

Considering the Urban Farm Program and the Role of Place-Based Experiential Education in the Pedagogy of Landscape Architecture

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Acknowledgments

For a host of reasons, this project has been years in the making. Consequently, to fully acknowledge the folks that lent a hand (and sometimes a shovel) is a daunting task, but here is a modest stab at it.

In order of appearance, I'd like to thank Richard Britz for having the vision and drive to begin the Urban Farm all those years ago and Ann Bettman for keeping it alive and nurturing its growth and refinement. Without any possible exaggeration her blood, sweat and tears are the basis from which the program continues to grow.

Over the years, we have been blessed by an amazing collection of Urban Farm Team Leaders who continue to make it all work. The extent to which I offer my gratitude to these generous people can also not be exaggerated. Specifically, I need to thank Lauren Bilbao for her limitless generosity of spirit, Tom Bettman for a dedication and wealth of knowledge that never ceases to amaze and Jen Surdyk for setting a unique example of courage and integrity that we all should strive to emulate.

Across the boulevard, as it were, I need to thank Liska Chan for continuing the tradition of departmental support on which the Urban Farm program depends as well as Robert Melnick for providing the incredibly timely pearls of wisdom that adorn this project. Most importantly, I need to thank Roxi Thoren for signing onto what was then a rather vague proposal to look at how the Urban Farm works. Her patience, ingenuity and dependable good humor allowed the project to fly, one bird at a time. For this I am extremely grateful.

In order to stay sane and get it out of the head and onto the page, thanks goes out to Dave and the soccer guys, Lynne and the Farmies and Foodies and the talented Arica Duhrkoop-Galas whose contribution defies calculation.

Finally, as I said during my presentation, you are never too old to thank your parents. Thanks you guys.

Abstract

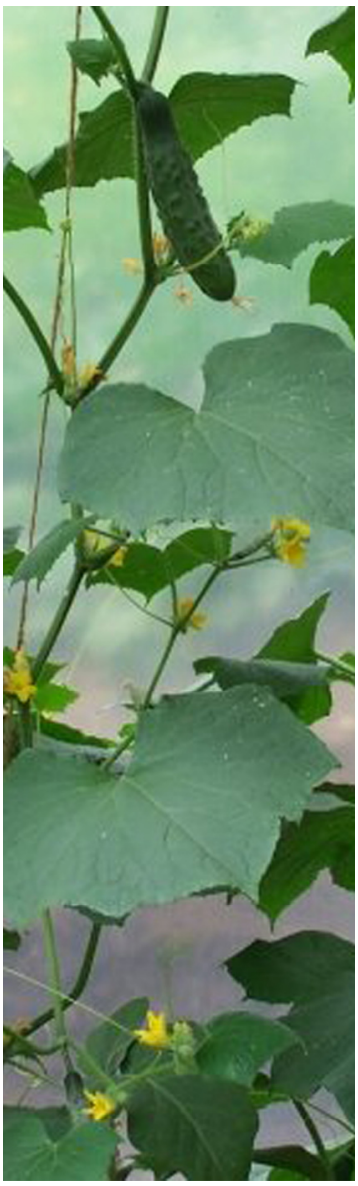
The Urban Farm is both a place and a program, within the department of landscape architecture at the University of Oregon, where students have been learning to grow and think about food since 1976. As a place, the Urban Farm is an officially recognized outdoor classroom where students learn by doing. As a program in the department of landscape architecture, the Urban Farm functions as both a sequence of classes that teach large numbers of students throughout the year, but also a community information and networking hub dedicated to agrarian issues.

This project will investigate how the Urban Farm functions within the pedagogy of landscape architecture as a unique example of place-based experiential education grounded in the local agrarian vernacular. Additionally, this study will consider how the opportunity to study in a hands-on working example of urban agriculture can increase ecological literacy and in turn, better prepare future professionals.

The structure of this study will be to investigate the real and theoretical characteristics of place-based education, as an alternative to conventional hierarchal teaching systems and how these traits and themes are manifested at the Urban Farm. Informed by a literary review and using David Orr's foundations for responsible ecological education as an organizing tool, a subsequent case study of the Urban Farm will then demonstrate how a unique, multidisciplinary, hands-on model of teaching enhances the pedagogy of landscape architecture. Specific themes and activities, both metaphorical and direct, which can be associated with the history and practice of landscape architecture and are also associated with the Urban Farm, will be presented These include; the history of the relationship between agriculture and landscape architecture and how this relationship can respond to new paradigms, the role of food and food systems in shaping material culture, the role of preserving cultural vernacular tradition and the understanding and preservation of natural resources as they pertain to foodsheds.

Finally, a synthesis of the opportunities and constraints that either supplement or hinder the implementation of ecologically responsible place-based landscape architecture education will be discussed and proposals will be suggested.

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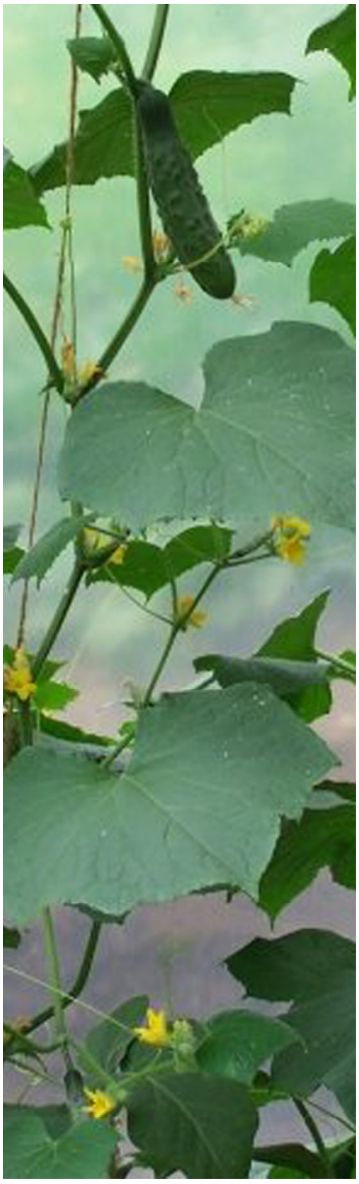
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1 *Landscape Architecture and Agriculture*

The Garden

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Landscape Architecture and Agriculture



Middleton Place S.C.
Courtesy of Middleton Place Foundation

To understand where the Urban Farm, as a form of educational stewardship, fits into the pedagogy of landscape architecture, it is useful to consider, very briefly, the role that agriculture has played in defining human spaces and how landscape architects borrow from agrarian tradition. The necessity to respect and incorporate processed patterns of healthy productive cultivation of the land has always been a professional imperative. This began at the most basic level, with the production of food and the simultaneous development of civilization. The manipulation of landforms in order to facilitate cultivation created a relationship between the natural and the cultural, where 'landscape architecture' and agriculture are forever linked. It is also useful to consider how the relationship between landscape architects - as makers of place - and an agrarian sensibility that responds to land and culture, continues to function.

The Garden

It has been suggested that the initial act of landscape architecture would most likely have been the construction of a crude fence.[1] (Helphand/ Laurie) With this simple but significant act, a garden was created. Michael Laurie has traced the origin of the word garden to the Hebrew gan, meaning to protect, and the oden, meaning pleasure or delight, the contemporary English garden being a combination of the two.[2] (Laurie 1987). This is noteworthy because, conceptually, the garden is both an identified, functional space and culturally meaningful.

Although seed collection and possibly primitive irrigation were probably the first acts of agriculture, the demarcation or enclosure of a space begins a dynamic where manipulation of landscape space for a prescribed result – in this case food production -has also fostered an understanding about place-making. The significance of this new relationship cannot be overstated because it is with this enlightenment and subsequent action that sedentary civilization and landscapes as artistic expression are made possible.



Traditional wattle fence
Photograph by Paul Walker

Eventually, garden making and crop surpluses gave rise to economic systems, trade possibilities, political organization and a social stratification from which a leisure class emerged. With the advent of relative wealth and time for leisure, designed landscapes could evolve from being entirely utilitarian into being symbolic and subject matter for artistic expression.

This is an altogether new relationship between culture and the natural canvas. John Dixon Hunt, in his important book, *Greater Perfections* (2000), describes this new understanding, as the "melding of nature and culture," and feels this to be the precursor to what he calls a second nature, where human behavior is now shaping how natural systems are utilized. To Hunt, this is possible because humans are distinct from all other animals, in that they possess an affinity for gardens and what they can mean. "Gardens change our perception of the landscape in which they are set, enabling discriminators of the scales of human intervention in nature."[3] (Hunt, 2000)

Mughal Char Bagh garden features an irrigation system modified to represent the four rivers of paradise. 1590
By permission from the British Museum



Nothing more clearly demonstrates the role of the landscape architect than the successful creation of places that satisfy both artistic and importantly, functional objectives. Examples of multi-use gardens are found across cultural histories and throughout the mythology. Most religious faiths describe gardens or paradise at the beginning of time or the end of life on earth (Laurie, 1986), and virtually all of the predominant structural motifs found throughout these gardens are drawn from agricultural systems.[4] The vast majority of prototypical landscapes often cited by landscape historians have their roots in the agrarian traditions of a given culture. Iconic garden traditions such as the Islamic char bagh, the parterre, English pastoral and Italian renaissance gardens all have structure rooted in quintessentially agrarian

forms. Even after these landscapes have become no longer exclusively functional, remnants of these traditions and activities remain. Simply put, agriculture and landscape architecture are rooted in the same soil.[5] (Alon-Mozes, 2000)

Once again, landscape architecture has always been the physical manifestation of a collective expression and given that the primary imperative has always been the need to build spaces that facilitate food production, agricultural forms and functions are the most predominant and durable pattern set that has driven design for as long as people have been creating spaces. For example, traditional garden layout and the use of water -being the most ubiquitous of agrarian forms - have always been central to the manner in which specific cultures have expressed themselves through place making, even though the methods might be vastly different across cultures. According to Hunt, " The garden is paradoxically composed of the perception of gardens in many different ways by different people and different cultures and periods."[6] (Hunt 2000) Virtually every cultural landscape, "especially garden making, is grounded in agricultural practice as the basis of land patterns, plant materials, technology and values."[7] (Hunt 2000)



Ladies with attendants in a Mughal garden.
By permission from the British Museum

Responding to the Agrarian

In many cases the act of artistic composition is mostly subservient to the pragmatic need to perform agricultural activity. An added poignancy is maintained by allowing the form of the garden or landscape to reflect specific function and cultural tradition no matter how rudimentary. This can also be very beautiful. Michael Laurie puts it this way: "Many of the agricultural landscapes of the world, organized on purely functional principles, are considered attractive. Much can be learned from the purposefulness of design that is to be found in primitive systems of intensive cultivation."[8] Although these spaces might not be designed in the aesthetics based classical sense, there is a lesson to be learned by understanding the logistical systems that need to be accommodated for so that the garden

can function effectively. This very much continues the 'melding of nature and culture' espoused by Hunt and is a responsive landscape usage that refers to both the land as the provider and to the primitive methods available with which to work it. That Laurie understands these places to be generally attractive adds integrity to the relationship and he feels that "the best examples frequently exhibit a sense of logic, inevitability and a relationship to context equal to that of a well-organized and productive farm."[9] (Laurie 1986) From a modern farmer's perspective, Wendell Berry maintains that:



Farmer works in his terraced rice fields at Penatahan, near Ubud, Bali, Indonesia. By permission, Peter Menzel Photography

> "The most insistent and formidable concern of agriculture, wherever it is taken seriously, is the distinct individuality of every farm, every field on every farm, every farm family, and every creature on every farm. Farming becomes a high art when farmers know and respect in their work, the distinct individuality of their place and the neighborhood of creatures that lives there."[10] (Berry, 2005)

Although Berry is speaking from a modern perspective that is not limited to the primitive methods of agriculture that Laurie cites, the necessity of creating spaces that respond to the land, while addressing absolutely the needs of both human and creature, nonetheless remains. To Laurie this is logical and inevitable, to Berry this verges on high art.

Specific function drives form

Middleton Place, S.C.
Courtesy of Middleton Place Foundation



Modernization and Industrialization

What often defines a specific culture and often what it is most proud of is the unique agricultural heritage by which the culture sustains itself. This is true across different cultures and references to this connection are seen in traditions across time. From the earliest garden images such as ancient Egyptian lotus glyphs or references to Babur's gardens, to modern harvest festivals and state fairs, people have measured collective wellness through how they practice agriculture. However, due to industrialization and urbanization, the working agricultural landscapes and activities that once embodied these

shared values have become so detached from developed spaces that reference to the agrarian is either lost or mostly symbolic. Simply in terms of current material culture, references to agricultural methods, systems and specific plant choices are now often only a nostalgic homage to a shared agrarian tradition that is missing. Tal Alon-Mozes calls these landscapes the "contemporary picturesque" and submits that the desire to rediscover a sense of place by re-introducing agrarian images and plant types into the landscape, speaks to this nostalgia. This is important because landscape architects and planners are beginning to remember that connections to agrarian tradition are not only nostalgic and symbolic but often an accurate indication of cultural or societal well-being.[11] (Alon-Mozes, 2009)



Rice fields being prepared near Menghan in Xishaungbanna, China
By permission, Peter Menzel Photography

As food systems become more and more mechanized and traditional connections to traditional agrarian lifestyle become more tenuous, the general health, in terms of both people and community, is compromised. This can already be seen in the form of food deserts, childhood obesity, general nutritional and ecological illiteracy and non-sustainable foodsheds. These conditions are symptomatic of a cultural landscape that is disconnected and devoid of a shared agrarian sensibility. The industrialization of food production has exacerbated this rift, separating a society's fundamental ties to the land.[12] (Pollan, Berry) As a result, traditional agrarian activities that were once celebrated by designers as being a defining positive characteristic of a particular place and people have been forgotten. Even symbolic or nostalgic references to agriculture are often missing. In many ways, a direct correlation can be drawn between the lack of connection to agricultural celebration within landscape architecture - both in terms of the design and implementation - and the collective illness of these cultures. This removal is more than just physical or geographic. Agriculture, as it is often perceived, is no longer the defining iconic activity, worthy of being subject matter for landscape architecture in the upper echelon of high art. A change in perception that has relegated food production and its associated activities to the category of



Allowing natural systems to provide beauty
Old Ox Farm
Photograph: Ann Cashen

work—associated with sweat, manufacturing, the working class, efficiency, and productivity,[13] (Girling and Helphand 1994), has created a climate where beautiful and inspiring spaces – that also provide sustenance – remain few.



Contemporary Picturesque Returning the orchard to the urban fabric. Suzanne Delal Dance and Theater Center Tel Aviv

Photograph: Shlomo Aronson Architects

Nothing speaks to the vernacular of a specific place more than its agricultural history and the landscape architecture of the area should be a reflection of this. Due to industrialization and the commodification of food, this is rarely the case and the ramifications are obvious. Massive ground water contamination, ecosystem and biodiversity loss due to large-scale monocropping, introduction of petrochemical based fertilizers and pesticides and their associated production, the emergence of super-bugs and weeds and devastating topsoil and rainforest loss are the symptoms of the industrialization of agriculture. Landscape architects need to recognize all of these unintended consequences. The consequence of industrialization has also been the loss of an entire agrarian vernacular culture that revolved around the production, processing and marketing of food. The legacy of this loss is that traditional sensibilities regarding food and its place in community have been often removed from how communities function, resulting in a social fabric devoid of an important set of shared values. Wendell Berry describes these communities as being 'defined mostly by the mere proximity of its people to one another' and 'no longer central to their own interest.'[14] (Berry, 1987, 184) Much of this can be traced to the loss of appreciation for agrarian tradition, creating a vacuum that is characterized by the existence of food insecurity and the associated consequences of unhealthful food choices.



Aerial of harvesting lettuce at Harris Farms in San Joaquin Valley, California. By permission, Peter Menzel Photography

Much in the same manner that they are major contributors in efforts relating to watershed restoration and protection, species-specific habitat protection and regional land planning, landscape architects need to address specific agricultural impact with equal vigor. It is incumbent upon landscape architects to rediscover the agricultural roots from which the history of

Aerial photograph of the Harris Ranch cattle feed lot, the Harris Feeding Company, in Coalinga, California. California's largest feed lot with up to 100,000 head of cattle. Coalinga, California. San Joaquin Valley. USA
By permission,
Peter Menzel Photography



landscape design is based.

Similarly, if landscape architects are indeed charged with historical preservation as also directed by the ASLA, it is incumbent upon the field to understand how the dominant cultural vernacular over the last sixty years has gone from a society based on an agricultural tradition that is ecologically based and sustainable to a society of fast food and excess. This transformation has altered both the cultural and built environments and landscape architects must be intimately familiar with the effects of this transformation.

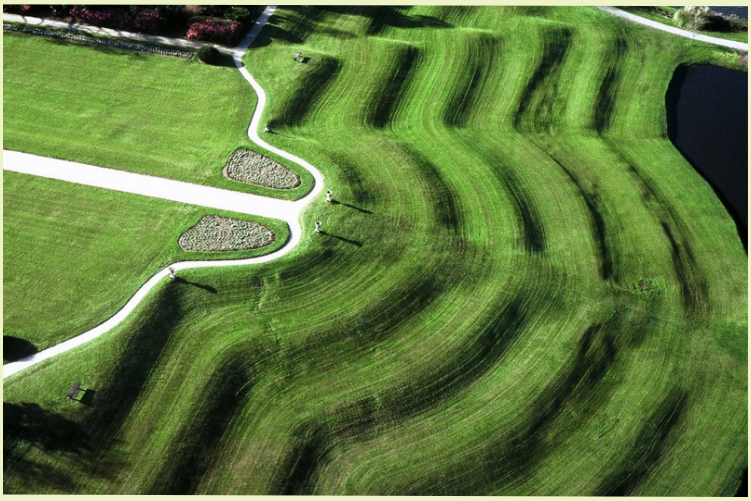


Farmer and Bull, Columbia County Fairgrounds, Chatham NY
Photograph by George Gruel

Creating a second nature through the melding of nature and culture Middleton Place, S.C.

Middleton Place is recognized by the National Register of Historic Places as being the oldest landscaped garden in the United States. As an important example of allowing the dominant agrarian activity to meld with the natural setting, the structure of elaborate garden design is determined. Middleton Place is the embodiment of John Dixon Hunt's theory of Second Nature.

First established in 1741, Middleton Place was primarily a working rice plantation. The initial siting and structure of the designed landscape was driven by the utilization of the Ashley River to power the rice mill and the first landform manipulations were primarily utilitarian. Additional modification was completed to accommodate livestock including the first recorded use of water buffalo in the United States. Sheep, alpaca, Tibetan cashmere goats, guinea hogs and poultry also were raised. (Smith 2007)



Elaborate terracing makes reference to traditional agricultural practice.
Courtesy of Middleton Place Foundation

The gardens at Middleton Place are a striking example of classical place making that combines the strict geometry of the French parterre set into an English countryside agrarian prototype. Expansive controlled views and minimal visual separation between the working agricultural operation and manicured spaces are utilized to create a seamless landscape that pays homage to both the dominant agrarian vernacular and the desire to create.



French inspired parterre garden set into native oak forest instills formality
Courtesy of Middleton Place Foundation



Rice paddies were created by diverting the Ashley river which also powered the mill
Courtesy of Middleton Place Foundation

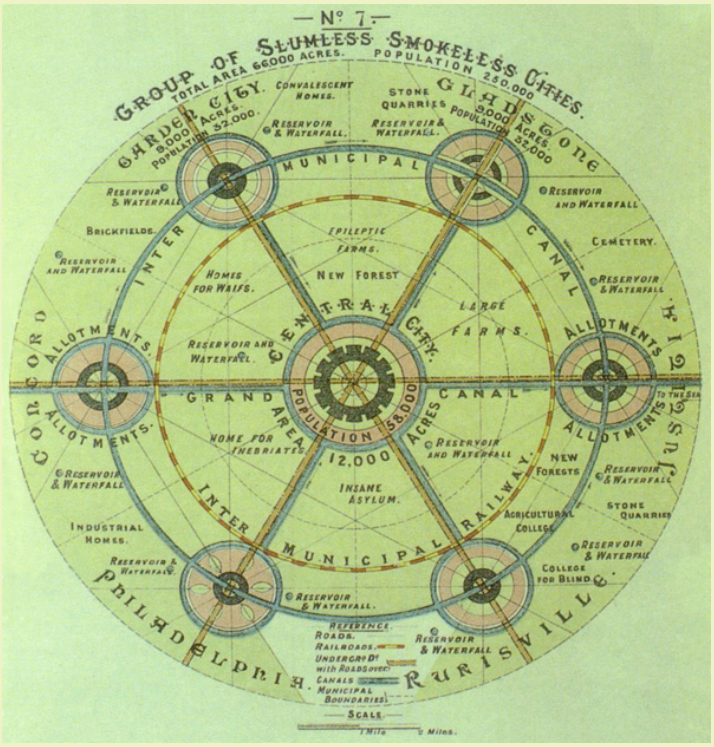


Modern activity pays homage to the technology of the period.
Water buffalo calf photo by Bruce Smith

Agricultural Archetypes are found throughout human expression



The use of prototypical agrarian elements juxtaposed with urban structure dates back to the 12th century.



Diagrammatic plan of Ebinezer Howard's Garden City concept shows an integration of agriculture and urban design.[15]



Human connections to natural systems and 'spreading seed' are common mythological themes, across cultures.

"In this intriguing painting, two nude men walk through a field picking flowering plants with human heads. Personifications of the sun and moon appear among the dark clouds above them. The premise context of this scene remains unknown and it may have originated from an ancient Indian folktale, now lost.

