way of making decisions about a green garage is to use cost-benefit analysis. A cost-benefit analysis is a decision-making process that compares the benefits of a decision against the costs. In the case of including eco-friendly features in a garage, the benefits of making the garage more efficient, sustainable, convenient outweigh any additional construction costs. Since eliminating all pollution is impossible, we can use cost-benefit analysis to find an optimum level of pollution by weighing the benefits of green innovations with their opportunity costs. Using

this method, we can use our resources in a way that not only benefits Edwardsville, but also our environment (Baxter, 1974).

Sustainability

Being sustainable means, "meeting the needs of the present without compromising the ability of future generations to meet their needs" (Mitchell Grant and Will Kenton). That's why sustainability is another factor to consider when building a modern parking garage. Today, building a sustainable parking garages is feasible. Some key features include; energy efficiency, use of sustainable building material, solar and wind power, and the eventual re-purposing of parking structures into next generation office buildings or apartments (Tang, 2011).

When thinking about a sustainable parking garage, one of the most important concepts is its ecological footprint. "Ecological footprint analysis reveals the growing competing demands on natural capital, and it also raises the issues both of equity and the long-term sustainability of production" (Tjeerd Deelstra, and Herbert Girardet).

Concerns and Issues

Water Runoff

Parking garages must route its collected rainwater and snow to the cities drainage system. This can be difficult depending on the design of the garage. We imagine a different type of drainage system that could be implemented for the City's garage. Rainwater and snow can be collected and run into an irrigation system. A home system is about $3,000-4,000 worth of materials (http://www.renewableenergyhub.us). This will be on a larger scale, but water bills will be less with a decent amount of water for farming coming naturally.

Excess Food

A parking garage with vertical farming in Wyoming can produce a harvest of "37,000 pounds of greens, 4,400 pounds of herbs, and 44,000 pounds of tomatoes" (The Verge). This creates the question: Where will all the food go? Mainly the food can be sold to local businesses and groceries, reducing not only the monetary costs of food transport but also environmental costs. Not all of the foods are sold in stores however, with many foods being "unfit" for sale. This includes fruits and vegetables that are oversized, look a bit weird, or maybe have a few bruises. These foods are still fit for human consumption, and instead of being thrown away we can create programs to distribute these "ugly" foods to those in poverty in Edwardsville. Similar things are happening in St Louis, with Urban Harvest STL donating a lot of their food to non-profit groups like the St. Patrick Center (urbanharveststl.org).

Maintenance

A traditional parking garage can require little to no full-time workers, but our design requires workers to plant, maintain, and harvest produce. This could drive up monthly costs, but could

be offset by encouraging volunteers to do the work. Experts from the Edwardsville Beautification and Tree Commission could provide expertise and supervise volunteers. Programs could be established to benefit local FFA students at Edwardsville High School and SIUE students. This keeps maintenance costs low and also underscores the importance of urban agriculture and sustainability to local youth.

The Ecofriendly Future of Parking Garages

How Adaptive Reuse is Necessary in Repurposing

The overall goal while building with adaptive reuse in mind is to create an economy that is less linear, meaning there is less of a 'take-make-waste' model of production. Adaptive reuse means to make use of an existing structure for something other than its intended use once it is no longer useful by its original purpose. A circular economy, in contrast to a linear one, promotes the reuse and refurbishment of waste to create a closed-loop

IMAGE 4 THREE ADDITIONAL STUDENTS AND THEIR POSTER ON ECOFRIENDLY GARAGES

system in which resources stay. Circular economies help to reduce the rate of resource depletion, waste, and humanity's ecological footprint ("What Is a Circular Economy?" 2017). By committing to circular practices, humans take responsibility for their current actions on the environment and are no longer passing the intergenerational buck, which means to create environmental issues to be dealt with later by future generations. By approaching projects with a plan for adaptive reuse, the proliferation of built structures and technological mass in society is reduced, and resources are used more sustainably as a result. This form of sustainable development is critical to the future of the modern world considering the increasing urban population and worsening environmental atmosphere that humanity has created for itself and is currently facing.

Principles of Adaptive Reuse:

- Maintain Memory and Place

- Increase Environmental Sustainability

- Preserve Social Sustainability (continuity of social narrative told by urban form)

- Economic Efficiency

- Authenticity of Culture

- Codify with Urban Planning Controls (Harrison Et. Al)

Aspects of 'Future Proofing' Buildings:

- Durable material selection, built to withstand tornados/hurricanes

- Build with awareness of systemic activity and impacts of sea level rise

- Reduce Obsolescence with Proactive Evaluations of Conditions

- Use local Materials and Labor (Richaven Architecture and Preservation, 2013)

Conclusion and Next Steps

We've seen just how harmful parking garages can be for the aesthetic value of an area, and how the continuous proliferation thereof is an unsustainable practice. Now what? Obviously, we want to reduce the need for more parking garages, but how do we do that? Make downtown Edwardsville a destination that gets people out and about more! Currently, downtown is a place where people show up, do one thing, and then go home. Adding more activities that encourage staying and experiencing downtown will help curb the need for parking garages. The Goshen Market is a good first step, but it lacks a proper home. Edwardsville needs a community park space in the downtown area that will get people out of their cars and set them on a path. This space can then be rented by event organizers to further attract people to downtown as a place to be at!

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