Bringing Communities Closer with Green Spaces

Creating mobile gardens from reusable materials

Tag Words: Re-Purpose Gardens; Communities; Public or Private Spaces; Organic; Creative; Park(ing) Day

Authors: Meredith Knesevitch, Douglas Lee with Julie M. Fagan, Ph.D

Summary

Spaces are not being utilized to their full extent in urban communities. They lack green aspects that allow people to interact at those spaces or bring a beneficial attribute to the environment, as development of areas continue to happen daily. Our solution first encompassed the idea of Parking(Day), the idea of occupying parking meter spaces and feeding it while people occupy the space to whatever they desire. However, that idea did not really lift off, so the next alternative was to create re-purpose gardens, gardens that are portable enough to be placed and moved anywhere while using creativity when creating it and allows the gardener to grow their own vegetation of their desire. The re-purpose gardens demonstrate simplicity in creating gardens in their choice of any base or planter, which can be an everyday household item while knowing what they feed their plants. (DL)

Video Link
http://www.youtube.com/watch?v=hGEC1hKtM8c&feature=youtu.be

Having Green Spaces

Lack of Green Spaces in the Urban Areas

“Life moves pretty fast. If you don't stop and look around once in a while, you could miss it.” This problem occurs every day, everywhere, and people do not really stop to look at what is around them. Many urban areas lack green space. Cities like New York City, Chicago, Los Angeles, as well as foreign cities like Paris, Hong Kong, and many others lack public green space. They mostly are made up of buildings, shops, and roadside parking spots. There is barely any plant or animal life in those areas. These areas are places that people can use to socialize, enjoy, and appreciate their setting that surrounds them. It is awful to imagine not having a place for the people to enjoy without being caught up with the urban lifestyle, the lifestyle where
people never rest and are always in a rush to get to places or accomplish things, never taking a break to see what they have around them is something special.

**Environmental Impact of Urban Areas**

Urban settings do not impact the environment in many positive ways. Usually, urban areas have industries producing products, with greenhouse gases being released into the atmosphere. Greenhouse gases such as carbon dioxide, sulfur dioxide, nitrates, methane, and many more are detrimental to the environment, which ultimately impacts the humans who inhabit it. The more greenhouse gases there are, the more harm that will be done, which makes the area we live in harder to inhabit. It makes the air we breathe not as pure or clean, but full of chemicals that may affect human health. This occurs when there are no plant lives to take in and convert the chemicals that will be purified air. Greenhouse-gas emissions (CO$_2$ and CFCs) from motor vehicles in developing countries contribute less than 3% to the global greenhouse effect, compared to a 9 to 12% contribution from motor vehicles in OECD countries and Eastern Europe (Faiz 167-86).

Furthermore, this increases the greenhouse effect, leading to more climate change. Climate change leads to trapped solar radiation in the atmosphere that is not being released back into space. This trapped radiation also leads to exposure to ultraviolet radiation, which can be detrimental to the skin if exposed long enough or without skin protection. Urban air quality is the prime casualty of motorization in developing countries. The air pollution problem will intensify in developing countries with increasing urbanization and the rapid pace of motorization. Urban concentrations of carbon monoxide, airborne lead, and particulate matter and sulfur oxides in many developing countries already exceed the levels in industrialized countries. Motor vehicles emit 30% to 85% of all man-made air pollutants in the large urban areas in developing countries, depending on the level of motorization (Faiz 167-86).

Without plants, all the air around us will build up and become dirtier with harmful chemicals trapped in the atmosphere and air we breathe. On a hot day, a tree can release tens of gallons of water into the air, acting as a natural air conditioner for its surroundings. The plants absorb carbon dioxide for photosynthesis through the same pores called stomata (Science Daily, 2010). Without purifying the air, humans may suffer from skin, lung, and heart cancer due to the impurities in the air. This can easily prevented with a public space, a space that would not create any production of greenhouse gases. It can be occupied by plants that utilize the harmful chemicals and convert them into oxygen that can be used by the people to breathe.