On the other hand, perhaps the artist intended to illustrate a variation on an episode from an ancient Middle Eastern tale featuring the Waqwaq tree. According to one account, the Waqwaq tree grows in a faraway land a bears fruit with human faces. This theme was also taken up in a medieval Persian story in which the ripened fruit of a magical tree fell to the ground and matured into man's heads."

Curator's comments
A scene in a fantastic garden
India, Mughal style, late 18th century
Opaque watercolor on paper
By permission of the British Museum



The Sheep meadow in Central Park was originally included in Olmsted's design to satisfy a requirement that called for a parade ground for military drills. This idea contrasted with the designer's vision of the Park as a peaceful and nature-based environment. In 1864, the parade ground concept was abandoned and 200 sheep were placed in the Park and housed in a Victorian building within the Meadow. (Paradoxically, in order to build the park it was necessary to displace 1600 low income people, many of them Irish pig farmers and German gardeners.) Although the sheep were transported to Prospect Park in Brooklyn in 1934, their inclusion demonstrates Olmsted and Vaux's appreciation for the importance of agrarian activity in urban settings.
Photo credit: http://www.centralpark.com/guide/attractions/sheep-meadow.html



Photograph by permission: Marcok / it.wikipedia.org

Andrea Palladio's Villa Barbaro, in Maser in the Veneto region of northern Italy, is a quintessential example to the integration of agricultural function and natural systems and high design. Built between 1560 and 1570, Villa Barbaro utilizes a natural hillside stream to service the kitchen and facilitate the winery. A created pool also allows for fishing. The central section of the building is flanked by twin wings designed to house birds for guano collection to be used for agricultural fertilizer.

The villa's interior features frescoes by Paolo Veronese in the artist's most contemporary style of the period featuring bucolic agricultural scenes and images relating to regional wine making.[16]



Photograph by permission of Wikimedia commons

2 *Introduction to Place-based, Experiential Education*



"Experience has its geographical aspect, its artistic and literary, its scientific and its historical sides. All studies arise from aspects of the one earth and the one life lived upon it".[1] John Dewey.

In her forward to David Sobel's *Placed-Based Education*; Laurie Lane-Zucker writes that "place-based education challenges the meaning of education by asking seemingly simple questions: Where am I? What is the nature of this place? What sustains this community?"[2] Unfortunately, students working in a conventional classroom setting with a one-way transmission teaching method do not have the opportunity to ask these simple questions. Continuing, she goes on to say that,

> "place-based education implies a process of re-storying, whereby students are asked to respond creatively to stories of their home ground so that, in time, they are able to position themselves, imaginatively and actually within the continuum of nature and culture in that place. They become part of the community, rather than a passive observer of it."[3]

At first glance, these questions seem intuitive yet there is a complexity to her follow up proclamations that addresses both the difficulty of steering the process towards place-based study and the benefits gained by doing so. To her, the necessary benefit of place-

based education is that students are creatively re-telling stories that lead them into imagining how they fit into the continuum of both nature and culture as active members of their society. This represents a drastic departure from the conventional classroom dynamic where method and subject matter fail to have any meaningful connection to student lives and the places in which they live. That they must be imaginative in order to see themselves as valued members of the place they find themselves, both in terms of the natural and the societal, reveals the dominance of a standard method that exacerbates the separation between nature and culture. Where the conventional model is a system better characterized by a detachment from, as opposed to an immersion within, a particular community/society that is responsive to natural systems, "place-based pedagogies are needed so that the education of citizens might have some direct bearing on the well-being of the social and ecological places people actually inhabit"[4] (Gruenewald, 2003).



Summer Pear

Photograph by Steven Basset

This, of course, is nothing new. Place-based advocacy can be traced at least as far back as educational reformist John Dewey's writings at the beginning of the 20th century. In his *'Pedagogic Creed'*, written in 1897, Dewey speaks to the existential tension between a student's psychological development and predetermined political and social niches, often at the expense of the freedom to learn. Dewey writes:

> "I believe that the psychological and social sides are organically related and that education cannot be regarded as a compromise between the two, or a superimposition of one upon the other. We are told that the psychological definition of education is barren and formal - that it gives us only the idea of a development of all the mental powers without giving us any idea of the use to which these powers are put."[5]

Succinctly put, Dewey is rightly concerned that student development within an educational system that is rigid, hierarchal and esoteric, becomes subservient to preconceived socially generic expectations which are not tied to the places they inhabit. This fosters a direct relationship between a student's narrow psychological development and his or her lack of connection to their environment.

David Gruenewald has criticized this condition as being driven by the assumption that, " education should mainly support individualistic and nationalistic competition in the global economy and that an educational competition of winners and losers is in the best interest of public life in a diverse society". [6] (Gruenewald 2003) Additionally, a perceived necessity for accountability with regard to general performance standards creates a false assumption that student achievement can be measured by classroom routines alone and what really matters is individualistic, quantifiable, and statistically comparable.[7](Gruenewald, 2003)



Plastic protects early tomatoes while over wintered garlic and spring greens thrive in cool weather. Photograph by Ali Abbors

This is in direct opposition to the forward looking idea that if a student is encouraged to immerse him or herself into the essence of the places that they inhabit, they will be more likely to imagine a role for themselves within these communities that they can find rewarding. This is where students learn how the world works and how their perceptions and actions shape the places that they will then become the makers of. Isn't this the idea after all?

According to Wendell Berry it is. Berry has written for decades about the need to re-establish the dedication to a true sense of land and place that has been vastly forgotten, mostly due to neglect and the repercussions of industrializing agriculture. As education has become increasingly focused and specialized, students have subsequently become increasingly detached from the uniqueness of where they are and what they are doing. For Berry, the consequences of detachment are dire. In his words,

> "Education in the truest sense is an enablement to serve – both the living human community and its natural household or neighborhood and the precious cultural possessions that the living community inherits or should inherit."[8]

Berry understands about the continuum of nature and culture that is at the heart of place-based teaching.. His would be a community whose legacy depends upon the generational passing down of what a culture deems precious. In order to build this community, the onus falls upon

educators to understand what these cultural heirlooms are and how they must be preserved. His intentional depiction of this arrangement as a household, where familial duty is paramount, suggests that the protection of societal and natural assets is the non-negotiable obligation of the collective. It is therefore the primary role of education to impart an ethos that responds to these assets. Berry contends:

> "To bring young people to a maturity, to help them to be good caretakers of what they have been given to help them be charitable toward fellow creatures. Such an education is obviously pleasant and useful to have; that a sizable number of humans should have it is probably also one of the necessities of human life in this world". Going further: "if education is to be used well, it is obvious that it must be used some where; it must be used where one lives, where one intends to continue to live; it must be brought home."[9] (Berry, 1987)

According to Woodhouse and Knapp, specific attributes of place-based education insure its effectiveness. To be effective, place-based education is:

- Emergent from the place
- Multidisciplinary
- Experiential and participatory
- More than 'Learn to Earn'
- Connected with self
- Multigenerational
- Multicultural

Janice Woodhouse and Clifford Knapp, in their comprehensive survey of place-based education, submit that place-based education also has been described as outdoor education, as well as ecological or environmental education and although these sub-disciplines sometimes differ, the methodological commonalities among them remain geared toward developing a pedagogy based on learning to be where we are.[10](Woodhouse, Knapp, 2000) These include attention to both the natural and built environments and using a methodology that provides 'meaningful contextual experiences' that complement and expand classroom instruction.[11](Knapp 1996) More specifically, place-based education is characterized by the following attributes:(1) it emerges from the particular attributes of a place and is specific to geography, ecology, sociology, politics, and other dynamics of that place, (2) it is inherently multidisciplinary, (3) it is inherently experiential and includes a participatory action or service-learning component geared toward ecological and cultural sustainability, (4) it is reflective of an educational philosophy that is broader than "learn to earn", (5) It connects place with self and community and includes multi-generational and multicultural dimensions as they interface with community resources.[12](Knapp, 1996)

Proponents of placed-based education contend that in order to implement the many attributes that Woodhouse and Knapp have identified, attention must be directed towards breaking the strict

bonds of formal instruction characterized by one-way transmission of information. These bonds are often intentional but more likely they exist due to a combination of pragmatics and the need for financial restraint, with the assumption being that conventional instruction is inherently less expensive. Educators are quick to relapse into efficiency over invention and the unfortunate acceptance that responsibility ends with a diploma. Berry views this type of education as a mere commodity, something purchased in order to make money, what Woodhouse calls, "Learn to Earn".[13] (Woodhouse, 2000) David Orr, agrees and has written that all of the factors that Woodhouse and Knapp have identified are needed in order for students to develop an ecological literacy that comes with understanding the places they inhabit.[14] Also in agreement is David Sobel who defends a place-based methodology as being the process of using the local community and environment as a starting point from which to teach concepts across disciplines. Sobel advocates for a system of learning that:



Working in the garden in the early evening
Spring 2008
Photograph by Ali Abbors

> "Emphasizes hands-on, real-world learning experiences with an approach that increases academic achievement, helps students develop stronger ties to their community, enhances students' appreciation for the natural world and creates a heightened commitment to serving as active, contributing citizens".[15](Sobel, 2004)

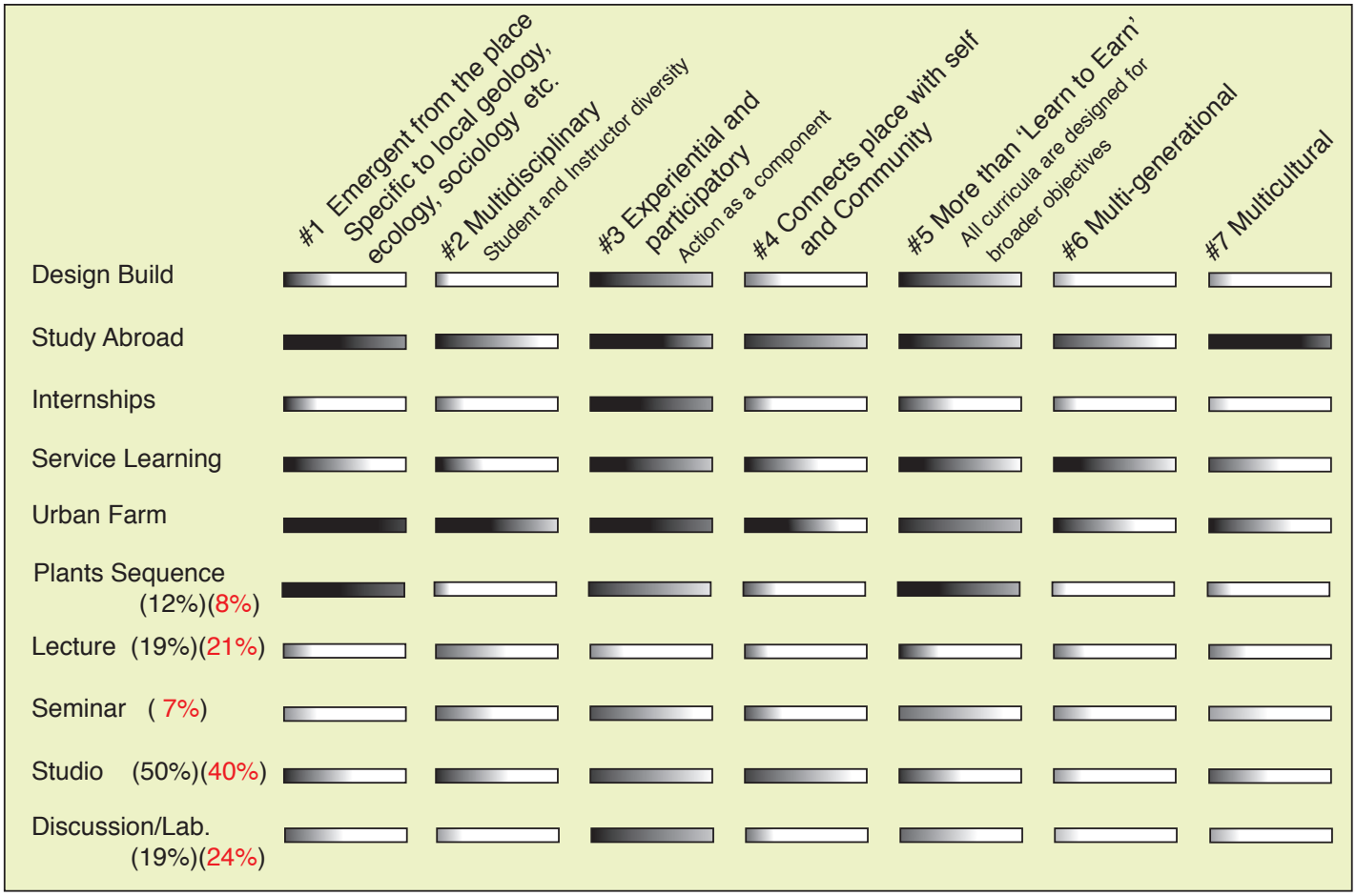
Sobel's general goals, particularly stronger community ties, natural world appreciation and committed citizenship are routinely achieved by students working in the hands-on, real-world learning model that is the Urban Farm and although these are just some the social benefits that students acquire - in addition to developing practical gardening experience - this demonstrates the effectiveness of a quality experiential place-based education model. Advanced social skills and a heightened appreciation of natural and cultural settings are added benefits that would not be acquired if the structure were static and merely a transmission of information. This gets to the essence of the theory that Dewey wrote about over 100 years ago, namely that in order

to train students to be free thinking, ecologically literate citizens – what Orr would call inhabitants and what Berry would consider a neighbor in the best sense of the word – it is crucial that the manner in which we educate these people encourages them to ask the questions;
Where am I?
What is the nature of this place?
What sustains this community?

Comparative Study of place-based opportunity: understanding where the Urban Farm program functions as a place-based educational model of instruction in the department of landscape architecture.

In order to assess the relative value of the Urban Farm as an example of place-based education within the landscape architecture curriculum at the University of Oregon, a qualitative comparative study of available experiential learning options was performed with a goal of determining how each option performs as place-based education defined by Woodhouse and Knapp. The list of experiential study options available to students includes: design-build, study abroad, internships, service learning, the plants sequence of classes and the Urban Farm. The plants sequence is the only required class being studied and is included because of the experiential nature of the teaching model.
Additionally, four general teaching models are being considered for the same characteristics. They include: lecture, seminar, studio, discussion/ laboratory.

The intent of this study is to consider elements within the curricula and assess the degree to which students are afforded the benefits of place-based models of learning. Simultaneously, by comparing each opportunity, conclusions can be drawn regarding the relative worth of each option, as it functions as a place-based teaching model. It should be assumed that for every 'value bar' in the matrix, a certain level of debate and assumption is necessary regarding the degree in which each teaching option or technique contains the essential characteristics of place-based education. The process of determining each value is more important than its final determination and the usefulness of this exercise depends upon the concerted effort to identify



The percentages following the teaching methods above represent the breakdown of each method within the required coursework. The black numbers represent the BLA curriculum and the red represents requirements for a first professional MLA degree. Because there are opportunities to modify study tracks and that methods can overlap within specific requirements, these values are relative and should be considered for comparative purposes.

whether each characteristic is present or deficient in each pedagogic element.

Because each of these learning options and methods vary both between each other and from term to term, a high degree of fluctuation is inherent with regard to content and predictable experience. General subjective value judgments have been made based on familiarity and qualitative discussions regarding each option. Further development of measurable metrics that could be used to quantify the differences of these subjective judgments would most likely yield interesting results. This is beyond the scope of this comparative study.

Qualified Conclusions

It is well understood that the inclusion of each pedagogic element in the curriculum is the result of careful consideration and that the menu of required and optional courses reflects the department's mission to: "Provide a balanced problem-solving methodology that recognizes the necessity to integrate system (science), intuition (art), and ethics (philosophy) in achieving appropriate landscape designs."[16] By viewing available options and methods through this lens, while considering essential characteristics of place-based education and where they are found in the curriculum, some general trends become evident.

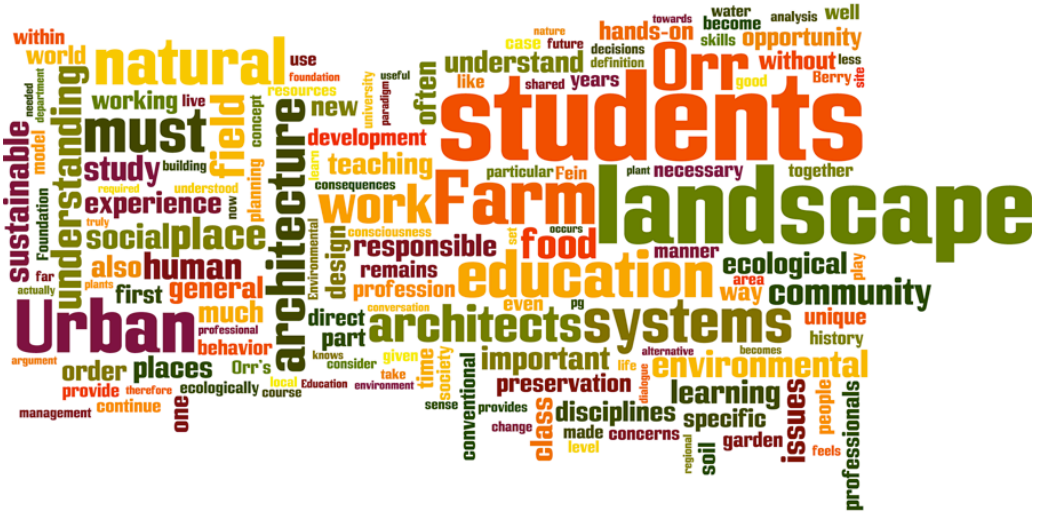
Not surprisingly, the most obvious conclusion is that the vast majority of instances where beneficial characteristics of place-based attributes are evident are found in the non-traditional experiential learning options. This is especially true when the intended characteristic is participatory and the curriculum is designed to be broader than 'learn to earn'. Of course, this is precisely why these types of options are offered, which demonstrates the department's commitment to providing as diverse a learning environment as possible. Given the requirements necessary for a professional degree and the reality that these alternative study tracts are not often embedded within the department and/ or recognized to be requisite to the training of future professionals in the conventional sense, this suggests a high degree of instinctual sophistication as to the importance of a well-rounded education based on a sense of place. That they are optional and often offered at times that do not accommodate student schedules, puts the onus on the student to plan their trajectory of study carefully in order to be able to avail themselves with alternative learning options that they might find most useful to their desired professional development.

In a general sense, the curriculum is strongly participatory which is not surprising due to the nature of the profession. This is particularly true in the alternative courses of study. The curriculum is deficient in multi-generational teaching as well as teaching that connects self and community suggesting that developing opportunities for students to interact with children and community elders should be considered. This is also not surprising considering that the student population is relatively homogeneous with regard to age and depth of community involvement. Apart from study abroad programs, cross-cultural interaction is

generally theoretical, however, references to indigenous culture are often importantly included in various courses. Due to the financial barrier that makes study abroad a less viable option for most students, this and other multi-cultural aspects of the curriculum should be considered when possible.

Due to the unique teaching model of the Urban Farm class and its long history, it is the strongest course offering in terms of a place-based model, particularly as a multidisciplinary option. Potential areas of improvement are connections to community, as well as multi-generational and multi-cultural interactions even though these remain much stronger than the general curriculum. Efforts to strengthen relationships with the Farm to School Program and the School Garden Program have increased inter-generational contact and these relationships provide students with vital insights into a facet of community that are not found elsewhere in the curriculum. Similarly, exposure to groups like Huerto de la Familia has given students an in-road into the Latino community with the intention of developing inter-cultural learning opportunities. Within the general curriculum, these types of relationships are conspicuously absent.

3 *The Urban Farm in the Pedagogy of Landscape Architecture Education: Using David Orr's six foundations for Ecological Education as a template*



David Orr contends that due to over-specialization of disciplines and detachment from natural systems, modern university students are increasingly illiterate with regard to the environmental implications of the work that they do and few voices have argued otherwise. The implications of this in regard to landscape architecture, especially terms of land use and resource use, are obviously significant. It is therefore important to develop programs and study paths that ameliorate the negative consequences brought on by overly specialized hierarchal education and alternative strategies for teaching future professionals that heed the warnings of this criticism and provide beneficial avenues for improvement must be developed.

Because the field of landscape architecture is as broad and dexterous as any, it is often difficult to provide a tidy mission statement that encapsulates what landscape architects actually do. Indeed, a persuasive argument can be made that ours is a field that must continually re-examine what we do in response to changing conditions and social paradigms. Through self-reflection and self-critique, we can develop the tactics required to better integrate our work into the cultural and social arenas that we hope to influence. A useful starting place from which to consider this self-examination is the definition of the field provided by the American Society of Landscape Architects (ASLA).

"Landscape Architecture is the art and science of analysis, planning, de-

sign, management, preservation and rehabilitation of the land. The scope of the profession includes site planning, garden design, environmental restoration, town or urban planning, park and recreation planning, regional planning and historic preservation. Practitioners share a commitment of achieving a balance between preservation, use and management of the country's resources."[1]

By itself, this open-ended definition aptly recognizes the various spheres of influence that landscape architects are involved in, however, it provides little suggestion of any shared vision or set of motivating factors that provide meaning to our work. What's more, nowhere in this definition is there inclusion of desired methodologies in both teaching and practice. Absent of any overt direction on how to behave, it must be assumed that the onus falls upon responsible practitioners to determine - independently -what is socially and ecologically vital and then worthy of the profession. Acknowledging this, it is then logical to surmise that sufficient attention must be directed towards providing landscape architecture students with the means to develop the necessary skills needed in order to be able to assess the impact of their efforts.

This is a challenging endeavor, given the breadth of the field and a curriculum designed to attend to the wide variety of topics and skills cited by the ASLA as being integral functions of landscape architects. However, the central tenet driving everything that landscape architects do is the need to be able to truly understand the places where we are and work. This would seem well understood, and indeed landscape architects are fond of offering the contention that - in theory at least- understanding place is central to the manner in which we practice.



Alexander Pope (1688 - 1744)
Image: http://famouspoetsandpoems.com/pictures/alexander_pope.jpg

Without question, the most often referenced articulation describing this understanding is drawn from Alexander Pope's Epistle IV.

> Consult the genius of the place in all;
> That tells the waters or to rise, or fall;
> Or helps th' ambitious hill the heav'ns to scale,
> Or scoops in circling theatres the vale;
> Calls in the country, catches opening glades,
> Joins willing woods, and varies shades from shades,
> Now breaks, or now directs, th' intending lines;
> Paints as you plant, and, as you work, designs.[2]

Written in 1731, Pope's epic poem has been adopted as a rallying cry because it speaks to the essence of the profession that Frederick Law Olmsted began over 100 years ago. What is provocative about Pope's poem, and what continues to define the field, is the notion that landscape architects have a unique responsibility to create spaces and conditions that are responsive to what it is that makes a particular place special and that a profound devotion must be paid to the unique essence found in all places, to the 'Genius of the Place'. Orr would argue that this unique 'genius' is first and foremost ecologically driven and that in order to responsibly educate landscape architects – future professionals with a tremendous amount of responsibility - it is vital that ecology drive every aspect of this training and in turn, drive the field. Without this criterion, landscape architects are much more likely to fail in their 'commitment of achieving a balance between preservation, use and management of the country's resources.'

In his seminal work, *Ecological Literacy: Education and the Transition into a Post-modern World*, David Orr provides six essential foundations for responsible ecological education. That he considers these topics to be 'foundations' suggests that they be used to construct an operable model on which to build responsible pedagogy. Understanding that landscape architecture is fundamentally a profession that is driven by a strong ecological ethic, these foundations can serve as a framework with which to critique the manner in which this ethic is taught as well as a providing a template with which to the assess the intrinsic value of the Urban Farm's contribution to the landscape architecture curriculum. The following section will discuss how the Urban Farm performs this function. Orr's foundations are as follows:

- All education is environmental education.
- Environmental issues are complex and cannot be understood through a single discipline or department.
- For inhabitants, education occurs in part as a dialogue with a place and has the characteristics of good conversation.
- The way education occurs is as important as its content.
- Experience in the natural world is both an essential part of understanding the environment and conducive to good thinking.
- Education relevant to the challenge of building a sustainable society will enhance the learner's competence with natural systems.[3]

Foundation #1

All education is environmental education.

There is an unavoidable interconnection between the natural systems that we depend upon and how our behavior can alter these systems. In the most general sense, the air we breathe, the water we drink and the sunshine that warms us characterizes these systems and we can no more be separated from these factors than salmon in a stream or an owl in a forest. However, what distinguishes us as human beings is that we are generally capable of understanding how our behavior will profoundly alter the environment around us.

As landscape architects, it is incumbent upon us to understand how this inter-connectedness is entwined within the needs and wants of society and the capacity of given places to support these requirements. We must also understand that these complex requirements constantly change with regard to setting, condition, time period etc. and for this reason, understanding the essence of the places we wish to inhabit and affect is critical.

In 1969, when Ian McHarg published *Design by Nature*, he called upon landscape architects to expand the field beyond the ornamental and into the protective and understood the ecological consequences of not only which decisions should be reached, but also the ramifications of how we develop and implement these decisions. He writes:

> "Clearly, the problem of man and nature is not one of providing a decorative background for the human play, or even amelioration of the grim city; it is the necessity of sustaining nature as a source of life, milieu, teacher, sanctum, challenge and, most of all, of rediscovering nature's corollary of the unknown in the self, the source of meaning.[4] (McHarg, 1969)

This is 'now or never' stuff and gets to the core of our relationship with the world around us. Even without the classic McHargian condescension of garden design being 'decorative' and playful, his adoration for the power and purpose of the natural is nothing less than holy. This sentiment is fully shared by Orr who provides a bleak forecast of the inevitable repercussions of conventional education, which Orr feels: " has been a celebration of all that is human to the exclusion of our dependence on nature. As a result, students resemble persons devoid of any sense of place or stewardship, or inkling of why these are

important."[5](Orr, 1992) David Gruenewald agrees and feels the pedagogy must be modified so that education of citizens might have some bearing on the well-being of the social and ecological places people actually inhabit.[6](Gruenewald, 2003)

This is where the necessity of re-evaluating how students are taught to truly understand the places they are called upon to protect, remains painfully clear. It is imperative that the prevailing attitude be one dedicated to restoring the appreciation of ecological consequence instead of the status quo where the celebration of 'all that is human' is allowed to flourish at the expense of protecting the place. Too often in the course of a student's career is 'providing a decorative background for the human play' given priority, as McHarg suggested. Instead training is geared towards the 'use and management of the country's resources' espoused by the ASLA as being on even par with 'preservation'. This scenario is existentially non-ecological and in direct opposition to Orr's foundation.

Education without a strong ecological foundation does very little to dissuade students from the unfortunate human position that we are free to behave how we will without serious repercussions. Environmental degradation due to irresponsible development and sprawl, ravenous material resource extraction and general indifference is more the norm than the exception and is all tied to the work of ecologically illiterate professionals who's education failed to instill an ethos of environmental responsibility. Therefore, not only must we be devout in our belief that there cannot be any separation or abstraction between the curricular information and its direct environmental connection, we must also be diligent in considering the manner of its dissemination.

Landscape architects have traditionally been well accustomed to performing detailed site analysis exercises where we identify specific aspects of a particular study area and draw conclusions that serve as a platform from which to make design decisions. Virtually all of these decisions are intrinsically tied to both our physical and cultural environments. Ours is an environmental field and we are adroit in identifying and quantifying measured characteristics such as climate, population statistics, natural resources, watersheds etc. Powerful GIS modeling allows us to combine otherwise abstract information and extract conclusions, usually off a monitor in a studio. We then synthesize these conclusions and hopefully make responsible design decisions based on what

we now think we know. Although this could technically be considered environmental - in the sense that the primary motivation for working in this fashion has to do with understanding the natural systems at play – simply sticking to business as usual, without seriously considering new methods and incubating novel perspectives - ones that foster student's emotional ownership of the places under consideration - will do little to improve the disconnect that so concerns Orr and others. To be fair, this separation is less prevalent within landscape architecture curricula than practically all other disciplines. Even so, the breadth of influence, for which landscape architects are responsible, demands that extensive ecological outcomes are comprehensively considered and implemented.



Damage due to constuction of new parking lot suggests that 'business as usual' is too often the case.
Photograph by author

In the case of the University of Oregon, an argument can be made that the necessity to include alternative hands-on teaching techniques that foster a constructionist system of learning - and therefore a stronger sense of place - is already understood. Many of these alternative-learning systems presently receive strong support including; Design-Build teaching studios focusing on environmental fluency, utilization of the campus as an arboretum when teaching about plants and the long history of hands-on study at the Urban Farm.

The Urban Farm as an Environmental Education Model

As a working model of place-based environmental education, the Urban Farm provides an opportunity for students to become immersed into *where they are*. From a natural systems perspective, Urban Farm students learn to appreciate soil quality and soil life, climate issues, plant and insect symbiosis, and other nutrient and bio-cycles. These systems are introduced simultaneously with the social systems that characterize the community in which they live including; transportation, land and water issues, social inequity, vernacular history, farmland preservation and most importantly the functions of the local Foodshed. These are the constituents that come together to form what becomes the 'genius of this place' both socially and ecologically. By studying them holistically and from an ecological perspective, students better understand how

entire social systems and unique natural systems are intrinsically and inseparably linked.

From Orr's perspective, teaching students that these connections are primarily ecological, and are embedded into the regional fabric, begins to satisfy his insistence that all education must be environmental education. Specific case examples and scenarios of how these interactions occur at the Urban Farm and improve ecological literacy will be discussed further in this project.



Landscape Architecture Design-build studio at the Urban Farm Photograph by Ann Bettman

Foundation # 2
Environmental issues are complex and cannot be understood through a single discipline or department.

Wendell Berry wrote in 1983 that the modern university has grown, "not according to any unifying principle, like an expanding universe, but according to the principle of miscellaneous accretion, like a furniture storage business".[7](Berry, 1984) His image suggesting a collection of mismatched chairs and ottomans as representations of academic disciplines and standards that clash in both style and function, vividly illustrates Berry's contention that education has become so compartmentalized and narrow that university graduates have become a "powerful class of itinerant professional vandals', who live, or are privileged to think that they live, beyond the bad effects of their bad work".[8](Berry, 1984)

Never one to pull punches, Berry is deeply concerned that there is an intrinsic chasm between disciplines that is the direct result of a curriculum dedicated to speciality. Whether or not this directly breeds professionals who intentionally produce bad work is up for discussion but what seems clear is that there exists a troubling paradigm where a student's inability or unwillingness to grasp that there is a vital interconnectedness between fields of study, one and that transcends disciplines, is the measure of the day. Often these interconnections are subtle and even more often they go unnoticed. This is not surprising due to the conventionally strict confines of subject matter, department, or even college. Opportunities for students to intermingle with peers who possess alternate perspectives and skill sets are few and far between, despite calls for integration. It would be unfair to suggest that this segregation is

self-imposed as students clearly welcome opportunities to expand their horizons into other disciplines however; the race to the finish seldom allows much time for detour. That is not to say that this never occurs and the student history at the Urban Farm, for example, indicates that there are far more students looking to reach out than there are places for them under the present class size model.

Landscape Architecture and Multidisciplinary Study

In 1972, not long after McHarg charged the field with the directive to reconsider the role Landscape Architects must play in terms of conscientious land planning, the ASLA commissioned the most comprehensive study to date regarding the role of the profession and its future. In perhaps the strongest conclusion of the report, its author Albert Fein, strongly warns the field that they must not forget the multidimensional history of landscape architecture and forcefully submits that " a denial of history is a denial of the civilized mandate to constantly re-examine what we have done in terms of what we are and wish to become".[9] (Fein, 1972) Fein and others have not forgotten the results of the self-imposed narrowing of the field that resulted in the departure of Regional and Land Planning from the profession in the 1920s. Going on, he forcefully bemoans a selective history of landscape architecture regarding Frederick Law Olmsted's pioneering work in planning and preservation and concludes that this important aspect of the field no longer enjoys the distinction that it should, relative to Olmsted's design legacy. This is very disconcerting because he understands the ramifications of specialization. Fein goes as far as to warn of a schism within the field if it does not evolve and re-orientate aspects towards "regional resource analysis and planning among faculty"[10](Fein, 1972), and suggests that, "special study must be given to additional courses in sociology, psychology and ecology on the undergraduate level that are so important to the professional training of a landscape architect."[11](Fein, 1972)

According to this report, landscape architects have known for 40 years that it is crucial that we involve opinion and collaboration from across disciplines. This pertains to professionals and educators who must continue to whittle away the boundaries separating disciplines in order to provide responsible service. In the case of educating the next generation of design professionals, we must include input from those with alternative perspectives such as farmers, grocers, school superin-

tendents, clergy, community gardeners, etc. As issues relating to food and food systems and how they relate environmentally continue to capture the imagination and increasingly are included in dialogue, it is these people who are the ones with a stake in the game and their perspectives represent a new constituency that is sympathetic to a shifting paradigm. In order for us to play a leading role in McHarg's human play, landscape architects must –quoting Fein- "incorporate with minimum stress the varied goals and wishes of its contemporary membership, and to respond effectively as well to the needs of a nation that has undergone a profound change in its environmental consciousness".[12] (Fein, 1972)

The Urban Farm as a multidisciplinary model

A study of student demographics - looking back 10 years - shows that students from 94 specific degree tracks enrolled in the Urban Farm class. In addition to generally consistent enrolment of architecture and landscape architecture students, the majority of students come from environmentally connected disciplines such as Environmental Studies, Environmental Science, Geography and Anthropology. Interestingly, students from disciplines related to the social sciences such as Political Science, Sociology and International Studies also chose the class in high numbers. This diversity of academic backgrounds confirms that the desire to take part in hands-on learning at the Urban Farm transcends field of study and that the popularity of the class is shared by students from across the university spectrum.

Surveys of recent Urban Farm students have shown that the most consistent motivation for enrolling in the class was a desire to work outside and learn to grow food. This was particularly true among female students. Students also responded in the positive when questioned whether they were motivated by the opportunity to study Urban Agriculture, learn garden design and meet new people. Additional survey results demonstrate that students consider having the opportunity to grow food to be important and that they feel that farming would be a satisfying profession. Thisin spite of the fact that they are not receiving instruction dedicated towards this professional career choice, the Urban Farm class notwithstanding.

Clearly the class is offering a learning option that is not available elsewhere at the university and students of all kinds are eager to become involved. That there is an opportunity for students of all kinds to take

part in a multidisciplinary, hands-on working experience is something that Berry would applaud, for the itinerary in this program is limited to sharing a human experience that super-cedes specific agenda. It is about working together and pulling together different knowledge bases without the restraints of relying on a presupposed expertise that must answer to a specific discipline. It is also about sustenance, a concern shared - of course - by those of all disciplines.

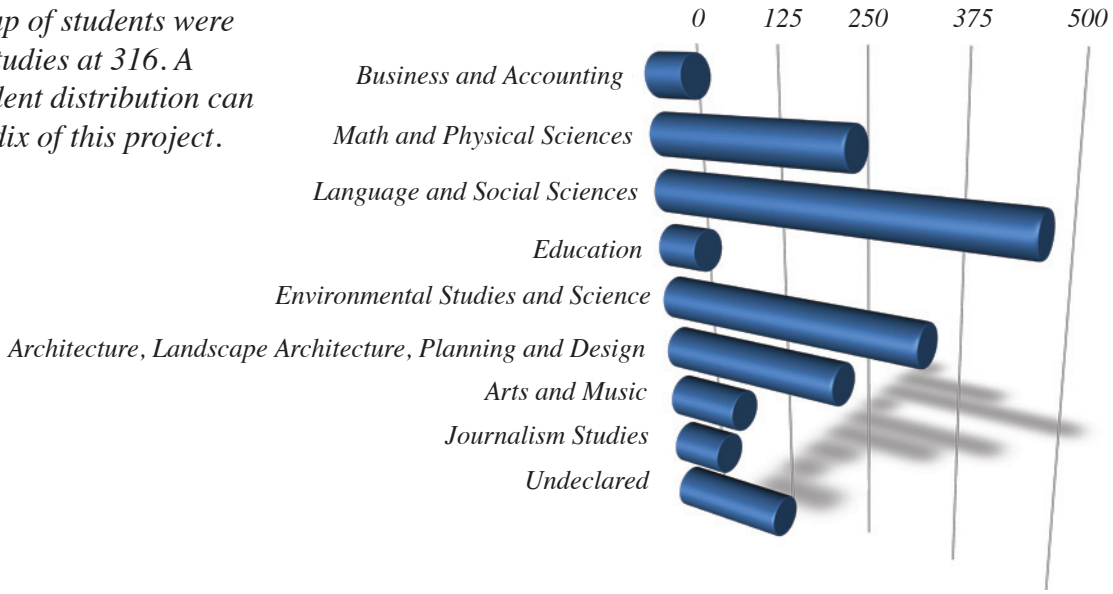
A strong argument can be made, in terms of shifting national environmental consciousness, that in no general area has a collective understanding been more amplified than that of sustainable food systems and food security. These concerns have now joined previously accepted study areas such as natural resource protection, water and air quality and habitat protection as being worthy pursuits for landscape architects. The contemporary membership that Fein champions, should now expand to also include nutritionists, sociologists, retailers and most of all, sustainable food producers and importantly farmers. These new players should be recognizable to landscape architects who are already adept at general collaboration but less articulate when trying to speak the language that is uniquely being spoken in places like the Urban Farm.

Foundation #3
For inhabitants, education occurs in part as a dialogue with a place and has the characteristics of good conversation.

In *Growing Vegetables West of the Cascades*, author and seed farmer Steve Solomon writes that there is a bargain struck when one becomes a gardener. Plant domestication, he feels, can be described as an: "Eternal contract whereby we humans promise to nurture a wild plant and protect it and its progeny from competition".[14](Solomon,2000, 6). To Solomon, a sacred arrangement has been cultivated where it is incumbent upon the steward to be able to understand the factors that need to be manipulated in order to ensure the survival of her charges. Without overworking the metaphor, a linear progression can also be drawn from the newly planted seedling and expands into a furrow, into a planting block, into a micro climate, into a farm, into a bioregion etc. The gardener, or Urban Farmer, in our case, becomes a soil scientist, hydrologist, nutritionist and entomologist, albeit on a less specialized level. Even more, she becomes a listener. This requires deliberate attention to the physical – and for some students, spiritual – attributes associated with a place and a time. I have a friend who is fond of sharing the adage

The Urban Farm as a multidisciplinary model

A study of Urban Farm students between the fall of 2001 an the fall of 2011 revealed that 1835 students from 89 disciplines enrolled in the Urban Farm class. The largest group of students were from Environmental Studies at 316. A detailed census of student distribution can be found in the appendix of this project.



Urban Farm Demographics 2001 - 2010

Business and Accounting

Math and Physical Sciences (Geography, Anthropology, Biology, General Science)

Language and Social Sciences (Political Science, Sociology, International Studies, Psychology, Spanish, English, History)

Education

Environmental Studies and Science

Landscape Architecture, Architecture, Planning and Design

Arts and Music

Journalism Studies

Undeclared

Disciplines which were represented by more that 30 students are listed by frequency

that he knows that it's time to plant his peas when he can feel the sun on his bald head. In his special way, he is 'listening' to the natural stimuli of his particular place and time and his response is one of understanding and welcome. By internalizing the natural feedback he receives, he has entered into a conversation and activity that requires enhanced understanding. The same could be said for the farmer who knows to monitor the lowest section of his pasture before allowing his livestock to graze because he knows that if the ground is too wet, his soil will be damaged and will produce far less hay. These seemingly simple acts of reciprocal learning are examples of what is missing in conventional education therefore leaving students to exist in a "monologue of human interests, desires and accomplishments that drowns out all other sounds"[15]. (Orr, 1992, 90) Orr is only partly speaking figuratively, but his condemnation of a one-way transmission model that fails to enter into the conversation of place, is obvious.



Team Leader Heidi Schroeder leading a group session
Photograph by Ann Bettman

Landscape Architecture as a conversation

Remembering that landscape architecture - as an ecological endeavor -involves the analysis, planning, design, management, preservation and rehabilitation of the land, it stands to reason that to be proficient at these essential tasks, professionals must be uniquely gifted in listening to the spaces and constituents that they will protect and/or manipulate. Herein lies the challenge. Often the imposition of human activity upon natural systems in need of protection is exactly what landscape architects do and this requires considerable understanding. Orr recognizes this predicament and suggests that,

> "The use of words such as "resources", "manage", "channelize", "engineer" and "produce" makes our relation to nature a monologue rather than a conversation. The language of nature includes the sounds of animals, whales, birds, insects, wind, and water – a language more ancient and basic than human speech."[16] (Orr, 1992, 91)

As mentioned earlier, landscape architects are well versed in collecting abstract data and assessing social necessity but are less adept at immersing themselves into the conversation that Orr is calling for. In many ways this requires a reconsideration of how they go about recognizing

parameters that are ancient and basic yet often poorly understood by those less skilled at this natural conversation. This is often a by-product of the abstract nature of how the discipline is conventionally taught and efforts to encourage students to learn to listen to landscapes should be undertaken.

Conversations at the Urban Farm

At the Urban Farm, where the gardener has entered into Solomon's contract, the necessary investment of stewardship presupposes that the 'drowning sound of accomplishment' is set aside in favor of that of the breeze, the insects, drip-hoses and garden colleagues. It is these visceral, palpable inputs that drive the conversation and distinguish an educational experience which is responsive from the 'conventional model of education' that holds to the belief that, 'we are alone in a dead world of inanimate matter, energy flows and biochemical cycles'[17] (Orr, 1992), a system much castigated by Orr, Berry, Thoreau and others.

Returning to the metaphor where the garden and its stewardship is a microcosm of a much larger set of concerns and problems, the dialogue at the Urban Farm is broadened to include the neighborhood, the agrarian community and its accompanying foodshed. These are abstract concepts to a student looking at hunger statistics, census reports, and regional on-line data with the intention of learning something useful about a particular community or place. This abstraction does not allow for constructive dialogue and often prohibits meaningful immersion into the subject at hand. This is not the case in teaching models like the Urban Farm class where students have worked in the rain and sun and have received direct feedback regarding regional climate. They have met local farmers and visited hunger relief garden projects. They have studied local food issues by comparing what they are growing and what is sold at the Farmer's market with what is offered at conventional supermarkets and they have seen first hand the smiles on the faces of children while they volunteer at Farm to School programs. These students have learned to ask the questions and listen to the answers that illuminate the drama in which they are the players.

If the intention is to really teach students the importance of understanding where they are and what they are doing, it will begin by affording them the opportunity to continue the conversations such as those that began the first day they came to the farm. Judging by the fact

that the Urban Farm program is unique to landscape architecture departments nationwide, this specialized conversational instruction remains more of an exception than the norm. That is not to say that the field has not embraced sustainable food issues at the same rate as the general public, probably more. However, the direct hands-on, experiential learning model of the Urban Farm remains an asset that is unique to the landscape architecture department at the University of Oregon. .