**Pausing to Enjoy Surroundings**
People always have an agenda for each day of their lives. Each day involves many various activities, getting from something to another or going from some place to another. Many adults have jobs. These jobs take up approximately one-third of their day, as the average worker works for about eight hours. People are so focused on their job, making money to spend and utilize for their own purposes. They always put in an adequate amount of effort so that they would not be criticized, or even possibly get fired. With that mentality, the working class rarely interacts with their ambient surroundings, especially in an urban setting. If they are not working, people have errands to do, such as shopping. People are focused on taking care of their families, checking off everything on their list that they need to get, such as foods and clothes. It requires a lot of energy to accomplish daily tasks when raising a family, leaving them not enough energy or time to take a step back, rest, and enjoy what they have. People deserve to enjoy their surroundings and give effort in giving back to their community by interacting with the people whom they live near and try to get involved in collectively making it even better.

Overview of Easton Avenue

Our area of interest is Easton Avenue of Rutgers University. Easton Avenue houses many college students with their apartments and many people of different backgrounds along that road. Furthermore, the Easton Avenue student apartments in the middle of Easton Avenue's copious dining and shopping opportunities and are close to downtown New Brunswick (Rutgers University 2012). These are people with rich artistic abilities and traits that should be exemplified to the community to see. They do not realize that space is needed for them to demonstrate their uniqueness to the community. People need space to socialize and have gatherings to enjoy the outdoors and show their talents off to the community. The beauty within people needs to come out and be seen by all. The street of many diverse people needs to come together and collectively enjoy what each person brings to the community. It is a prettier scene compared to angry people parking on the side streets feeding the meters, not appreciating the space, and then seeing motor oil leak from their car, that ultimately runs into the sewer systems. In addition, it is just a car, ubiquitous things that do not present an element of surprise to the community. It is banal, trite, and is expected. It also does not help to see police officers ticketing cars too. It does not promote a community rich and proud of culture. It is important to have the community of Easton Avenue to be able to demonstrate their freedom of their interests and hobbies. If given an opportunity, the rest of the community can learn from one another and even get to know one another better and create stronger bonds.


Current Solutions

Currently, there are not many solutions to this issue. At best, urban areas create parks in their town. However, these parks are not located in an area that can be seen by many. They are usually on the edge of their town, not visible or accessible to many people. Some people may
not even know that their local park exists. It does not engage the public and is very limited in its purpose. People use parks for recreation, usually for kids. It does not engage the whole community, such as adults, as they are just there being chaperones to their children. It also does not serve to create awareness of how important space is to the citizens of the community that could be utilized by all.

People want to believe that space is ubiquitous, everywhere, and that there is always a place for something. However, that is not the case. Every day, lands are being used for some purpose. They would be used on housing, commercial enterprises, office buildings, restaurants, and other things that take up space. These lands will never be what they were before. From an environmental setting, it will be a place full of people and have barren grounds that are not rich in any life. People do not realize that not everything can be reversible. Once a change is made, that resource is gone and would not return back to their natural state. If it can be reversed, that process takes a long time, even beyond our lifetimes. It is not possible for people to wait that long to see the lands restore back to what it once was, as then it would be the problem for the next generation.

Other solutions that were implemented were to have the local government restrict the use of land or plant trees in a certain area. Even though that idea may sound like a good idea, it does not get the public involved. That is almost similar to a mandatory act. It is not voluntary as people would get paid to carry out that function. The local government hires the industries related to the problem to perform the solution. The public may realize the change, but they were not actively engaging in it, as eventually, they might even forget the importance of that solution. Without public participation, they do not realize how the solution impacts them.

**Potential of Park(ing) Day**

(MK) Our solution is inspired by an event called Park(ing) Day. This is an incredibly successful annual open-source global event where people come together to temporarily transform metered parking spaces into temporary public spaces into what their imagination leads them. The parking spaces are transformed into a number of different spaces useful to the community; such as park space, art displays, and so on. The creativity is limitless as to what one can do in the “precious urban real state” we call a parking space (Rebar Group 2011). The mission of Park(ing) Day which inspired us is to call attention to the need for more urban open spaces in cities as well as to improve the quality of the urban streetscape for human use...at least until the meter runs out!