Students who are responsible for watering new spinach starts are in-tune with the weather
Photograph by Ali Abbors

Foundation #4

The way education occurs is as important as its content.

In 1953, mathematician and satirist Tom Lehrer sang of his 'bright college days' as being, "Ivy covered professors, in ivy covered halls". [19] Although this assessment is geared to amuse - and is in fact probably funnier to those like urban farmers or landscape architecture students who know, first-hand about ivy being an exotic invasive species – nonetheless, this speaks to a widely held position that condemns the effectiveness of this style of education. Once again, this is not a new concept and condemnation of unilateral transmission as an educational technique remains frequent. John Dewey again:

> "All education proceeds by the participation of the individual in the social consciousness of the race. This process begins unconsciously almost at birth, and is continually shaping the individual's powers, saturating his consciousness, forming his habits, training his ideas, and arousing his feelings and emotions".[20] (Dewey 1897)

Dewey's key tenet, of course, is that education cannot proceed without the constant participation of the individual and this existential interaction is necessary in the development of conscious, feeling, responsible human beings. To him, education is a social process. Education is growth. Education is not a preparation for life; education is life itself.[21] (Dewey, 1897) This declaration was trumpeted by transcendentalists such as Emerson and Thoreau who wrote passionately about the benefits of experiential learning. Writing in *Walden*, Thoreau poses the question,

> "Which would have advanced the most at the end of the month, - the boy who had made his own jackknife from the ore which he had dug and smelted, reading as much

"As our minds sweep over the past and back to the present, I want them to center on the natural ecosystems still with us as our primary teachers. They are our source of hope. Reduced in number and limited in scale, they still hold answers to countless questions we have not yet learned to ask. The best place to begin to apply the knowledge we have learned and will learn is with agriculture."[18]
(Wes Jackson 2010)

> as would be necessary for this, - or the boy who had attended the lectures on metallurgy at the Institute in the mean while, and had received a Rogers pen knife from his father? Which would be most likely to cut his fingers?"[22]

Experiential Learning in Practice

Contemporary Landscape Architects understand this process as well. Olmsted, who began Central Park forty years before Dewey's declaration, espoused a system of learning and involvement that still has as much to say about the field as any other factor. What makes Central Park the crown jewel of the profession is not only the beauty and grace of its design or the ingenuity of its logistics. What makes Central Park indispensable is that Olmsted knew that it would provide New Yorkers an opportunity to interact 'with nature' in a way that was unavailable to them in 1850 and remains otherwise unavailable to them a hundred and sixty years later.



Team Leader Lauren Bilbao leading a hands-on canning workshop
Photograph by Ann Bettman

> It is one of the great purposes of the Park to supply to the hundreds of thousands of tired workers, who have no opportunity to spend their summers in the country, a specimen of God's handiwork that shall be to them, inexpensively, what a month or two in the White Mountains or the Adirondacks is, at great cost, to those in easier circumstances.[23] (Olmsted, 1997).

In so many ways, this appreciation for the direct exposure to natural systems as teaching tools is his greatest legacy and continues to define the profession he began and contemporary educators continue to improve.

The question then becomes; how can the teaching of landscape architecture remain dedicated to Olmsted's understanding that ours is a field that depends upon direct participation in order to foster responsible design? As much as we would like to spend the necessary time needed on working on site, this is seldom the case in the conventional model. For example, students are often afforded the occasional site visit or a studio field trip to a project area, however, this does not allow the degree of interaction required to truly understand the nature or - genius of the place - and students are generally not given ample opportunity to hone

the skills needed to become proficient in site-specific analysis. At least not to the degree that Orr, or even Olmsted would have wished for.

Experiential Methodologies

At the University of Oregon, strategies intended to provide more applied teaching have been implemented to give landscape architecture students real experience and the chance to participate directly. As was discussed in the previous section, these include design-build studios, the chance to study in Kyoto and Rome, extended field study sessions, an intensive hands-on, field-based Plants sequence, service learning opportunities, the Courthouse Garden Project and the Urban Farm Program. Few question the effectiveness of these programs, even though all of them save the Plants sequence remain on the periphery as non-required electives.



Urban Farm students using donated materials to erect a plastic hoop house Photograph by Michael Perrault

Of all these opportunities, the Urban Farm class offers the most intense experiential opportunity and although lectures and panel discussions are presented at the Urban Farm, the vast majority of the work is hands-on. This is done individually and in teams and gives students real life experience in community building, physical site appreciation and analysis, natural system interaction and practical skills training. To insure these outcomes, special attention is paid to a process that differs considerably from the general study. These differences are manifested in a host of ways and can be seen on a daily basis at the Farm.

A Day on the Farm

Urban Farm Director Emeritus Ann Bettman, was a strong proponent of the tradition where on the first day of the term students would meet in a large circle and discuss a plan to do a large group project in not much more than an hour. Bettman's tradition continues and is very important. Work is intentionally scheduled so that the group of 80 plus workers can confront a set of projects together. This usually involves transforming an area of the Farm in some way, whether it is attacking overgrown blackberries or weeding and mulching an entire area in one fell swoop. Students are encouraged to take a moment and look around before beginning, and again after, the work session and consider the results. The power of what eighty people working together can accomplish is much more than the actual finished product in that it provides

a dynamic where a 'before and after' experience is afforded. This has proven to be very powerful and is a novel experience for most students. Once again, this is an intentional, specific first day exercise designed to introduce new students to a vastly new University experience not only with regard to the job at hand, but in the manner in which it is being tackled.





Spring term students work together to free grapevines from invasive blackberries on the first day of class. A 'before and after' experience can be useful in the development of 'esprit de corps'
Photograph by Rosie Sweetman

During the first week, students join the team that they will be working with over the course of the quarter. Similar to conventional classroom team projects, the dynamic created by a group of students, each with a different collection of skill sets and experience levels, is such that the success of the team, and indeed the learning potential of each student, is dependent upon every student's willingness to work together. This dynamic is amplified by the inherent physicality of the activity and students quickly organize themselves in order to negotiate a distribution of work they are comfortable with. Without question, the Team's whole will greatly exceed the sum of its parts if students are contributing at a level within a comfort zone that inevitably expands over the course of the term. This is evident both on the team scale and in terms of the general population of the class.

Taking this a bit further, the success of the class as a whole relies upon how well the group interacts with the agrarian community within which it finds itself. This is generally a very positive relationship as students become enthusiastic about expanding what they are learning in the garden and lending their skills to a host of community efforts. By developing relationships, students are afforded insights into the places they are working and living in; insights that would be impossible to acquire through conventional research. It is important to note that the insights, impressions and introductions that students receive while working in their particular groups and community arenas, often have profound affects on the manner in which they re-consider the place they live. Looking into local food systems and the people who are involved with farming, marketing, hunger relief, philanthropy and volunteerism is most often a student's initial introduction to this facet of

their community. Most students are responsive to the unique concerns that are associated with this type of work. This is true across disciplines and in the case of landscape architecture students this is a unique opportunity to increase their proficiency in cultural site analysis and coalition building.

Studies have shown that the ability to retain information is drastically enhanced by the involvement of hands-on, sensory interaction. Anyone who was ever forced to take piano lessons knows that even years later, when all memory of reading music or specific chord progressions have retreated beyond retrieval, the fingers still remember rudimentary movements. The same is true for having one's hands in the soil and the wind and rain on one's face. Studying the sand, silt and clay levels of soil samples in a jar or reading the characteristics from the county soil survey tells you nothing about temperature, tilth, moisture content or presence of life. These are the added findings that can be learned through direct observation and although the specifics of findings will perhaps be forgotten, the process of how they were discovered will continue to resonate.



First day work session, Spring 2010
Working together in a large group demonstrates the power of collaboration
Photograph by Renee Wilkinson

Foundation #5
Experience in the natural world is both an essential part of understanding the environment and conductive to good thinking

> *"One swallow does not make a summer, but one skein of geese, cleaving the murk of March thaw, is the Spring."*
> *Aldo Leopold, A Sand's County Almanac*

Anyone who has ever read Wendell Berry's poignant imagery of farming his 'old Kentucky home', or Wes Jackson's writing on the majesty of the Great Plains knows of the lasting impacts of interacting with the natural world. As human beings in general and Americans in particular, we share a fascination of the wild, a fascination that has captured the imagination of some of the most important social thinkers of the last 100 years. Transcendentalists such as Emerson, Whitman and Thoreau, have written extensively on the need turn to the natural world for enlightenment. Writing in Walden, Thoreau suggests that: "We need the tonic of wildness...At the same time that we are earnest to explore and learn all things, we require that all things be mysterious and unexplorable, that land and sea be indefinitely wild, unsurveyed and unfathomed by us be-

cause unfathomable. We can never have enough of nature."[24](Thoreau). What makes this statement important is that he is speaking to both experience in the natural world - as a tonic that heals - as well as the contention that nature can never be fully understood and will therefore always continue to inform. Environmental ethicists Aldo Leopold and John Muir concur and have spoken about the dire consequences of a general population that is detached from natural systems and that it is essential that students are allowed natural world experience in order to become 'good thinkers'. In A Sand County Almanac, Leopold writes:

> "One of the penalties of an ecological education is that one lives alone in a world of wounds. Much of the damage inflicted on land is quite invisible to laymen. An ecologist must either harden his shell and make believe that the consequences of science are none of his business, or he must be the doctor who sees the marks of death in a community that believes itself well and does not want to be told otherwise."[25]



Spring Work Session
Photograph by Ali Abbors

That contemporary writers, like Gary Nabhan and Barbara Kingsolver, also continue to speak about the power of natural spaces to affect profound emotional reaction and provide clarity, suggests that this is a quintessential human condition. These voices are devout in the belief that exposure to the wild is as essential to one's wellbeing as any other factor and unless we strive to understand the environment that we are intrinsically linked to, we are hopeless to protect it. For this, there can be no substitute for direct experience. Orr's foundation is intentionally worded to voice the contention that 'good thinking' depends upon one's experience in the natural world. There is also a moral connotation to the goodness he extols in that, we are the stewards of this world and this is a duty to which we are bound.

Teaching Landscape Architecture through ecological experience

As educated landscape architects, this duty is even more binding. It is our responsibility to strive to truly understand the complexities of the world around us. Quoting the Fein Report once again, landscape architects must " incorporate with minimum stress the goals and wishes of its contemporary membership, and to respond effectively to the needs of a nation that has undergone a profound change in its environmental

consciousness"[26] (Fein, 1972, 5-1). Leopold would applaud landscape architects who have embraced this consciousness and joined him in his effort to diagnose the wounds that he believes are a result of systematic detachment. Borrowing his medical reference: in order to prescribe a treatment strategy for the 'invisible damage' to nature, landscape architects must continue to look for methods of teaching that immerse students experientially into natural systems, without the detachment that is common in conventional methods. Only then will they fully understand the consequences of the decisions they will be called upon to make. Orr puts it this way: "Environmental education ought to change the way people live, not just the way they talk"[27] (Orr, 1992, 91) The suggestion here is that specific behavioral change is the goal of responsible education and students must be affected on a visceral level.



Students winnowing oats gain insight on grain issues
Photograph by Ali Abbors

The gardening experience and 'good thinking'

In many ways, the biological dynamics of a garden serve as a microcosm of natural systems on practically every scale and this provides a wonderful teaching opportunity. Students are essentially creating specific ecosystems in order to grow healthy plants. They understand that the primary factor in Organic agriculture is the creation of healthy soil. They learn to appreciate that the necessity of sufficient biodiversity is as important within the rhizosphere of a brassica plant as it is in a climax forest or healthy farm. They learn of the symbiosis between mycorrhizal fungi, bacteria and nitrogen fixing plants and they are fully aware of their role in providing for these interactive systems that in turn provide for their plants. They are often emotionally invested in the work they do and the lessons learned - both good and bad - are not soon forgotten. There is simply no way to simulate this interactive relationship and its associated lessons in the studio or in front of a computer. In addition is direct climate observation, waste control in the form of compost production, fertility concerns, distribution of labor issues, pollination dynamics, invasive species control, water conservation, nutrition and food preservation etc. All of these topics are directly interwoven into the garden experience and can affect the class on a daily basis. With all these issues in play, students quickly realize that they are a part of something much bigger and that the manner in which they behave indeed has consequences. This is when the changes that Orr and others are calling for take hold and folks actually begin to re-orientate the way

they live.

If we take Fein at his word and embrace the contention that landscape architects are 'to respond effectively to the needs of a nation that has undergone a profound change in its environmental consciousness', one would be hard pressed to suggest any other national priority shift as overt and ubiquitous as issues that relate to food production. Landscape architects who have had direct interaction in this arena are obviously well positioned to act as advocates for environmentally responsible agrarian decision-making and are better suited to address the damage that is no longer invisible. This will require a shift of both consciousness and behavior, however, re-orientation fosters optimism and according to Fein, this shift "would not be a totally radical step, for the history of the profession indicates how it continually has been affected by changing national priorities".[28] (Fein, 1972)



Sowing seeds in the early spring
Photograph by Ali Abbors

Foundation #6
Education relevant to the challenge of building a sustainable society will enhance the learner's competence with natural systems.

Orr's final foundation is deliberately open ended and subject to considerable interpretation. He recognizes that the challenge ahead lies in the paradigm that sustainable societal development is inextricably dependent upon a competent understanding of natural systems. Few would disagree that the jury is still out on whether we possess this degree of competence.

Beginning with the word sustainable, it is useful to consider the time frame of Orr's commentary. When *Ecological Literacy* was first published in 1992, the concept of sustainability had not yet become so mainstream as to be as much a part of the general lexicon as it is today. This was a novel concept that served to articulate a growing consensus that business as usual was not an option. At the time, this was a necessary invention used to emphasize the new consciousness exemplified in Orr's Foundation. In truth, after 20 years the word sustainability has been overused to the extent that it has probably outlived its usefulness.

Briefly, the popular use of the term sustainability can be traced back the 1983 the United Nations General assembly's World Commission on Environment and Development (WCED). The commission was

set up to address, "the accelerating deterioration of the human environment and natural resources and the consequences of that deterioration for economic and social development."[29]

The commission was chaired by Gro Harlem Brundtland and in 1987 released the findings that would go on to be known as the Brundtland Report. From this report comes the initial widely accepted working definition of the concept of sustainability: "Sustainable development is development that meets the needs of the present without compromising the ability of future generations to meet their own needs."[30]

What one notices immediately about this definition – and what deeply concerns Orr and others - is the presupposition that sustainability, as a concept, is first and foremost tied to development and there is no differentiation between economic and social development. An argument can be made suggesting that Orr feels the necessary relevant education required in order to competently understand natural systems has not been provided and therefore -by his standards- without this knowledge base, development cannot be truly sustainable. He feels that it is irresponsible to forge ahead without understanding the consequences of our actions. What makes Orr's foundation interesting is his decision to deviate from Brundtland and intentionally shift the discussion from 'sustainable development' to 'sustainable society'. His agenda centers on looking at how a 'sustainable society' responds to - yet also informs - understanding of natural systems. His is a society characterized by an increased symbiosis between competent citizens and the systems that they are a part of. There is no separation between the natural world and the people, those he would prefer think of as inhabitants. Orr maintains that , "Good inhabitance is an art requiring detailed knowledge of a place, the capacity of observation, and a sense of care and rootedness. Residence requires cash and a map."[31](Orr, 1992. pg 130)

This is a rather striking departure from the Brundtland concept where the role of developer takes center stage and if we return to the final tenet of the ASLA definition of landscape architecture, we see the same thing: 'Practitioners share a commitment of achieving a balance between preservation, use and management of the country's resources'. That 'use and management' of resources receives equal billing with preservation is an arrangement that surely worries Orr and is surely unsustainable.

Looking now forward, Orr's foundation remains useful and

poignant. As landscape architects, we must spend adequate time looking at how communities function and influence the dominant paradigm. If the idea is to exact real change, it is rather preposterous to think that the work of design professionals can persuade the general population to act appropriately without also being grounded in the things that the people consider most important. It is therefore incumbent upon the landscape architect to immerse himself or herself into what distinguishes the places they are called upon to design. This pertains to both cultural and environmental immersion. This 'art of good inhabitance' should be as much a part of a designer's arsenal as a soil survey, census data sheet or topo map. Far too often do we conduct only cursory investigation into how our work will respond to the most necessary concerns of community stakeholders and even less effort do we spend on actually becoming a part of this community with a stake in the game.



Journalism student conducting on-site interview. Spring 2011
Photograph by Mark Blaine

This dynamic is almost always exacerbated by the confines of the standard landscape architecture studio. Due to time constraints and the necessity to provide instruction of the common standards of the profession, comprehensive attention is seldom given to really developing skills specifically geared towards societal dynamics and building community. This scenario often carries on into the professional world where economic factors amplify the need for efficiency and expedition, often at the expense of environmental and societal revue. In truth, there is a risk that we can be far too similar to the 'itinerant professional vandals' that Berry warns us about.

Around the world, there is no other human activity that impacts the land more than agriculture and if landscape architects continue to hold to the notion that we are stewards of the land and that we are committed to redefining sustainable behavior, it is imperative that we incorporate agricultural issues - both social and environmental - into the work we do. The next generation of landscape architects must be well educated on the complexities of subjects such as foodsheds and food security, ground water pollution, the negative effects of monoculture and farmland preservation.

Learning to build community at the Urban Farm

Fortunately, a surprisingly large number of these concerns are made familiar to students at the Urban Farm, particularly with issues related to sustainable agriculture and foodsheds. This phrase refers to the societal and ecological inputs and processes relating to the production and distribution of food within a given population base. This relatively new concept – (not recognized by spellcheck, although 'Cheetos' is) – is as useful a metric for measuring or understanding community behavior as we have. In considering the manner in which the local foodshed functions as a system, Urban Farm students are introduced to the intricacies of local food production and recognize where the work they do falls into a long history of agrarian tradition in the region. They are directly involved with hunger relief efforts and their associated concerns. Issues relating to nutrition, social justice, social inequity and inter-racial relations are all connected to this work. Parameters of food safety, food policy, water quality and waste streams are also issues recognizable to Urban Farm students as these are the issues that shape the foodshed in much the same way as streams, rivers and lakes shape watersheds. One would be hard pressed to come up with a single shared thread that connects a community together as universally as the manner in which it procures and produces the food that it eats. This should surprise no one, but Orr would certainly argue that the effort required to fully learn how these factors define and shape behavior is not being sufficiently applied. He would most likely also contend that the task of building a more 'sustainable society' is made harder by our negligence in this area. To him, "education must be directed toward developing a citizenry prepared to live well in a place without destroying it."[32] (Orr 1994) and the manner in which we educate is too often inadequate, if the goal is to identify societal shortcomings while increasing familiarity with natural systems.

Summary

In his conclusion to Earth in Mind, David Orr compares modern society to the prodigal son who returns home in shame, bloated from excess and seeking penitence. He feels that ours is a generation of ecologically illiterate professionals who lack both the awareness and required skills to turn the ship of once imagined progress. To Orr, we must return to an understanding and set of values that is specifically based on the places we inhabit. We must return home to 'restore ecological and human scale to a civilization that has lost its sense of proportion

and purpose'. Continuing, he argues that this can only be possible if we 'regenerate roots in particular places and traditions'.[33] (Orr, 1994)

In order to enact the changes that Orr espouses, there must be a fundamental paradigm shift in the manner in which we educate those who will be entrusted with carrying out needed change. A new educational strategy of place-based experiential learning is needed in order to build upon the foundations of responsible ecological literacy that Orr has identified. This multidisciplinary strategy will incorporate a hands-on responsive methodology that focuses on creating a community consensus that is ecologically responsible and manifested in sustainable behavior.



Working together on a shared project builds team unity
Photograph by Renee Wilkinson

If the Urban Farm program is to continue to provide this unique learning opportunity within the pedagogy of landscape architecture, it will be necessary to identify and acknowledge which specific aspects of the curriculum perform specific functions that inform students and increase both their general and site-specific ecological literacy. Although most of these are actually obvious, a sustained level of scrutiny can track precisely how each lesson learned could be put to practical use by future professionals. At first glance, it would appear that a general introduction into the intricacies of foodshed systems and how these systems demonstrate shared community values and structure would be the primary imperative subject area not generally included in the conventional curriculum. Also imperative, however is the physical hands-on experience gained by students working together in a common urban agricultural endeavor.

Finally, and most important, are the lessons extracted by simply becoming in-tune with the natural systems on which everything at the Urban Farm depends. Beginning with the feel of soil from which the plants extract nutrients and continuing with the water and warmth that allows seeds to germinate and the feeling of sharing the harvest after hard work, the visceral feedback that is provided remains an entirely singular experience in the study of landscape architecture.

The benefits of these experiences are many and will be discussed in further detail in the following section.

Comparative study of experiential learning opportunities in the landscape architecture curriculum

In order to assess the relative value of the Urban Farm as an example of ecological education within the framework of David Orr's six foundations and in the context of departmental offerings, a similar comparative study of available experiential learning options was performed. In this case, the goal was to determine how each option conforms to each of Orr's foundations. The list of experiential study options available to students remains: design-build, study abroad, internships, service learning, the 'plants' sequence of classes and the Urban Farm. Again, the 'plants' sequence is the only required class being studied and is included because of the experiential nature of the teaching model. Each of these learning opportunities have been assessed for the following six criteria:

#1 All education is environmental education.
#2 Environmental issues are complex and cannot be understood through a single discipline or department.
#3 For inhabitants, education occurs in part as a dialogue with a place and has the characteristics of good conversation.
#4 The way education occurs is as important as its content.
#5 Experience in the natural world is both an essential part of un derstanding the environment and conductive to good thinking
#6 Education relevant to the challenge of building a sustainable society will enhance the learner's competence with natural systems.

The same four general teaching models are also being considered for the same characteristics. They include: lecture, seminar, studio, discussion/laboratory.

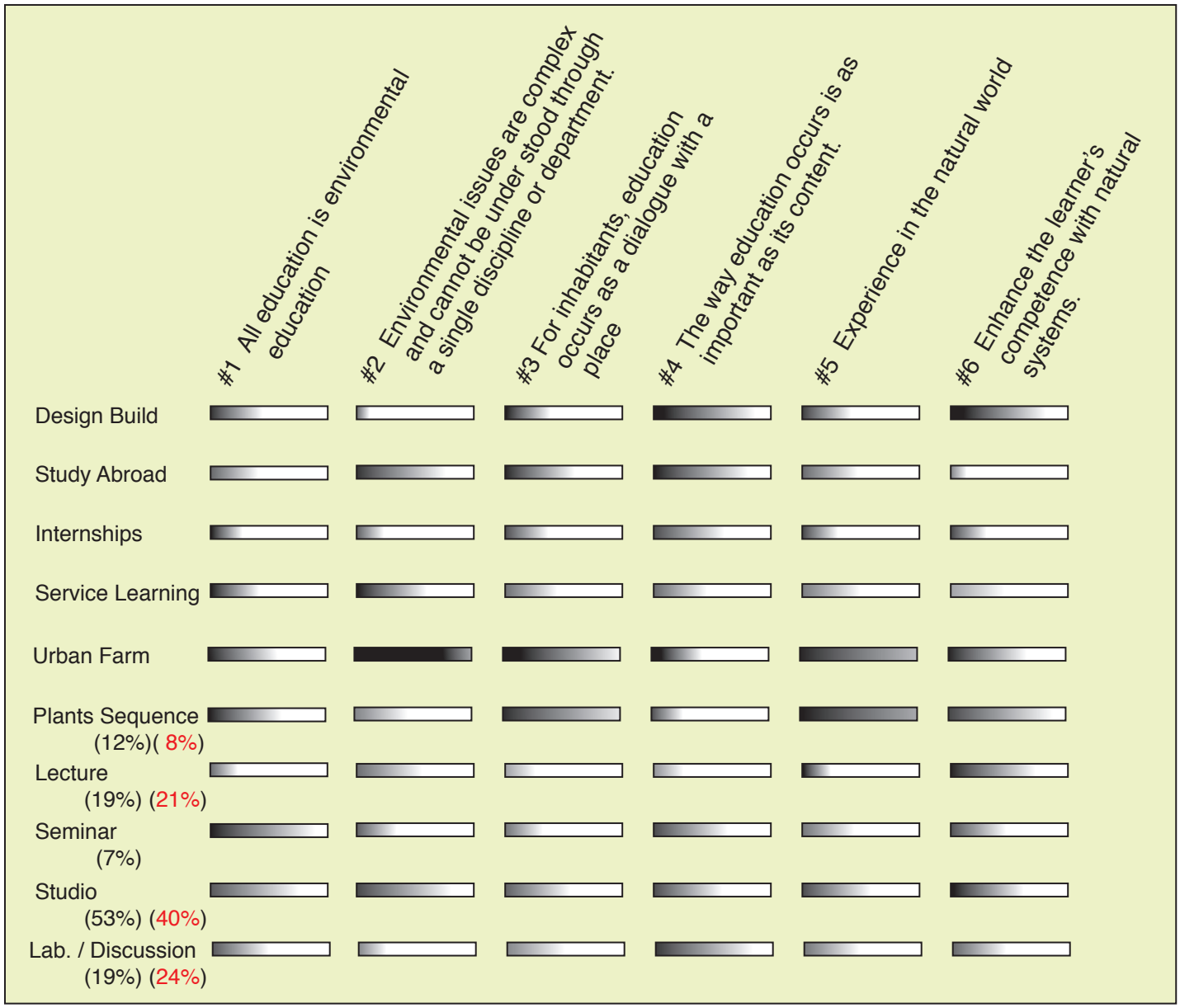
As with the previous study of place-based characteristics, the intent of this general study is to compare elements within the curricula and assess the relative degree to which these classes that enhance ecological literacy by conforming to Orr's foundational requirements. The methodology and associated caveats continues to be the following:

• The process of determining each value is just as important as its final determination in that it provides curricular reflection and an opportunity for self critique.
• The usefulness of this exercise depends upon the concerted effort

to identify whether each characteristic is present or vacant for each pedagogic element.

• A high degree of fluctuation is inherent with regard to content and expected experience. However, each class or technique has a predictable

Matrix of program elements and teaching strategies considering David Orr's six foundations for ecological education



(% of required curriculum for BLA degree, % of required curriculum for first professional MLA)

likelihood of containing important foundations and assigned values are based on these predictabilities.

• General subjective value judgments have been made based on familiarity and qualitative discussions regarding each option.

Qualified Conclusions

As with the previous study, each value determination is based on both the content of the course material and the manner of its dissemination. By considering how each course or general teaching style adds to ecological literacy by including Orr's six necessary foundations, some general trends can be seen. It is clear that the overall curriculum scores highly on participation and general ties to environmental issues and to the idea of sustainability. Conversely, the multi-disciplinarity requirement is least represented. Due to its alternative teaching style, content and student demographic, the Urban Farm scores highest under Orr's criteria.

There is less discrepancy between the experiential study options than the traditional teaching methods but it is clear that the Lecture format is least equipped to conform to Orr's standards. This is primarily because so much of Orr's ecological education relies upon participation, dialogue with natural systems and the crossing of disciplines.

Finally, because all options and techniques have the potential to be ecologically useful under Orr's directive, by assessing how his foundations are represented across the curriculum, it becomes easier to compare compliance and adjust accordingly. It also becomes easier to see which courses or methods perform the role well, demonstrating each one's general importance. By modifying specific courses styles and techniques so that they include Orr's foundations, the general curriculum is improved. Towards this end, combining these foundations within specific courses and combining specific techniques should be considered.

4 *The Urban Farm – A Program and a Place*

History/Context/Function

History of the Urban Farm
Edible City Laboratory

Decline and Reinvention

The Outdoor Classroom

Program Vision & Development
- *Space and Perception*
- *Content*
- *Class Material*
- *Assigned Classwork*
- *Ritual*

Within the Cultural Context

Within the Campus Farm Movement

The Urban Farm Model

The Urban Farm Class

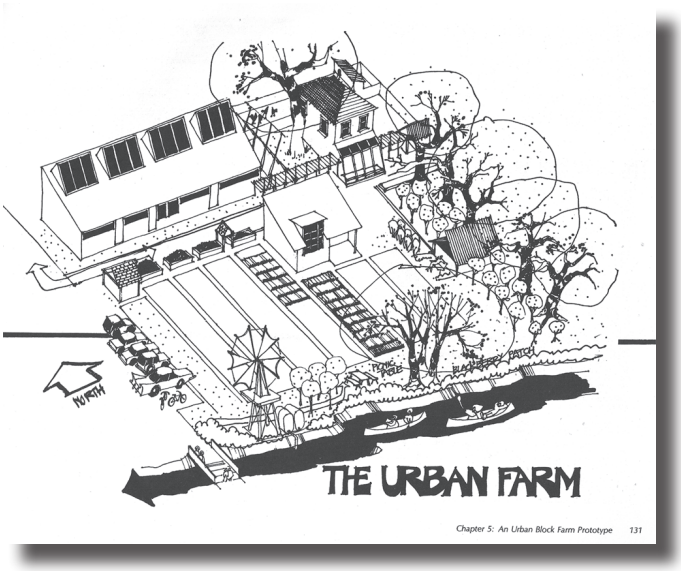
A Day on the Farm

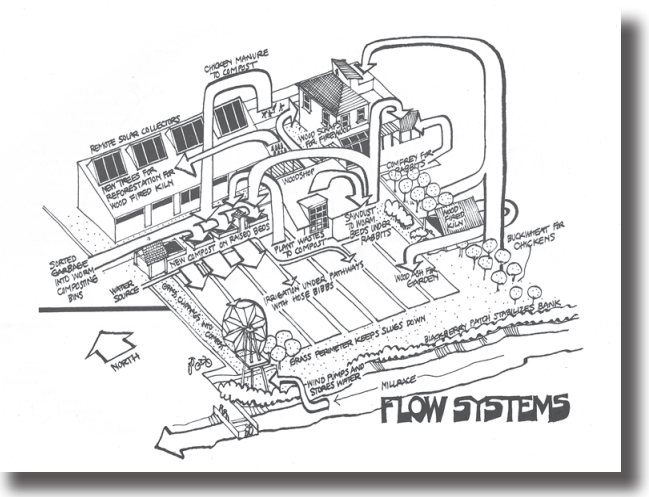


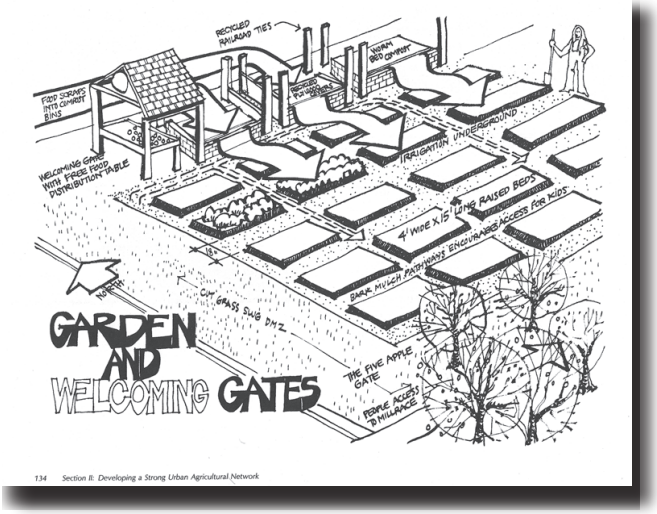
Original Urban Farm greenhouse serves as current clubhouse
Photograph by author



Richard Britz circa 1995
Photograph by Author





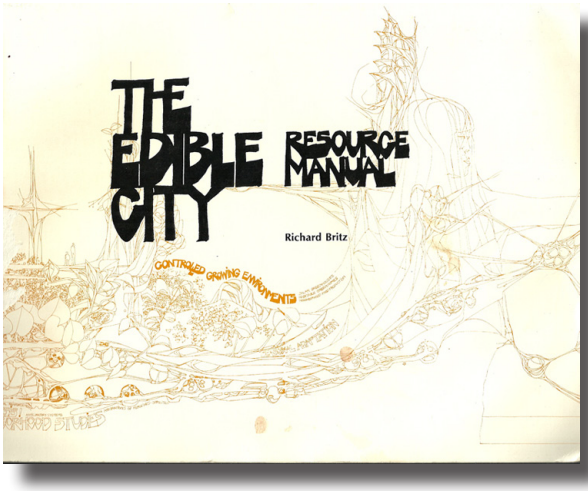


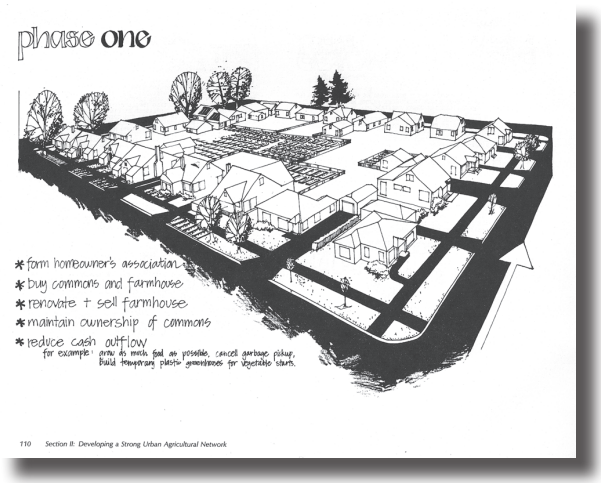
History of the Urban Farm

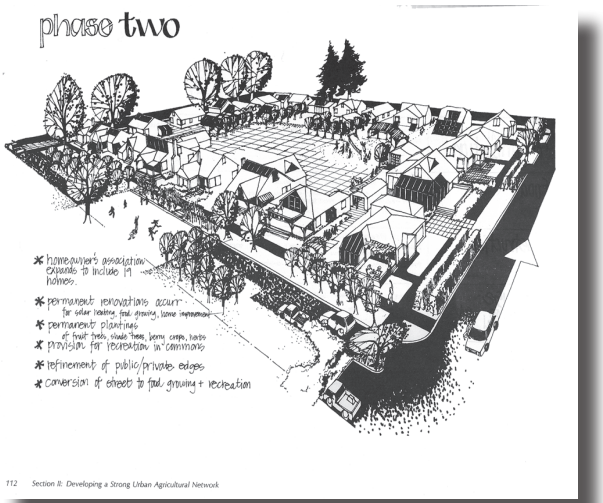
Edible City Laboratory

The Urban Farm as a garden project began in 1975 mostly as a collection of students growing food on surplus space. This began a tradition that continues to the present although the idea of surplus space is a thing of the past. The program was initiated by Richard Britz, who was a young architect teaching in the department of Landscape Architecture and was a brilliant organizer and outspoken advocate of getting students to understand the importance of growing food. His primary work centered on a concept which he called the Edible City in which he and his students were considering ways of retrofitting existing city blocks into planned communities dedicated to self sufficiency. Decades before the idea of sustainability entered the general lexicon, Britz envisioned residential, city-block scale communities that conserved and/or created energy, minimized waste and utilized shared open space for food production. Using the central inner - or surplus - space available in a typical Eugene city block as a study area, Britz and his students proposed strategic phasing sequences depicting how individual Urban Farms could be created to subsequently transform the way cities were being designed and lived in.

Much of the Edible City concept had to do with energy and material flow systems and the decreasing of what Britz often referred to as 'import and export coefficients'. The idea was to 'close the loops' in terms of energy, waste, water and food. Although most of these concepts would seem familiar now, this was pretty heady stuff at the time and probably had a lot to do with the eventual permission to put some of these theories to test at what Britz was calling, the Urban Farm. At this time, the area of the







Right: Detailed drawings from Richard Britz show sequences of city blocks being retrofitted as Urban Farms. Each phase represents the degree to which agricultural activity plays a predominant role in shaping the built environment. Phase three shows a complete transition where the block cooperative is producing a considerable percentage of the group's food and is off the grid in terms of waste conversion. The Urban Farm would be in phase two.

Opposite: Britz' original concept drawings show diagrams of flow systems at the Urban Farm.



Urban Farm was very similar in scale to the usable space of a typical Eugene city block. The concept was to use the Urban Farm site to test sustainable systems and consider their feasibility. The majority of the early work being done had to do with growing food and increasing soil fertility. Rabbits and chickens were being raised for nitrogen –and sometimes protein - and a large-scale organic waste worm-composting program functioned as a model of sustainable organic material recycling that converted food waste from restaurants and households and utilized all of this material on-site.



The red-pole circle serves as a meeting place and center of the farm.
Photograph by Ann Bettman

Work at the farm in conjunction with research and design studios gave rise to the publication of the Edible City Resource Manual in 1981.[1] This volume documented the work of architecture and landscape students and eventually spawned the creation of the Edible City Resource Center, a 501-(c)3 whose mission was to promote sustainable food systems, responsible design and community-based activism. Thirty years later, this effort has become the Willamette Farm and Food Coalition and is doing much of the same work.

Decline and Reinvention

In the 1980's, student involvement in the program decreased considerably. Richard, having been denied tenure, had left the department in 1979 and without his energy, the Urban Farm languished. The political and social climate was such that living simply with an authentic regard to local food and a sustainable lifestyle waned in popularity, even in Eugene. This resulted in decreasing interest in gardening and the fate of the Urban Farm hung by a thread. In the winter of 1983, Ann Bettman, who had worked at the Urban Farm and was teaching the plants program and design studios, gave a slide presentation to the department with the intention of determining a future for the farm.

The response was very positive and Bettman took over where Britz left off, however with a considerably more measured style. She was interested in developing the space slowly with perennial plantings of flowers and vegetable beds that would establish the structure of the garden. Under Bettman's leadership the class began to gain in popularity, which was crucial because in 1986, the Farm came under threat from a development group called the Riverfront Research Park

(RRP). The RRP is a collaboration between the University and the City of Eugene that was working towards locating large research buildings in the north campus area. Bettman joined members of the architecture department to oppose this plan, explaining that the Urban Farm was a sacred site and building upon it would violate the university planning directives that are based on Christopher Alexander's Pattern Language. (This will be discussed in further detail in the 'Outdoor Classroom' segment of this chapter). In the face of this opposition, the RRP decided to site construction in other areas.

Shortly thereafter the Architecture and Allied Arts School (AAA) became interested in replacing the adjacent antiquated furniture design woodshop with a much bigger version that would essentially decrease the Urban Farm area by 50%. Had Bettman not re-established momentum back on the farm, this planned development may very well have been fatal. However, the landscape architecture department was able to negotiate for temporary additional space for the class to function while the new woodshop was being built.

In 1991-92, professor Cynthia Girling, an Alumna of the department who had worked at the Urban Farm and was a contributor to the Edible City Resource Manual, offered a design-build studio that included retaining walls, an entry gate and trellis sequence and additional hard-scaping. Landscape architecture students spent two terms designing and building these improvements and by doing so, reinforced the department's commitment to the Urban Farm. This work was key in establishing the garden and orchard spaces as being an identified 'outdoor classroom', which is recognized by the university planning office as being a vital pattern of behavior.

With the relative security of a recognized space and sanctioned use pattern, Bettman continued to develop the Urban Farm as a program. New connections with the local agrarian community were cemented and the farm's role as a community member continued to grow. It was about this time that Britz returned for a cameo appearance and taught a winter Urban Farm class. The energy he brought, combined with a small but dedicated group of students looking to increase their involvement at the Farm, further invigorated the program. Bettman, along with Britz and department head David Hulse seized on this energy and developed a strategy where the Urban Farm class would continue to be offered with her at the helm.

The Outdoor Classroom

As student enrolment numbers continued to increase and forward momentum remained constant, options were considered to look for additional space for the program. Towards this end, Urban Farm students were given permission to begin to repair adjacent land to the north and develop an area that is presently known as the "Back 40". In truth, students had already begun the land-grab before gaining permission but no one really seemed to care about a bunch of students cleaning out old construction debris and removing blackberry brambles.



Ann Bettman circa 1995
Photograph by author

As a strategy to improve the neglected soil of the Back 40, and in good Urban Farm tradition, a number of students began to collect loads of kitchen scraps from local restaurants and began an ambitious in-situ, or 'sheet composting', program to build soil fertility. This project coincided with a visit from Uday Bhawalkar, who, at the time, was the director of the Bhawalkar Earthworm research institute and an internationally known expert of vermi-bioconversion, or earthworm composting. Bhawalkar was introduced to the project by representatives from the Worm Digest, which was a monthly publication that operated under the umbrella of the Edible City Resource Center. This is significant because twenty years after the first seeds were planted at the farm, growth was continuing with direct links to the original effort still visible. Following Bhalwalkar's advice, the program of layering large amounts of food waste with donated leaves and rock dust returned the area to productivity and facilitated the planting of the orchard that exists today.

Although the 'back 40' has yet to be officially recognized as a part of the Urban Farm classroom, a mixed species orchard with an adjacent fenced planting area and plastic hoop house occupy the site. This area and these elements play a central part of the Farm as it presently functions and efforts to make this area permanent are continuing. Because the university has undergone significant expansion with record numbers of incoming students, options for development are always being considered. At the present time, approximately 1⁄2 of the Urban Farm space is officially considered part of the outdoor classroom with the remainder being 'buildable space'. It seems unlikely that the

university would decide to build in this area, however pressures being as they are, this remains a concern. The Urban Farm class would be seriously impacted should any further designs to reduce its usable area be entertained and student objection to such a plan would most likely be considerable.

Program Vision & Development: Creating an urban farm program in a landscape architecture department

For more than two and a half decades, Bettman steered the development of the program with a dedicated understanding that direct associations can be made between the activities on the ground and the manner in which the ground is considered, both locally and in general terms. As a gardening experience, the class was designed to provide valuable life skills and a new perspective for most students. As a programmatic collection of related elements, it became a learning environment where students from across all disciplines can become advocates for sustainable farming practices as a means of protecting the health of our air, land, and water.[2] (Bettman 2002) An argument should also be made that an ethic to improve social ills such as food insecurity, nutritional illiteracy and community disconnection can also be added to this list.



Students are quickly made aware of the hands-on nature of the class during first day introductions Photograph by Renee Wilkinson

Space and Perception

In the early days of the Urban Farm program, Bettman was not working in an environment where urban agriculture and food system awareness was in the forefront, as it is today. This was a much more frustrating time in which the Urban Farm required constant defending from forces that lacked the vision that Bettman espoused. The disconnect between a desire to use the 'open space' of the farm for possible and eventual construction and the need to preserve the Farm's Class 1 soil, was absolute. The loss of much this precious resource to an architecture studio demonstrated this disconnect. Despite this atmosphere and through her dogged perseverance, Bettman was able to not only defend the land under use but to also foster an atmosphere where high student interest and a dedicated group of team leaders could create a momentum that continues to the present. Increasing the class to

three terms a year was also key during this period. Even though many of the forces that she successfully repelled still exist, the core of the Bettman's program remains intact.