It is important for us to understand the brief history of this event in order to generate our own ideas of how we want to create our own temporary spaces. Park(ing) day started in 2005 when Rebar, a group focused on public art, created a temporary park in a single metered parking space in San Francisco. Rebar paid the meter of a parking space, which allowed them to lease the precious asphalt for two hours. Here they rolled out sod, put out a bench, and a shade tree, as well as fencing around the space for safety. They found that people inhabited the space, and ended up paying the meter for more time in the space. Images from this event circulated the web, and Rebar began receiving request to create this project in other cities around the world. What came forth is an open-source project where anyone can create their own temporary space in a
metered parking space. This day is now known as Park(ing) Day, and falls on the third Friday in September. Rebar explains that the beauty of the open source model is that it allows people to express issues they need to in a safe, friendly way. Rebar notes that Park(ing) Day is so special, because it is also a way to identity community needs and values, and to draw attention to the social issues important to the community.

In the past, people have built free health clinics, temporary urban farms, held ecology demonstrations, political seminars, art installations, free bike repairs, wedding ceremonies, and so on. So this is not only a declaration for open space but also a way for people to demonstrate programs that they feel are missing in their city. Rebar states one of the main goals behind the event as such, “The PARK(ing) project was created to explore the range of possible activities for this short-term lease or urban real estate, and to provoke a critical examination of the values that generate the form of urban public space.” They also say that Park(ing) day is a generous and creative act to challenge in a friendly, non-threatening way, the existing conditions and notions of public urban space, and encourage people to help remix, reclaim, reprogram, and redefine public space to suite communal needs. It is important to note that Park(ing) day is an act of generosity; it is a form of community service and aimed to allow for cultural expression, socializing and recreation; all things a healthy city needs! It is not a harmful protest and not meant for chaotic activity. We are acting in the public interest to add health, comfort, and vitality to our city. After all, everyone can benefit from a greener city with more areas for rest, activity, and social interaction.


Planning Rutgers’s Own Park(ing) Day

After researching this event, as well as other the precedents, we determined that Easton Avenue is the perfect place for us to demonstrate a similar expression. Easton Avenue is one of the most highly utilized streets, yet is currently lacking in public space, a green streetscape, and a sense of character (or sense of place). Easton Avenue has a high rate of foot traffic, from students, to residents of New Brunswick, to business owners, etc. As well as a high rate of vehicular traffic, from cars, to trucks, to buses, etc. Therefore, this street serves as a main artery of the city, yet does not cater to the thousands of pedestrians that utilize it, and seems like a perfect spot to hold the event. New Brunswick currently doesn’t speak to the fact that it is filled with talented, creative, young students, and wonderful citizens. The character of the place is not representative of the character of the people living in it.

We plan on holding this event in spring, hopefully April First, a Sunday. We will reach out to as many people as we can, as this event will not be successful without the participation of the local residents. We plan on reaching out towards the students of Rutgers University, New Brunswick location. We will advertise the event on each campus, encouraging students to join and/or send advice on what events they would like to hold or see held. Specifically, we will incorporate the students in the department of Landscape Architecture, the Bloustein school of
Planning and Public Policy, Mason Gross Art students, Ecology students; however, anyone who wants to be involved is of course more than welcome!

In order to make this work, there are numerous people we would need to speak to if we want this event to go down smoothly. We will speak with the New Brunswick police department, New Brunswick Parking Authority, and the Transportation Alternatives in order to get a permit and acceptance of our proposal. We will pay the meter and hold events in the spaces either for two hours, if we cannot get the permit, or for the whole day, if we can get the permit. Regardless, we will make sure we can legally hold this event, with our without a permit. We plan on leaving the spaces in better condition than we found it, and causing no damage or harm to the spaces we inhabit. This event is going to be a fun way for people to come together, enjoy some public space, and make a bold statement on how we are currently using our city.