Content

Due to the absolute uniqueness of the Urban Farm class within a department of landscape architecture, the development of the Urban Farm as a program was and continues to be a work in progress. Over the last thirty or so years, Bettman and her team have laid the foundation on which the farm continues to grow. An account of the frustrations and simultaneous rewards that were associated with her development of the program will soon be published in Laura Sayre's extensive study of the most important student farms in the country titled, '*Fields of Learning: The Student Farm Movement in North America*"



Students making compost
Photograph by John Carson

Class Material

Over the years a collection of the most important information needed in order to be a proficient gardener has been compiled to form the *Urban Farm Reader.* The reader contains Bettman's writing on the history and mission of the Farm, basic soil and plant biology, an overview of specific organic philosophies and a breakdown of vegetable plant families. In addition, sections relating to the soil food web, composting, herbal remedies, seed propagation schedules, fruit tree pruning etc. Essays from team leaders and authoritative voices in the field are also included to provide students with what they need to become competent gardeners.

Assigned class work

To complement the physical work at the farm, seasonally appropriate assignments age given. Students are required to select from a reading list of pertinent titles relating to agricultural issues and write about what they learn. They also are required to identify appropriate community efforts having to do with sustainable agriculture, where they then work and report on their experience. This assignment is intentionally open-ended so that students can find exciting and important work in the community in which to become involved; be it hunger relief

programs, school gardens, farm to school programs, community gardens or residential efforts. Students are also required to develop an individual working definition of 'Eating Local' that they then adhere to for two days and report on their experience. This assignment also is subject to alteration due to the season but is generally intended to encourage students to focus on the origins of the food that they eat. As with gardening, student experience levels with buying local can vary significantly. This assignment is generally successful in getting students to compare what they are growing at the farm with what is available and thereby make more informed decisions about the food they buy and consume.



Harper Keeler discussing soil with his team
Photograph by Ali Abbors

Ritual

An important aspect of the Urban Farm experience has to do with a class as a group pausing to remember where we are in the cycle of the year. Drawing on her Celtic heritage, Bettman initiated a tradition of getting together on key agricultural holidays and talking about where we have been and where we are heading. Because students mostly attend the Urban Farm class for only a ten-week term, they often lose track of the fact that the growing cycles do not conform with the school cycle. By pausing to reflect on work that was done before the students arrived and the work that they are leaving for the next class, bridges are formed. These events usually happen in the spring and fall and include references to various mythologies that add poignancy to the event. Students have found that taking part in these type of rituals gives them and stronger connection to the work that they are doing and helps them to understand where they are within a long line of agrarian based cultures and traditions.



Taking a moment to celebrate where we are in the cycle of the seasons
May Day 2010
Photograph by author

Urban Farm Land and Function

The Urban Farm is a 1-3⁄4 acre 'L-shaped' piece of land just to the north of Eugene's historic millrace and is surrounded by AAA art studios, woodshop and ceramics kiln. On the Farm there are

approximately 60 fruit bearing trees including cultivars of apple, Asian and European pear, cherry, plum, persimmon, fig and English walnut. Majestic heritage black walnut trees surround the farm to the south and west.

Students grow food in one hundred 4' x 15' garden beds that are separated into three areas. A central meeting place defined by a circle of straw bales is reserved for general class meetings and a variety of other separate meeting areas provide for smaller, more intimate, group discussion sessions. Throughout the common areas of the farm are border plantings and groupings of perennial flowers, medicinal and culinary herbs, cane fruit varietals, grapes and seasonal ornamental beds.



1936 Aerial of the University district, millrace and Willamette River. Land use along millrace and extending north was dominated by fruit and nut orchards and other agrarian activity. The Urban Farm site is shown in red. University of Oregon Library Collection

The heavily traveled Franklin Boulevard separates the North Campus area from the older, more formal main campus. North campus is a collection of eclectic fine arts studios, a zebra fish research center and an even more eclectic ensemble of facilities maintenance and energy production buildings. Within this collection resides the Urban Farm. To extend the seasons, the farm utilizes a 16' x 12' greenhouse as well as a 24' x 12' plastic hoop house and the original 10' x 12' greenhouse that presently functions as a potting shed, tool storage unit, library and general clubhouse. Plans to repair or replace this structure are being considered; however, due to the historic role this building played in the formative days of the Urban Farm, a considerable amount of sentimental value is attached to this modest structure.

Cultural Context - Continuing the agrarian vernacular tradition

The North Campus area of the University of Oregon falls within the floodplain of the Willamette River. Over the millennia, seasonal flooding and subsequent receding of the river created large deposits of rich silty loam soils. This is designated Class-1 agricultural soil and is considered some of the best agricultural soil in the world.

Agrarian activity on this tract of land has happened as long as there have been people in the valley and agriculture in the Willamette

Valley continues to be a major component of revenue statewide. Historic aerial photos of this area along the river show extensive fruit and nut tree cultivation, a practice that continued into the nineteen seventies when development began to spread into this area. Remnants of these orchards are still scattered about, including a mature English walnut tree that continues to produce nuts on the Farm.

Evidence of past land use was exemplified by the old farmhouse that stood on the Urban Farm site until it was torn down in 1991, despite calls for its protection. The farmhouse originally sat amidst a commercial cherry tree orchard and had been re-purposed as a meeting place and library in the early days of the Urban Farm. Unfortunately, it was considered inappropriate as a campus building and attempts to save and repair the farmhouse were unsuccessful.



Original Farmhouse circa 1982
Photograph by Ann Bettman

Mature cedar trees that were once a hedge buffer between the farmhouse and the adjoining property continue to define the space where the farmhouse stood. This space is now the primary open-air meeting place for the Urban Farm class. Several years after the building was removed, table grape vines that adorned a trellis on the front of the Farmhouse, re-emerged from rootstock that somehow survived the demolition process. These vines presently cover the eastern gateway to the Urban Farm.

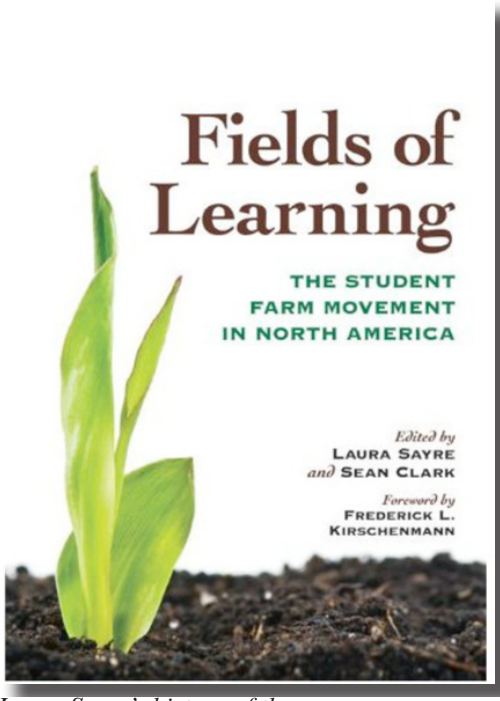
Defining the southern border of the Urban Farm is the Eugene's historic millrace. In 1852, ten years before the founding of the city of Eugene, the millrace was dug to initially power a sawmill and then a gristmill two years later. Although the millrace has long ceased to be a source of power, its intrinsic connection as a historic artifact of the area's cultural history, one that is directly tied to Eugene's agriculture legacy, continues to intrigue students interested in studying the agrarian tradition of the past.

The Urban Farm in the context of the Campus Farm Movement

Although the Urban Farm program can trace its roots back to the 1970's, the popularity of University campus farms has only become mainstream in the last decade. Over the last few years, the movement has grown tremendously. According to the 2011 College Sustainability

Report Card, 70% of schools have a community garden or farm on campus, up from 30 % in 2008.[3]

Laura Sayre's history and assessment of the campus garden movement, "*Fields of Learning, The Student Farm Movement in North America*", concludes that at the time of her research there are about a hundred, if not more, higher-education institutions in North America with on-campus farms or gardens of some sort, and more being established each year.[4] (Sayre 2011) Sayre's definitive study grows out of her work in the creation of the Rodale Institute 'Farming for Credit' data-base and seeks to determine why the popularity of the campus farm movement has grown to where it has and what has spurred such universal popularity and endorsement.



Laura Sayre's history of the campus farm movement.

For the purposes of her study, her team chose to concentrate on student-run or student-initiated projects that had some level of student initiative or possibilities for student leadership with a degree of attention and concern paid to questions of environmental stewardship and sustainability.[5] (Sayre 2011) Large agricultural school programs and land-grant universities, although important and discussed, were not central to her research.

Drawing from data collected from 85 programs of various sizes and styles, her team selected fourteen specific prototypical campus farms that were separated into the following categories: "Roots", "Back to the Land", "Coming of Age" and "New Directions". The Urban Farm program is featured in the "Back to the Land" category along with projects from UC Santa Cruz (1967), Hampshire College (1970), Evergreen State College (1969) and UC Davis (1977). These programs are grouped together primarily because of the relative origination time and common reasons for being. Sayre suggests that they were founded in an era of mingled optimism and crisis, idealism and urgency and points out that for some observers, this '60s and '70s-era phase of garden creation, represents the starting point of the contemporary movement.[6] (Sayre 2010)

As one might expect, each farm project is also as diverse as the university or region it is a part of. Depending often on the department or study tract associated with each, the attached curriculum is generally customized to meet specific expectations. However, in a broad sense, campus farms are very much alike in that they commonly address the social, environmental, and health benefits gained by providing access to

fresh healthful food and community building opportunities to enhance better personal health, vernacular cultural awareness, and environmental protection. Because of this, it is useful to identify project differences that demonstrate how a particular program functions apart from the general goals that most share.

The Urban Farm as a distinct model

The Urban Farm is distinct from other campus farms not only in that it is housed in a department of landscape architecture but particularly in both the manner in which food is distributed and the number of students in a given term. Of the fourteen case study programs that the Sayre team highlighted, the Urban Farm is the only program that does not market the food grown. Twelve projects sell produce through Community Supported Agriculture (CSA) subscription models and most market to either the campus food service system or farmer's markets. Of the 85 programs that are identified in her database, 39% have CSA programs and only 8% of projects do not market their food.[7]



The Urban Farm is distinct from most every campus farm because none of the harvested food is marketed. Students receive direct feedback from their work in the form of fresh produce.
Photo by Ali Abbors

That the Urban Farm chooses not to sell food speaks to the primary mission of the program. When it was decided that, due to overwhelming popularity, the Urban Farm class would regularly enroll as many students as the space would permit, a conscious decision was reached that speaks to the primary goal of providing a unique educational experience to as many students as possible. Understanding that a considerable portion of this experience -in many ways the most important - is the direct consumption of the food grown, a dedication to rewarding students with fresh food was put in place. This creates a condition where virtually all of the food grown goes directly to the students in the class and marketing is not an issue. The Urban Farm model is distinct from the vast majority of farm projects because it is free to operate without the constraints created by a marketing program. This allows for a teaching environment that does not revolve around growing market ready varieties and removes an urgency that could potentially hinder curricular diversity and experimentation. Exercises such as vegetable canning, fruit tree pruning and grafting, compost demonstration, beekeeping and a plant identification program are but a few of the on-site activities that fit into an already crowded activity list

that is unencumbered by market functions. These functions would also affect the physical space if they were a vital component of the program due to the limited space available and a large student population. It is understood that possible revenue generating avenues are being missed, but the benefits of providing students with the fruits of their labor and a diverse experience far outweigh these avenues.



Urban Farmers in the Neighborhood
Earth Day 2010
Photograph by Ali Abbors

Additionally, as a supportive member of the local agrarian community, the Urban Farm feels that to enter into a competitive market with neighboring growers; without having to pay the overhead of labor, land and water costs, would be unethical. As the farm presently functions surplus food is rare so this is generally not an issue. During occasional periods where high production coincides with no class attendance, excess produce is donated to local hunger relief efforts.

The Urban Farm as a Class

The Urban Farm hosts over 200 students each year, over the course of three terms. The primary focus of the class is teaching students how to grow their own food. Working in teams, student urban farmers become the stewards of the farm's vegetable beds, orchards, greenhouses, compost systems and general spaces. For their efforts, they take home the food that they grow. Simultaneously, students are introduced to issues relating to sustainable agriculture, local food systems, community supported agriculture, farm to school programs as well as other agrarian concerns.

The Urban Farm class is made up of students from virtually every area of study at the University. Although the course is offered as a class within the department of landscape architecture, students from 89 programs have elected to work at the farm and registration is very competitive. Due to the tremendous popularity of the program, upper class students make up 85% of the population each term, as they are the first to be able to register. The course is offered in the spring, summer and fall terms and the specific activities performed by students change with the seasons. For this reason, many students will take the course multiple times with the intention of increasing their general knowledge of growing cycles. Due to the significant vested interest of having

plants in the ground, many remain involved at the Farm by taking advantage of volunteer work times throughout the year where they come to work and leave with produce.

In its current incarnation, the Urban Farm class hosts approximately 75 students during the spring and fall terms. Summer classes generally contain about 50 students. Students in each class are split into teams of about a dozen students taught by an Adjunct Instructor /Team Leader or the Urban Farm Director.

A Day on the Farm

A typical spring class at the Urban Farm begins with a general circle meeting before students break into teams. This allows for general announcements and housekeeping. Time is specifically allocated to allow and encourage students to voice concerns, announce events related to community gardening and perform general networking. This is an important opportunity in which to share community information and where representatives from related projects and programs are invited to pitch their work and solicit volunteers. The Urban Farm is increasingly dedicated to helping students develop community relationships and this forum has proven to be vital towards this end.

After breaking into teams, each team performs garden tasks related to their specific area of the Farm. This includes everything from basic soil preparation and seed sowing to the eventual harvesting of food. Every team is given an equal area of established planting beds that they then decide how to manage. Over the course of the term, they will tend to these beds as well as pitch in on the general stewardship of the Farm. This work includes tasks such as compost making, working in the greenhouse, orchard care, pathways, perennial beds of flowers, herbs and fruit, lawn mowing, communal harvesting etc. Often these chores will allow for students to mix with other teams and in doing so increase the general camaraderie of the class. This interaction is vital for a successful class and is reinforced by the sharing of all the food harvested each session. Although ambitious students inevitably take the opportunity to bring home their favorite vegetables, there is usually enough to go around and specific harvest requests are usually honored.



Spring term students preparing produce for the harvest table
Photograph by Ali Abbors

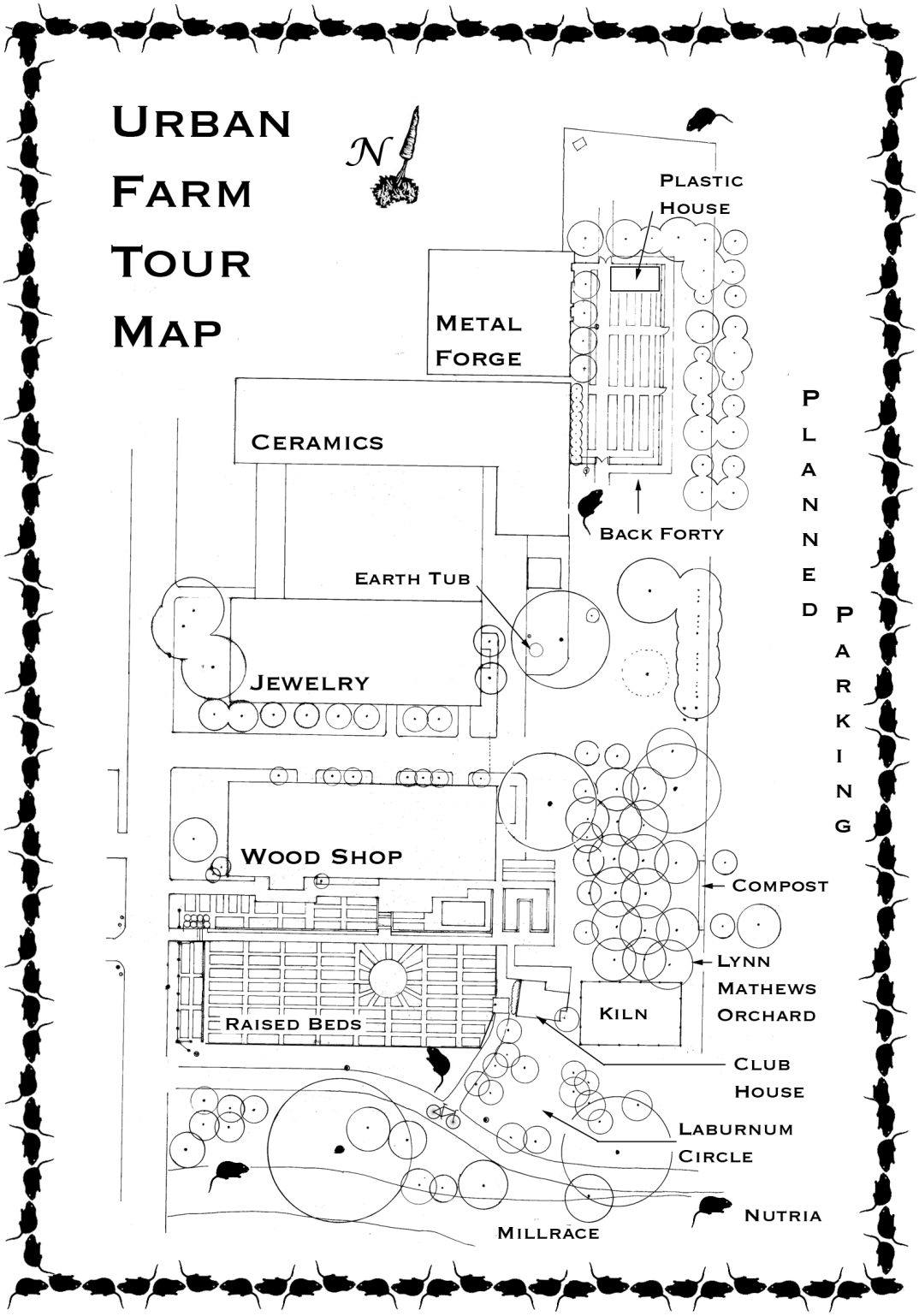
Depending on the season and the crops being grown, the majority of in-class work is direct hands-on gardening. For some students this

is old hat and for some it is a totally new experience. The varying levels of experience between students can be considerable and the most successful teams will work together to mitigate these discrepancies. As mentioned before, the multidisciplinary nature of the student base is such that a large variety of skill sets can be found in every team. Team leaders are encouraged to divide the work evenly so that each student is afforded the opportunity to try new things and to step out of their comfort zone as far as they are willing to go. Students are generally eager to expand their horizons and share their experiences.

Simultaneous to the hands-on activity portion of the curriculum is a series of assigned on-site activities designed to augment the in-class garden work. Students are required to learn to identify a collection of plants found at the Farm. This collection includes virtually all of the vegetable crops planted, fruit trees, volunteer species of annual and perennial 'weeds', perennial herbs and surrounding tree species. Students are also required to master basic soil science, plant morphology, composting systems, seed saving strategies and soil food-web dynamics. Most of these topics are taught within their particular teams using hands-on activities and subjects found at the Farm. Depending on the season, these activities will change. Seasonal activities include seed saving and propagation, food preservation and



Spinning Honey
Photograph by Ali Abbors



Urban Farm Map showing surrounding AAA studios.
Map drawn by Author

5 *Lessons learned at the Urban Farm Teaching Landscape Architecture in the Garden*



Team Leader Tom Bettmen leading a session, Spring 2008
Photograph by Ali Abbors

By considering the unique characteristics of the Urban Farm and how it functions as an alternative experiential education method within the pedagogy, valuable lessons are learned. In the context of landscape architecture instruction, specific examples of learning opportunities that are only found at the Urban Farm have been identified. The following collection of essays will demonstrate how the Farm experience fills gaps in the landscape architecture curriculum and how student learning is enhanced by this experience. These are organized into the following subject areas:

Landscape Architects and Soil

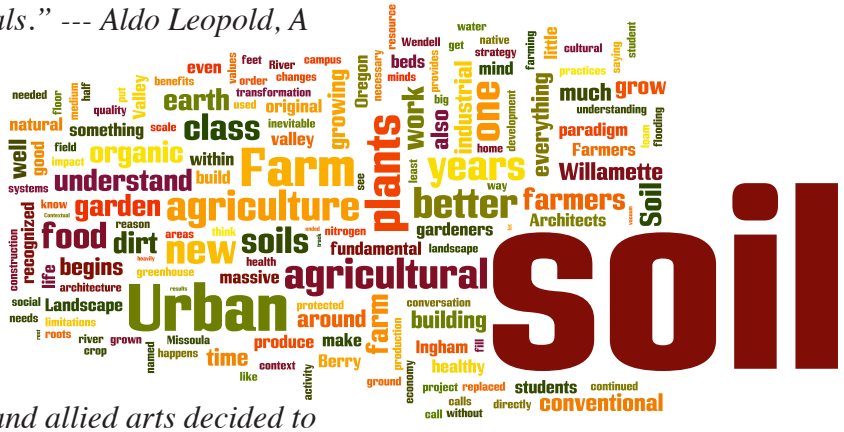
The Outdoor Classroom

Landscape Architecture and Food Systems

In Preparation for Urban Agriculture

Landscape Architects and Soil

"Land, then, is not merely soil; it is a fountain of energy flowing through a circuit of soils, plants, and animals." --- Aldo Leopold, A Sand County Almanac, 1949



Reading between the rows: Soil

In 1990, the school of architecture and allied arts decided to build a new woodshop for the architecture department. The funky old student-built furniture studio had outlived its usefulness both aesthetically and as a classroom. Unfortunately for the Urban Farm, this meant that half of the garden area would be taken over by the footprint of the new building. At the time, the farm program was on an upswing and enjoyed consistent student enrolment so it was agreed that the class would be able to garden on some adjoining spaces so as not be put out by the construction. The class soldiered on and growing continued, albeit on far inferior soil.