Operation: Re-Purpose Gardens

Downfall of Park(ing) Day

(DL) However, there were many problems that were encountered when trying to have our own Parking(Day). In order to make it work, many things were needed. For example, in order to occupy parking spaces, we needed a permit. It was very difficult to even get in contact with New Brunswick Parking Authority. They were of no use and city planners never responded back to many e-mails. Furthermore, with a big dream of occupying a whole street on Easton Avenue, it would require a lot of people or ideas to occupy the spots. It would have been a very difficult task to find people or services to occupy parking spots in a short notice of time. It was not feasible to accomplish this goal last-minute. Lastly, there was a predicament of paying the meters. Paying for one meter for the entire day would be an easy task. However, if we had to pay for every meter on the entire street of Easton Avenue, it would be very costly for us, as that requires a lot of quarters, which adds up to a lot of money. This is assuming we did this in a somewhat legal fashion, where we occupy the space since we would have paid the meter to have that space. This project relied on so many things to go right, but there were so many uncertainties and permissions needed that ultimately made us decide that the project was not likely to happen. With all those setbacks, it was best to come up with a different idea to revitalize the land.

Refocus by Going with Re-Purpose Gardens

In order to revitalize the land in a simple way, we first looked at the concept of rooftop gardens. Rooftop gardens are an effective way of utilizing space on the roofs to grow plants. This allows for a lot of exposure to the sun while having it outdoors. It also utilizes vertical space instead of horizontal space. Instead of using up lawn spaces, it is ingenious to use the top of a building. We wanted to expand on that idea by trying to think thrifty and creatively. That led to our idea of a re-purpose garden. Our definition of a re-purpose garden is a garden that is simple and mobile. These gardens would be built in everyday items that are available at home or any item that can hold soil and plants. These items should also be porous, allowing for water
flow and for air circulation that would not suffocate the root systems. Percolation is also important so water can escape, instead of having the plants be flooded.

Furthermore, the bases will have mobility, making them easy to move. They could be light so it can be carried anywhere for long distances without feeling fatigued, except from the weight of the soil. It could possibly have wheels to roll it to places. Lastly, they might be foldable, allowing it to be a smaller size and easier to carry. This allows the garden to be placed anywhere, adding an aesthetic aspect to the environment that they are placed in. They can fit into the middle of a yard like a typical garden. It can also be placed in a trunk of a pickup truck, a child’s toy wagon, trash bins, and anything to one’s imagination. To demonstrate its easiness and simplicity, we will be building our own re-purpose garden from various items acting as bases and with different plants in each garden. Lastly, we will document the expenses put into this project, trying to demonstrate a point that growing your own vegetation is worth the same price as buying your own food or possibly even cheaper. However, by growing your own food, one would know that the vegetation is organic and would not contain pesticides.

**Ethics of Re-Purpose Gardens**

A re-purpose garden does not present any ethical problems. It is resourceful and uses things that are readily available. It does not involve much spending except for the soil and plants. Then there’s water and sunlight that is readily available. Lastly, there is the base in which the soil and plant would be potted in. The base is up to the gardener, which allows for creative imagination. Anything that can hold soil is adequate enough. One can find a base at home, in a shed, in an attic, or anything that a person owns. As long as it is sturdy and can sustain dry and moist conditions, it will be functional enough to grow vegetation. Any base would be adequate as long as it does not degrade into toxic chemicals.

Furthermore, since the person who builds this garden controls what is fed to the plants. That means the control of pesticides and fertilizers. Most home gardeners do not rely on heavy concentrations of fertilizers or pesticides. Since a re-purpose garden is not an intensive crop farm, there would be a significant reduction in phosphates and nitrates added to the soil. Nitrates and phosphates can easily run off the land, potentially entering water sources such as streams, ponds, and other bodies of water, causing eutrophication. Eutrophication is the process where nitrates and phosphates cause algal bloom and depriving the water body of oxygen, killing off aquatic life in that body of water. Eventually, the algae would die too, causing a repugnant smell and ultimately leaving the body of water never to have life again, as the process of restoration would take a very long time. Having small-repurpose gardens and their mobile properties allows it to keep nitrates and phosphates away from water sources if using fertilizers.

Re-purpose gardens are environmentally safe. Their mobility allows them to be placed anywhere at any time. With that ability, it prevents runoff of fertilizers into local bodies of water, preventing pollution of the lands. Building one of these gardens allows the gardener to know where their food is coming from and controlling what is being grown. Having a re-purpose prevents potential farming dangers, making it a valuable asset to have.

**Service Statement**

(MK) In order to get the word out about our project, we thought it would be important to send a cover letter and video link to *On The Cheap with Spencer Soper* and *Mother Earth News*. 
We picked these two resources because we believe that these media outlets attract people who would benefit from learning about our project. The audience we aim for are people that care about the environment, are looking for cheap and easy ways to garden, live in urban environment where garden space is a concern, and need a garden that is mobile.

*On The Cheap with Spencer Soper* is a digital newspaper that gives users tips on how to live an inexpensive life, among other things. Mother Earth News is a website acts as a guide to people who want to live resourceful and inexpensive lives. They have a section dedicated to “do it your self” projects. Both magazines are great outlets to educate people on how they can make gardens out of unused objects sitting around their home.

**Building Our Own Re-Purpose Gardens**

(DL) In order to demonstrate the simplicity of a re-purpose garden, our service announcement video had us building our very own re-purpose gardens. We first went to Home Depot to acquire soil, marigolds, red lettuce plants, annuals, perennials, and tomato plants. After that, we went to Acme to ask the kind people who work there to having a shopping basket. From there, we headed to one of our houses to start the construction of our garden.

Our first garden was made in a planter crate. This crate is foldable, allowing it to be carried anywhere. This crate also has pores, allowing water and air to circulate through. In this planter crate, we planted a portion of the plants that we had purchased in there. After finishing our planting process, we showed how mobile it can be by having one of us carry it from various places. We took it across the street, up a set of stairs, and even going around a block of a neighborhood.

With our second garden, we used the shopping basket as our base. Since the pores are so big, we laid plastic shopping bags and poked very small holes in it to create smaller spaces for percolation of water. That way, the plant does not suffocate or drown, allowing air and water circulation. In the shopping basket, we were able to hold approximately eight plants with ease. With handles, the re-purpose garden made from a shopping basket was very easy to move. It was like carrying groceries. We were able to move this particular garden to the rooftops of a house. That extra weight did not affect the roof at all and allowed the plants to get a lot of exposure to the sun, promoting further growth.

Another garden we constructed was out of a lid from a subs platter. It was large enough to hold a sufficient amount of plants too. However, we also had to poke holes in it to allow for percolation. This was not as durable, since it was made from a cheap plastic material. It probably would not last that long, but if placed in an area, not moved as much, and left alone, then it would be adequate enough. This garden can be appealing in the kitchen as a centerpiece, or something to complement the platter of subs.

For our last garden, we used a colander. This colander was made of metal and already comes with pores since it sorts out noodles and other big foods from water. The only concern with this garden is whether the colander could rust. It would not rust if the material is made from stainless steel, but if not, then rust poses a threat to the garden. Rusting is due to chemical reactions that degrade the metal and changes the composition of the metal. However, we do believe that it is made of stainless steel, otherwise draining vegetables and noodles would be dangerous. Overall, this was a durable garden and is the smallest of them all. It may not be a colander any more, but if there is another one, then this one was worth it to be expendable.
When calculating the costs, it was very reasonable. We only bought plants and soil since the base is provided by our resourcefulness of looking for one in our households. A big bag of soil that provided enough soil for five re-purpose gardens cost approximately $12. The plants we purchased were marigolds, annuals, perennials, tomato plants, red lettuce, cilantro, and basil. The total for those plants was about $24. It was very affordable, even for poor college students. With time, the crops would grow and be harvested. Eventually, the production of your own food will save you more money on grocery shopping.