Although the new shop would supplant most of the farm including the original compost areas, original drawings of the building show a generous greenhouse that was designed into the project, suggesting that the planners at the time had at least some of the interests of the farm in mind. Or so it seemed.

The first thing one notices when new construction begins is the amount of excavation needed to support a two-story building. Because deep rich silty loam is ill suited to build upon and, as is the custom in rainy places, all of the wonderful soil adjacent to the work site went the way of the dump truck and was replaced by crushed rock. To a contractor, this is business as usual. To us, this was theft.

In order to appease the Urban Farm, promises were made to stockpile the native soil and use it to fill in the planting areas around the finished building. To little surprise, when the time came to fill the new beds, we were told that the 'dirt' was used around campus and inexpensive sandy river soil was provided instead. Twenty years later, these beds still fail to produce vegetables as well as the original beds that are only feet away. I guess we can take some comfort in the knowledge that somewhere on campus, the roots of some lucky nandina or viburnum are enjoying the feel of Class 1 soil, touched by years of respectful gardeners.

We never did get that greenhouse.

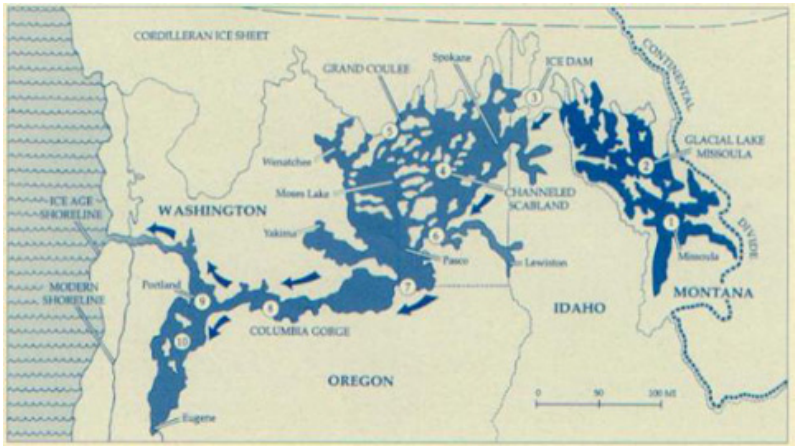


Construction of a new woodshop displaced much of the original garden. Expansion to the north replaced the lost growing area but on inferior soil.
Photograph by Ann Bettman

"... the soil of any one place makes its own peculiar and inevitable sense. It is impossible to contemplate the life of the soil for very long without seeing it as analogous to the life of the spirit."
--- Wendell Berry, The Unsettling of America, 1977

One of the most frequent conversations at the Urban Farm begins when a student says something about the 'dirt' we have. It is usually an honest statement, something like, 'I wish I had dirt like this in my garden' or 'how much dirt should I put in this pot?' At the farm, its been said that dirt is the what you find under your nails or have in a vacuum cleaner bag, what we have here is soil – and darn good soil at that. The county soil survey calls it Chapman loam, one of the finest Class 1 soils found anywhere. Truthfully, after 35 years of feeding it, it is even better.

Soil is where everything starts. It is the context from which everything grows. This is true both in the context where soil is the medium in which everything we plant lives but also as the contextual link to the cultural and ecological vernacular of the region. This soil is why the Oregon Trail ended for many in the Willamette Valley. The soil is why there were people here for thousands of years before that. The soil is why we are now where we are.



Map of Missoula Flood Path
Image : Waymarking.com

Contextual History and Soil Quality

More than 15,000 years ago the largest and most powerful scientifically documented freshwater flood to occur on earth happened in the Pacific Northwest. Massive glacial ice dams that were holding back an even more massive Lake Missoula - about half as big as the state of Oregon - began to break, creating tremendous regional flooding. Envision boulders the size of small cars being swept from Idaho by water traveling over sixty miles an hour, through the Columbia River gorge and settling in the Willamette Valley and you get an idea of the scale of these events. General consensus is that there were dozens of such floods over about 2000 years and the resulting lake-bottom sediments deposited by the Missoula Floods are the primary reason for the agricultural richness of the Willamette Valley.

The Urban Farm is situated on the second fluvial terrace above the Willamette River, where seasonal flooding also resulted in regular silt deposition, further enhancing the quality of the soil where food is

grown. It would be nice to think that this resource exists because it was recognized and protected but it is only through serendipity that this pocket of native earth remains. This is the canvas on which the Farm works and this is the starting point in the education that students receive.

Experienced gardeners know the benefits of this good fortune, as does anyone trying to grow food in the sticky clay soil of the Eugene foothills. Apart from wineries and perhaps Christmas tree farms and nursery operations, the bulk of agricultural activity - excluding timber - happens in the low valley and for a good reason. Much of the soil complexes on the valley floor or river terraces are Class 1 soils. This means that these soils present the fewest limitations and are the most suitable for agricultural crop production. As the capability classification number increases, soil limitations increase and suitability for agricultural crop production decreases.[1](Hulse et al., 2002)

Working the Soil & the Soil as Home

The Urban Farm practices organic gardening and if there is any single attribute that separates organic agriculture, from what is unfortunately deemed 'conventional' agriculture, is that conventional farming is about growing plants quickly and organic farming is about growing soil. Sure organic farmers want big healthy plants, but they subscribe to a different set of values that with begins with the earth beneath their feet.

To better understand this, it is useful to consider how the perception of soil changed with the 'green revolution' in the late 1940's, ushering in the new method of agriculture that is poorly named 'conventional' today. This ironically named movement was essentially a strategy to utilize Second World War surplus munitions and industrial synthetics as soluble nitrogen for agriculture. Since then, soil has been relegated to being little more than a medium with which to hold up plants. The legacy of this heavily subsidized revolt is a food system that is addicted to petroleum-based fertilizers, massive soil degradation and irreversible ground water pollution. These are not debatable conditions and the environmental impact of this activity is well documented.

The social impact of this industrialization is less recognized and arguably worse. Cheap nitrogen from industrial by-products, cheap oil to make it and move it around and aggressive lobbying to make it attractive, has created incentives for farmers to embrace this new technology. In doing so, they have jettisoned their ties to the land and soil and these

lost connections are but a few of the casualties that can be attributed to this transformation. Wendell Berry bemoans this departure from traditional agrarian values as being,



Helicopter sprays flowers grown for seed: Lompoc, California
By permission, Peter Menzel Photography

> 'industrial fantasies where value equals price, all relations are mechanical and that competitiveness is a proper and sufficient motive'. He feels that the 'great breakthrough of industrial agriculture occurred when most farmers became convinced that it would be better to own a neighbor's farm than to have a neighbor'.[2](Berry,1984)

The social transformation that accompanied this paradigm shift is one where a protectionist stance, responding to natural systems, has been replaced by a belief that soil productivity is a commodity to be exploited for profit. Through technological 'breakthroughs' and continued subsidy, this exploitation continues at an unprecedented scale.

On the other side of the coin is the responsive strategy of Organic agriculture; one that looks holistically at the natural systems that affect what is being grown. This requires an understanding of soil dynamics that has been mostly disregarded by industrialized agriculture. At the Urban Farm, much of the information that is taught regarding soil has been influenced by the work of Elaine Ingham. Widely recognized for her work at Oregon State University, Ingham is a leading researcher in the field of soil science. Her study centers on an effort to understand what bioprocesses are at work within the rhizosphere of plants, something she calls the 'soil food web'. In a nutshell, Ingham has determined that the health of plants is directly related to the diversity of the constituents that live within the terrestrial ecosystem around their roots and the symbiosis that these soil denizens enjoy with the plants that are being grown and with themselves. In an odd way, Ingham's work has only confirmed what organic gardeners have known for years



Used house lot in Stockton, California. Old houses are moved from smaller farms and land that is being commercially developed, and put up for sale, like used cars.
Caption and photo by permission, Peter Menzel Photography

and that conventional farmers have discarded, namely that healthy vegetable plants depend on healthy soil. However, her articulation about how these fungi, bacteria, protozoa and nematodes thrive within a micro-system that is dependent upon garden stewards behaving consciously, encourages a much more thoughtful conversation.

Urban Farmers have little problem connecting the management of microscopic soil communities and soil-stewardship to everything that they do at the Farm. It is all about consciousness and it begins with the soil. Everything that happens at the Urban Farm is done with the soil's health in mind. We feed it when it is hungry, water it when it is thirsty and cover it when it is cold. We let it rest when it is tired, try not to step on it and run it through our fingers to see how it is 'feeling'. For this it provides for the life it harbors and it gives us food. Herein lies the fundamental difference between what students are practicing with their hands in the soil and the blatant disregard that characterizes the dominant paradigm. Once again, it is Berry who encapsulates this discrepancy;

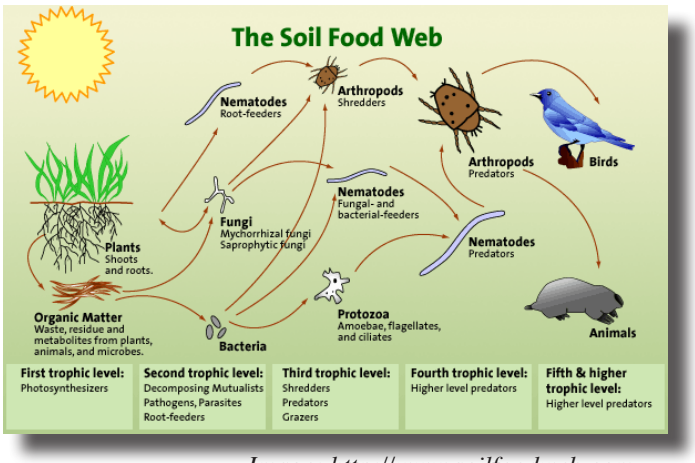


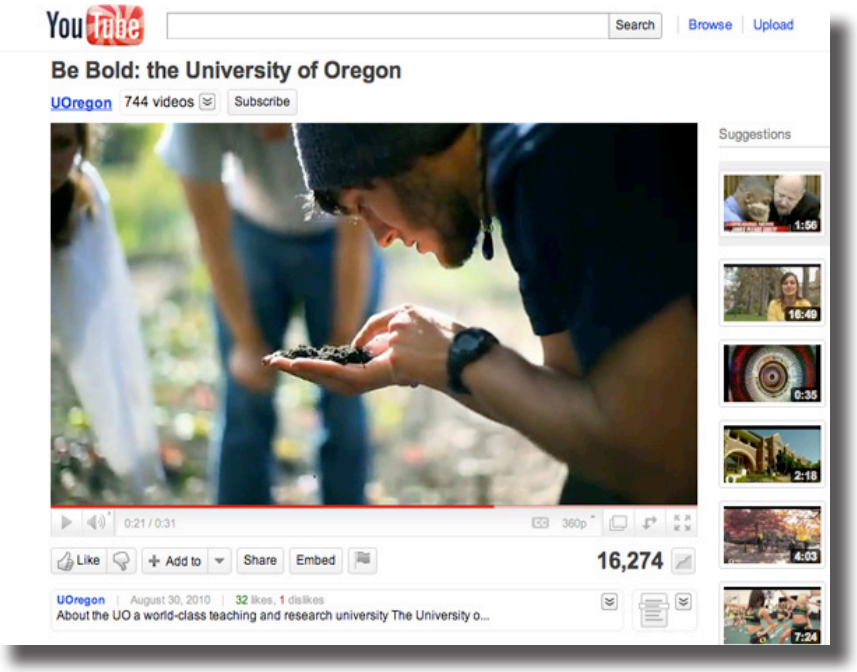
Image: http://www.soilfoodweb.com

> "A person who undertakes to grow a garden at home, by practices that will preserve rather than exploit the economy of the soil, has his mind precisely against what is wrong with us.... What I am saying is that if we apply our minds directly and competently to the needs of the earth, then we will have begun to make fundamental and necessary changes in our minds. We will begin to understand and to mistrust and to change our wasteful economy, which markets not just the produce of the earth, but also the earth's ability to produce."[3]

Berry's call for fundamental and necessary changes, ones that are directed to the needs of the earth, might as well be a call to landscape architects to be better professionals. Having been Urban Farmers, future designers know as well as any the benefits of working with class 1 soil and what it provides. Through reading, group discussion and interaction with local farmers, they have entered into a conversation that is geared towards the protection of these prime agricultural soils and no longer will they see valley floor development as inevitable. That the best agricultural soils should be protected from development goes without saying, yet this is seldom the case. There are reasons for this,

not the least of which are the simple facts that it is cheaper to build on flat ground and 'its where the highway is'. Urban Farm students are introduced to this paradigm and asked to think about the role that soil plays in general scheme of things. They understand the significance of losing this irreplaceable natural resource and that they are partaking in an agricultural tradition that has been as much a part of the cultural landscape as any other and thereby must be preserved.

It is common for Landscape Architects to spend time in the field in order to perform site analysis. After having been Urban Farmers, it could be argued that they will have a better understanding of what factors need to be considered with regard to soil, especially when considering growing food in urban settings with marginal soil quality. Having learned to how to 'grow soil', they are also better equipped to understand what sort of programmatic activities will be needed to ensure positive project results.



University of Oregon promotional video featuring Urban Farm students
http://www.youtube.com/watch?v=maIC1xzsVeA

The Outdoor Classroom

Many campus open spaces serve as vital "classrooms." Many outdoor-classroom functions require open, sunny spaces (e.g., sports fields, marching band practice areas, the urban farm, and informal outdoor spaces for teaching classes).

THEREFORE: Preserve the open, sunny spaces required for outdoor classrooms. Always consider the use of the open space when selecting and placing trees. This may mean that it is not always possible to replant the total lost tree canopy caused by development projects.



Patterns
University of Oregon
Campus Plan, Policy # 11[4]

Reading between the Rows: The Outdoor Classroom.

In the spring of 2008, a picture of the Urban Farm appeared on the front page of the local Sunday paper with the headline, "Future hospital considers research-park site". As nice as it is to have your picture on the cover, it is a bit disconcerting to see that someone somewhere has considered what you are doing to be expendable. Shortly after that, I was contacted by a group of fifth-year architecture students who wanted to visit the farm to see what was happening there. I love to give tours and agreed to meet with them. The tour was going fine until it became clear that the reason they had come was to inventory what was needed to move us elsewhere and build on the spot. This too, was disconcerting and even saddening considering that it was coming from those who will be the next generation of architects. As it turned out, these students are not representative of the general level of consciousness found in the architecture school and an email from the university president promised that the hospital would not take our space, but it does make one think.

The University of Oregon classifies the Urban Farm as an 'outdoor-classroom' and the space is specifically cited as such in the campus plan. This is significant for many reasons, not least of which is, the unique method in which the university practices planning and thinks about campus space. In the 1970's the university developed a system to re-consider changing conditions and future development so that it could respond to specific sets of desires and patterns that 'establish a means of articulating commonly held values as they pertain to the campus environment and design'.



Team Leader Jen Surdyk teaching a group about garlic, Spring 2008
Photograph by Ali Abbors

This system was developed by Christopher Alexander and is described in his book, *The Oregon Experiment*. Alexander's team identified specific shared wishes and characteristics that could respond to changing needs and paradigms and from these patterns developed a language, which could be used to inform designers and planners. According to the university planning office,

> "The Oregon Experiment established a process by which development decisions could be made on an ongoing basis. This concept acknowledges the fact that the exact nature and magnitude of future changes cannot be predicted with any degree of certainty, and that object-oriented plans based on explicit assumptions about the future become outdated as the "future" becomes known."[5]



Students finishing new fence construction. Spring 2008
Photograph by Ali Abbors

That the Urban Farm is considered an outdoor-classroom, worthy of being singled out in the campus plan and acknowledged as a vital pattern, suggests that an important recognition has been realized. This applies to both the activity that is taking place on site and the manner in which the site is being classified. From the standpoint of campus planning, there is an understanding of the need for open sunny spaces and how they play a vitally important role in the health of the campus. From the perspective of the Urban Farm, the absolute uniqueness of hands-on food production accentuates the value of this arrangement. There is a symbiosis between the implementation of a campus plan that responds to forward looking patterns and a responsible, tested land use pattern that embodies these sensibilities.

This lesson is not lost on Urban Farmers who appreciate the

great fortune afforded to them by being able to 'farm' this land. Student appreciation for the chance to grow food fosters a love for the space that is unique on campus and encourages a willingness to devote hard work towards its stewardship. That they are doing it on campus and that it is a singular activity, taking place in a unique outdoor campus space, makes them even more aware of the importance of the work they are doing and where they are doing it.

This is not unanimous, however, and it is not clear whether those with more conventional perspectives appreciate this type of work and the intrinsic value of the outdoor-classroom. In fact, many perceive the Urban Farm outdoor-classroom as an available building lot or general public space. This attitude was exposed recently when virtually no attempt was made to integrate the Urban Farm classroom into an abutting parking lot construction plan that included the removal of valuable farm plantings. Even though the campus planning policy clearly states that all uses are considered important and that any new use must not benefit at the expense of an existing use,[6](University of Oregon Campus Plan) the classroom as a recognized land use pattern received second billing to parking. Only after dogged efforts by the Urban Farm did the parking lot development team agree to allow for the modest changes that saved a few fruit trees.



2010 parking lot construction displaced an existing hedgerow and many fruit trees. Attempts to integrate existing edible landscape into the parking lot plan met with resistance from city planners
Photograph: Urban farm Archives

Ironically, this development, and its impact on the existing activity at the Urban Farm, provides students with a useful illustration of the relative status of urban agriculture against the perceived need for additional parking on campus. From a purely structural standpoint, the shapes and forms of the vegetable gardens and fruit trees at the farm do not look like the rest of campus, or most urban settings for that matter. Bettman submits that these exuberant, sometimes messy plants are not 'well-behaved', however they are alive.[7] (Bettman, 2002) This is very important because it suggests that a new aesthetic based on understanding the usefulness of food production is possible - and even beautiful - within relatively controlled environment of the college campus or other pre-conceived spaces. By learning to appreciate this, landscape architecture students are provided with an entirely new set of place making tools with which to use in order to become better designers. From its initial conception, the Urban Farm has been an example of sustainable

land use within an urban matrix and the increasing pressure to develop only adds to the poignancy of an outdoor-classroom juxtaposed with the built environment. From this vantage point, students develop strong feelings about the position that urban food production has in the course of things, and for many, this juxtaposition has strengthened their resolve to advocate for responsible urban land use.



Reading Between the Rows: Turkey Day at Laughing Stock Farm

You know that you have arrived when you get to go to turkey day at Laughing Stock Farm. Paul Atkinson is a hog farmer and friend of the Urban Farm. For as long as most of us remember, he has come to the fall class and talked about Laughing Stock pigs. In addition, he has a few cows, a couple hundred laying hens and a herd of goats that he milks to make cheese. What Paul does best is his pork. For years he supplied Alice Waters with prime, milk and hazelnut finished Oregon pork for Chez Panisse until he became unhappy with the idea of shipping his product out of state.

Paul is the kind of honest farmer who isn't satisfied that he can provide his customers with quality food unless he does it all himself. He makes an exception with turkeys. Every year, just before Thanksgiving, Paul invites about fifty of his close friends out to get their holiday bird, but there's a catch. In order to get the freshest, most kindly raised turkey you'll ever find, you must first be willing to trade something for it. From farm labor to foraged chanterelles, Paul's friends offer what they can for a turkey and he makes out great. He was particularly pleased with 'a dinner a week for a month' that he was given, especially when he could pick it up each Wednesday on his egg delivery route. Another friend is regularly invited and, according



Turkey Day at Laughing Stock Farm
2010
Photograph by Renee Wilkinson

to Paul, not just because he grows and trades the best peaches in the valley.

Getting back to turkeys and turkey day, there's another catch. In order to take a bird home you have to help with the 'processing'. The way it works is, one is handed a recently dispatched turkey that has been dipped in hot water and told to proceed to the 'plucking table'. After the feathers are removed by the 'trader', the skilled folks with the sharp knives do the tough part, which is probably a good idea because local wine and home brew have been known to be barter items as well.

For some, this is old hat while others are 'less enthused' about the hands-on involvement, however, what is universal is the feeling of community that is being shared by all. In the best sense of thanksgiving, folks from all over the spectrum are gathering together to celebrate the season and the local bounty. For many, this is a return to a simpler time when neighbors got together and offered what they could. For Urban Farm folks, this is a chance to step out from the narrow confines of college life and really see what it means to be a part of where they live and how it feels to be an active member of their foodshed. Not only seeing where your food comes from, but actually having a hand in the process is a very powerful thing for which to be thankful.