In conclusion, re-purpose gardens are an effective way in revitalizing space and bettering the environment. They provide environmental benefits of preventing runoff while conserving space. This keeps the land healthy and allows the extra land to be used for other things. Furthermore, they are very affordable and can be a profit for a gardener who grows herbs. The mobility of these gardens allows them to be placed or be taken anywhere. Lastly, these gardens allow one to be very creative in designing it as long as the garden is effective.

References


Letters to Editors
Dear Targum Editor,

I am writing you in regards to a project my partner and I are doing for our colloquium, Ethics in Science. We are constructing a project we call Re-Purposed Gardens. We are re-purposing everyday objects into container gardens that are mobile, cheap, and easy to make. In doing this, we are also re-purposing unused space into usable, productive, garden space. In our digital
In this presentation, we will make a video showing the process of making one of these gardens as well as the number of places this garden can exist.

In this presentation, we will show people how a few household objects can be transformed into a vegetable, herb, and/or flower garden. We hope by showing a few examples, we will inspire others to explore their household objects and see how they can turn them into a beautiful garden. We will also utilize objects that make the garden moveable. This will demonstrate how one can constantly move the garden from space to space depending on their needs.

Another aspect of our idea is to illustrate how people can use their gardens to beautify spaces around them that are aesthetically displeasing, thus re-purposing space. Examples of this are moving gardens onto roofs, porches, balconies, etc. We would also like to show that by transforming unused household objects, one is recycling their object, in the sense that it will not find itself into a landfill, but will be re-purposed into a planter.

In this day and age, everyone is looking to save a few bucks on groceries, and growing your own food is one way to do that. We want to show how students can grow their own vegetables and herbs in a cheap manner. We will emphasize this by keeping track of how much we spend when we create a model garden. Lastly, these gardens are a work of art. They can be done publically or privately. We want to inspire people to go out into their community or backyards and plant!

Thank you in advance for your time!

Sincerely,
Meredith Rose Knesevitch

Dear Urban Sustainable Living Editor,

I am writing to you in regard to a project that my partner and I are doing for our colloquium course, Ethics in Science. Our goal is to construct re-purposed gardens. These re-purposed gardens are popup gardens made in everyday objects that serve as the pot or base. These everyday objects are mobile, cheap, can hold things, and presents a unique take on how to utilize what you have. In our video presentation, we will be demonstrating the process of making a re-purpose garden as well as demonstrating its mobility by taking them to various locations around a community.

In this presentation, my partner and I will show people how to transform household items into a flower or vegetable garden. By showing people this process, we hope to inspire others to explore any opportunity to transform their objects at home into a luscious garden. Furthermore, we will explore using objects that makes the garden more mobile. An example would be a wagon or wheelbarrow since they have wheels. This will demonstrate how one can move the garden to any location of their desire.
Another aspect of our idea is to illustrate how the gardens that people build can make spaces near the garden aesthetically pleasing. This re-purposes the space and changes the culture of an area. For example, by moving gardens onto rooftops, balconies, and other various locations that receive sunlight, that area becomes greener with plant inhabitants. We would also like to demonstrate that by using unused household items as a planter, one is recycling that object to have a purpose, being put to use instead of finding it in the garbage can.

In today’s society, people want to go green, but don’t want to sacrifice money in order to do it. However, by building a re-purpose garden, one is capable of growing their own vegetables instead of buying them at the markets, saving the consumer money. We will emphasize this by keeping track of how much we spend when we create our model garden. Lastly, these gardens are masterpieces. They can be done anywhere. We want to inspire people to make their communities a greener place by planting and adding more life to society.

Thank you in advance for your time.

Sincerely,

Douglas Lee
Undergraduate Senior of Ecology, Evolution, & Natural Resources
Rutgers University