"If we recognise that every ecosystem can also be viewed as a food web, we can think of it as a circular, interlacing nexus of plant animal relationships (rather than a stratified pyramid with man at the apex)... Each species, be it a form of bacteria or deer, is knitted together in a network of interdependence, however indirect the links may be."
The Ecology of Freedom[9]
Murray Bookchin (1982)



Santiago Danger Slossberry
First day at the Urban Farm, Second day on the Earth

In 1993, the American Society of Landscape Architects produced the following declaration on environment and development:

> "In facing the growing urgency of environmental issues confronting human societies, we must do more than sustain the earth; we must heal, enhance and manage the life-sustaining processes of the planet and ensure the integrity and strength of the global landscape which connects them."[8]

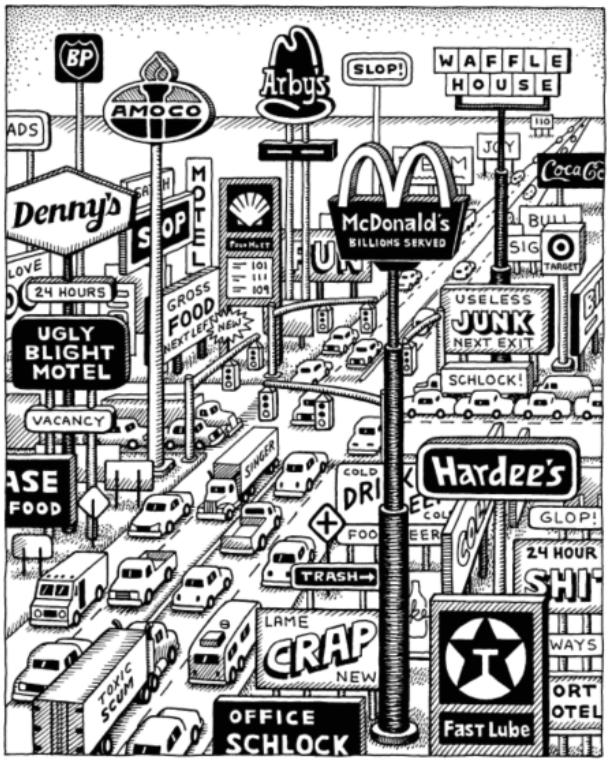
As the ASLA declaration suggests, landscape architects are duty bound to study human society in order to develop strategies to heal and enhance connections to the global landscape. In terms of urgent environmental issues and life sustaining processes, one would be hard pressed to suggest a more pertinent area to consider than food systems and how they shape landscape.

Whether studying urban centers, small towns or rural farmland, the single most telling metric with which to measure the collective sensibility of a given community and how these sensibilities shape the landscape, is the manner in which it feeds itself. Put simply, every culture in the world can be better understood by the food that it eats. Unfortunately, this does not bode well for Americans, given how and what most folks eat everyday. If you are what you eat, we are a society that has lost its connection to the land and where our food comes from and therefore, has lost what it means to really be a part of a place. Our modern landscape very much reflects this dis-connection.

Like it or not, how we spend our money demonstrates who we are and what we care about, especially with regard to food. For example, food deserts and fast food eaten on the run -usually in a car- say as much about what a community deems important as civic amenities such as public parks, public buildings and public art. Ironically, a community that spends 1% on art, for example, considers itself enlightened yet it spends millions to facilitate generic shopping hubs and the obligatory supermarkets and chain food outlets that anchor them. If you consider the public health consequences that are a by-product of procuring food in this fashion, the 'civic investment' that is dedicated to the unsustainable foodshed is even more significant.

Whether consciously derived or not, the dominate perception of what we consider normal is no longer pastures and paddocks but parking

lots and drive thru (sic) windows, despite the fact that folks would probably not characterize these things as being especially desirous or attractive. We have allowed beauty and healthy tradition to be replaced by generic infrastructure dedicated to excess. This has not gone unnoticed and the ramifications of how the symptomatic elements of these 'normal' foodsheds negatively shape the landscape are beginning to be understood. Referencing Rene Dubos, David Orr submits that the greatest disservice we have given our children is the belief that the ugliness born from this misplaced civic priority is somehow normal.



Cartoon lampooning the urban condition.
Artist unknown

"Ugliness is the surest sign of disease or what is now being called 'unsustainability'. Show me the hamburger stands, the neon ticky-tacky strips leading towards every city in America, and the shopping malls, and I'll show you devastated rain forests, a decaying countryside, a politically dependent population, and toxic waste dumps."[10] (Orr, 1992, 88)

It is difficult to contest the connections that Orr and Dubos have drawn and it is impossible to separate food from this arrangement. The dominant paradigm cynically dictates that the way in which we procure sustenance is simply the necessity for some type of efficient distribution of foodstuffs within assumed parameters and the consequences are inevitable and therefor accepted. This prevailing attitude is not accidental and millions are spent to convince us that this new normal is acceptable or even the target condition. Millions are also spent so that the toxic waste and decaying countryside that Dubos has condemned are handled politically as he suggests. Understanding that the way we eat has created this new toxic normal and that the decay of the countryside is a simultaneous result, it becomes self-evident that in order to heal the landscape, it is necessary to break from the gluttonous food system that drives the dominant condition. Fast food requires pavement, but pavement requires fast food as well.

In order to consider ways in which landscape architects can develop strategies to repair this predicament and in doing so, 'heal, enhance and manage the life-sustaining processes of the planet', it is

important to consider further how it is we've gotten into it. People aren't simply presupposed to accept that the traditional agrarian sensibilities that once defined sustainable behavior should be cast aside for those of excess. However, this seems to be the case. Wendell Berry contends that this is the inevitable result of industrializing agriculture and the subsequent demise of family scale farming. That the replacement of diverse healthy farms with industrialized mega-farms should facilitate people's separation from the land goes without saying and the effect it has had on landscape form is obvious. Orr agrees and would add that a general separation from nature has exacerbated the detachment from land and food and that a need to re-construct lost connections is paramount.

Learning to Analyze Landscape Through Sustainable Foodsheds

Remembering the contention that every culture in the world can be better understood by how it feeds itself, it seems crucial that landscape architects become intimately familiar with traditional agrarian commonalities and how they shape sustainable foodsheds. Towards this end, Urban Farm students are introduced to the importance of a vibrant local agrarian community in a healthy localized food system that contrasts sharply with the fast food culture that they are keen to repair. Students visit and work at examples of local urban and rural farms that are successful working examples of responsible, traditionally sustainable land use and behavior. By becoming involved with these efforts, students quickly realize that there is a vital inter-connectedness within the community that has to do with growing and moving food, something that most of them never really understood and certainly never encountered in design studios or site analysis classes. They are encouraged to become active in this community and learn how food-related networks function. Some volunteer for school garden projects and study subscription (CSA) Farms. Some work for non-profit groups dedicated to local food issues and some initiate neighborhood efforts to begin gardening on the residential scale.



Urban Farm students raising a greenhouse at Hayhurst Farm
Photograph by Tom Bettman

Each of these community projects is a constituent of the local

system and each provides a valuable learning experience not found in the traditional curriculum. Very much like standard internships geared towards introducing students to the rigors of professional practice, these types of interactions teach students to recognize the components of sustainable behavior and provide insights into natural, social and built landscapes. For example, by working at gardens dedicated to hunger relief, students learn about how income disparity affects children and how programs providing less fortunate community members the opportunity to grow their own food restores pride. They learn that Latino families struggle disproportionately with nutrition issues and depend on gardening for both food and community support. Students also work closely with 'Farm to School' programs that center on educating less fortunate school children about nutrition and improving school lunch programs while instilling a respect for the systems that are needed to produce healthful food.



Urban Farmers who volunteer and intern at Huerto de la Familia gain rare inter-cultural experience. Photograph by Michael Hanson

These are but a few of the immediate benefits students receive by becoming involved with the machinations of their local foodshed. In a practical sense, the experience of working within the local food community helps them develop analysis skills that guide them to better gauge what is important to the place they are apart of. As future professionals entrusted with the responsibility of envisioning how human places function, these skills will prove invaluable.

In Preparation for Urban Agriculture
Future Landscape Architects in the Garden



Reading Between the Rows: Urban Farming in Eugene

When Richard Britz coined the name 'Urban Farm' in the early 1970's, he chose an oxymoron to intentionally provoke students to think beyond the work that they were doing on the ground and think in terms of the big picture. He understood that it is easy to get lost in the job at hand and forget that what you are doing is not only important but is perhaps revolutionary.

A lot has happened since 1976 and the signs are all around, especially here in Eugene. Growing food in the city is no longer a minority or fringe activity; in fact, it is very much the norm. In many neighborhoods, not having a garden is more conspicuous than having one. Garden center seed stocks that never used to run out, fly off the shelf and local farmers enjoy a vibrant market for selling vegetable transplants. The City has responded to this shifting paradigm with dedicated support for urban food production in the form of increased community garden plots, the publication of a 'Best Practices Manual' for Urban Agriculture as well as suspending enforcement of urban chicken regulations. As with many progressive issues, Eugene is well ahead of the curve.



Team Leader Lauren Bilbao's 'front yard' garden. A new aesthetic of urban food production is becoming the norm. Photograph by Author

This realization hit home last spring when Fritz Haeg visited the Urban Farm. He was 'On Tour' in support of his very popular book, Edible Estates: Attack on the Front Lawn.[11] *Haeg's work has to do with removing residential front lawns and replacing them with art installations in the form of in-situ food production. The novelty of his work has garnished prestigious commission grants and his book is in its second edition. The New York Times book review called it "An*

ingeniously subversive landscaping manifesto".[12]

I was happy to give him a tour of the Urban Farm but I got the feeling that it made him a touch uncomfortable to learn that the work he was being recognized for has been happening in Eugene for 35 years and if he installed one of his Edible Estates around here, few folks would even notice. Such is the community we live in. In the book, Haeg states that, " A small garden, with humble materials and a little effort can have a radical effect". Indeed it can and in fact, indeed it has, for 35 years at the Urban Farm.



Urban Farm students are continuing the tradition of the Victory Garden Movement

In Preparation for Urban Agriculture
Future Landscape Architects in the Garden

Pressures related to growth and dedicated efforts to protect vanishing agricultural land have inspired landscape architects to look for alternative strategies when considering civic design. Combined with a new understanding of food systems and a desire to explore ways to localize these systems, urban agriculture has become a valuable tool for designers and planners seeking to create healthy, vibrant urban spaces while simultaneously celebrating the production of healthy local food.

From community gardens to school garden projects to growing food on vacant lots and hunger relief efforts on municipal property, agricultural activity has become an accepted and often desired constituent of the urban fabric. This is not a new phenomenon even though the heightened attention and increased exposure these efforts are receiving might suggest otherwise. Laura Lawson has traced the practice at least as far back as the 1890s,[13] initially in the activity of property-less urban gardeners utilizing surplus space. Depression relief strategies, schoolyard gardens and 'victory garden' campaign models have followed and are all ancestors of today's urban agriculture efforts.

As would be expected, the diversity of style, scale and mission of these new garden projects makes it difficult to identify positive constants that always accompany urban food production and new tactics are needed to address the complexity of this activity. Lawson has written extensively about these complexities and maintains that "collaborative partnerships are required that balance the participatory, evolving nature of user initiated spaces like community gardens with the long term vision and structure of planning".[14] Landscape architects are both well positioned and capable to enter into these partnerships and by becoming primary initiators, increase the functionality and durability of these

efforts.

In order to be qualified to lead the resurgence of this proven activity, it is essential that future professionals receive proper training towards this end. This requires helping designers determine what factors separate activity focused on urban food production from those of the conventional parks, gardens and similarly designed spaces that they are already familiar with. Herein lies the challenge. Since it is safe to assume that the programmatic elements of a working agricultural operation invariably differ from those of spaces with more benign uses, it follows that instruction aimed towards teaching how to design these unique places must reflect these differences. This should be done both theoretically, through the study of history and precedent, and logistically, through hands-on training.

Hands-on experience, on the ground

Students who work at the Urban Farm are afforded the opportunity to experience the day-to-day activities associated with a working food-producing program. Virtually every activity that they partake in will most likely need to happen in real situations, at very much the same scale. This provides invaluable feedback regarding the logistical requirements that should be considered including; movement patterns, composting systems, irrigation requirements, tool storage, protective fencing, meeting spaces, perennial versus annual planting requirements and areas for processing and cooking of fruits and vegetables. These are elements that are generally not associated with conventional landscape architecture and require specific attention.



Activities specific to urban gardening often define the shape of the place. Students spreading compost, Spring 2008. Photograph by Ali Abbors

For many designers, especially those without practical experience in this area, these are new issues and the parameters of these elements are foreign to them. Landscape architects need be diligent in identifying predictable use patterns and how these new activities can be accommodated, much in the same way as architects who routinely research the specific action that will be associated with the intended program of future buildings. In doing so, they can then provide for site and programmatic requirements that accompany food-producing spaces.

In most cases, urban agriculture is practiced in the form of community gardens and other user-initiated efforts and is characterized by the opportunistic use of surplus space where the action is determined by what is afforded. It is very much a 'do the best with what we have' paradigm. These projects are generally underfunded, constructed in a piece meal fashion, and haphazardly assembled. Often this results in unattractive and possibly dangerous conditions. Anyone who has ever stepped on the wrong end of a rake knows all too well the potential hazards of a poorly arranged work site. These conditions also perpetuate the negative perception that urban food production is inherently unsightly and unsafe. This misconception often hampers the ability to convince policy makers to reconsider regulations that limit agricultural activity in urban settings.[15]



"The point is for the students to understand, in a deeper way, the meaning of the lines that they draw on the page" Stan Jones

Greenhouse building workshop. Summer 2010
Photograph by Jennifer Purcell

Now that landscape architects have begun to embrace the usefulness of urban agriculture - and the signs of this are many – there needs to be a reflection of this appreciation in the pedagogy. To the extent that landscape architecture programs offer hands-on instruction of urban agriculture, this reflection is missing in most cases. Results from phone interviews with departments around the country confirm that although student interest in urban agriculture is on par with general increased public interest, in a strong majority of programs, education in this area is limited to studio projects, most of which are hypothetical. This is understandable. In a curriculum that requires proper instruction in a very wide array of theoretical, historical and practical knowledge sets, it is difficult to shoehorn additional models and experiences into an already crowded fixture list.

Alternative Experiential Education

The usefulness of experiential education within landscape architecture teaching is well known, if not primarily focused on urban agriculture. The most universal model enlisted is design-build. Design-build studios have proven to be an effective model for providing authenticity to student work. Those who are given the opportunity to see their designs through to fruition, and have had a hand in project construction, learn valuable lessons, many of which can be also translated to urban agriculture. In Design-Build, as a teaching model

in landscape architecture, Stan Jones submits that, "The point is for the students to understand, in a deeper way, the meaning of the lines they draw on the page".[16]

His point is well taken. From the comfort of a drafting board, it is easy to shift a topo line here, or a retaining wall there, without understanding what this means during construction. Having never manned a shovel and a wheelbarrow for a day or hauled gravel in buckets makes it a whole lot easier to forget to consider machine access and that the work will have to be done by hand. What seems like an innocuous decision becomes less so with the perspective gained from having had to do the work created by these decisions. Jones would agree that the deeper understanding the he is alluding to is very much provided to those who have worked at the Urban Farm. Students who have been in the trenches have a much better appreciation for the work that needs to be done and will design better settings for this work because of this appreciation. In terms of accommodating program specific use, there is no better way to teach students how to predict the implications of these uses than to have them actually do them.



Specific consideration is needed when designing sites that will accommodate large numbers of urban farmers. Low fence height and specific pathway hierarchies facilitate movement and interaction. Photograph by Ali Abbors

It is also important that they do them in a group, as this is how dynamic landscapes perform. Ron Lovinger is fond of saying that the role of the landscape architect is to 'provide a set where human drama can unfold'.[17] Being able to experience a working model is much like a dress rehearsal in that it increases students' proficiency in being able to predict what activities need special attention. When 80 people are working together in a space that is less than an acre and a half, the necessity to allow for movement without strict choreography is paramount and it only works because proper consideration was given to how the stage functions under various conditions. To attempt to design working spaces that might function in similar ways, without having ever experienced the manner in which all these different people interact and share the space, would be most challenging and probably less successful. Once again, the simple fact that the associated activities of working with tools, pushing wheelbarrows and moving heavy objects within an often crowded and undirected drama demands that the stage for this action reflects a specific set of design decisions that are hard to

predict. Students who have acted in this situation make these decisions more easily.

Students who return to the Urban Farm throughout the year will also experience how seasonal changes profoundly affect the scene. Much more than conventional public parks and gardens, the Urban Farm – and urban agriculture projects - undergo tremendous change due to the seasons and how the activities associated with the time of year change. It is virtually impossible to design spaces that will perform consistently without accounting for these dynamic changes. Experiencing seasonal change - in real time - provides students with feedback they rarely receive in the standard studio arrangement. Anyone that has ever reviewed student work will recognize the scenario where students' decisions are influenced by the prevailing weather. For example, students who are working during a rainy winter quarter seem compelled to provide lots of sunny spaces in their designs even though these spaces will be unbearable during the hot summer. This prejudicial phenomenon is understandable when all they have to go on are the conditions at hand. It is safe to say that students who have studied the cycle of the year through being at the Urban Farm are far less likely to make this mistake and more likely to think in terms of changing conditions, especially if they have had to pick summer squash on a ninety degree day and pushed a wheelbarrow on soft ground on a cold day in January.



Students erecting a plastic hoop house on a rainy spring day become in tune with how seasonal change affects both program and place. Photograph by Michael Parrault

Urban agriculture and social change

Urban agricultural experience gained at the Urban Farm can also benefit landscape architects in terms of big picture social change. Remembering the ASLA definition of the scope of the field; we are responsible for site planning, garden design, environmental restoration, town or urban planning, park and recreation planning, regional planning and historic preservation. Each of these sub-topics has an associated connection to food systems and can be tied to the lessons learned at the Urban Farm. Site planning and garden design have been previously discussed and the need to consider foodshed logistics when considering

town, urban or regional planning is self-evident. Also obvious is how community gardens and schoolyard scale gardens have become recognizable constituents of parks and recreation planning and a new aesthetic - one that reflects the beauty and usefulness of edible civic landscapes in these sorts of public spaces - has already been embraced by the field.

Environmental restoration is also an identified responsibility that can be directly connected to work done at the Urban Farm, especially in terms of urban food production. In its most basic sense; in order to safely grow food, you need good soil. In order to insure that the food being consumed is healthful, specific site analysis geared towards food production must be undertaken. Much of this work will be familiar to landscape architects however, with edible landscapes comes a heightened level of responsibility. As mentioned before, a large percentage of user-initiated urban gardens have historically been started on marginalized land. In an urban setting, these spaces have an increased likelihood for contamination and often require specific methods of correction before growing edible varieties.

The concern for safe soil is well known to Urban Farmers, as is the need to protect the soil from excess heat, moisture and compaction. This should not be new to landscape architects but those with previous growing experience are much more likely to plan responsibly if they bring with them a knowledge set that understands the importance of cover crops, beneficial companion planting, crop rotation, nutrient cycles, soil food webs and plant and insect symbiosis. It is on these relationships that the ecological restoration of urban spaces depends and to properly grow food, these relationships must allowed to flourish. An argument could be made that by entering into this sort of project, one where people literally receive nourishment, landscape architects have increased their level of societal involvement beyond providing planting plans and construction documents. They have embraced a systems-wide relationship where the work that they do expands beyond the borders of site and involves not only the physical but social landscape. This is not new for landscape architects, as involvement in designing urban social spaces is a major focus of the field. However, by adding a nutritional component to the relationship, an additional poignancy is created.

6 *Conclusions*

The Urban Farm as a unique model within a department and within a community.

> While Gardens aren't a cure-all to the problems of economic racism and environmental injustice, unequal access to resources and an exploitative profit system, they can help us get by a little easier, give us space to breathe, to learn from the earth, and to begin to reweave relationships based on respect for the land and for the people around us.[1] Cleo Woelfle-Erskine

In his introduction to Urban Wilds, Cleo Woelfle-Erskin encapsulates the potential benefits derived from the simple act of cultivating the soil for the food we share. Within this tradition lie insights into protecting land and water, providing food security to those less fortunate and pushing back against pressures of industrialization and inequity. In doing so we pause to take stock of where we are in time and place and where we are with those around us. Students who work and learn at the Urban Farm understand these connections.



Working the soil begins a new relationship with the place that is most often unavailable to students
Photograph by Ali Abbors

The Urban Farm remains both a program and a place in the department of landscape architecture. It is unique on both fronts. As a place it is a singularly unique campus outdoor classroom where students work with their hands in the pursuit of growing food and community. As such, the Urban Farm is the physical embodiment of a new kind of aesthetic, one that includes and celebrates sustainably functional land use in response to a new consciousness. As a program of study, the Urban Farm provides an alternative perspective where students learn, hands-on, the implications and intricacies of agricultural activity in an urban setting. As a teaching model, the farm embodies a significant departure from the classical hierarchal teaching model and embraces a system of environmentally responsive place-based learning designed to impart what David Orr calls 'practical competence'.

From an extensive literary review of the benefits and challenges of campus farm projects, the most comprehensive list of benefits and associated learning opportunities that come from this type of hands-on learning is provided by David Orr in his book Earth in Mind. Writing on

the agriculture and the liberal arts, Orr proposes that:

> "Agriculture should be included as part of a complete liberal arts education, first because it offers an important kind of experience no longer available to many young people from predominantly urban areas. Student responsibility for farm operations would teach the values of discipline, physical stamina, frugality, self-reliance, practical competence, hard work, cooperation and ecological competence. Second, college farms properly used would be interdisciplinary laboratories used for the study of sustainable agriculture, ecology botany, zoology, animal husbandry, entomology, soil science, ornithology, landscape design, land restoration, mechanics, solar technology, business operations, philosophy, and rural sociology. Third, college farms could become catalysts in a larger effort to revitalize rural areas in surrounding areas. Fourth, college farms could be used to preserve biological diversity jeopardized by development. Fifth, college farms could be a part of a global effort to reduce carbon emissions involved in the long distance transport of food. Sixth, could close waste loops by composting all campus organic wastes and incorporating these as soil amendments. Finally, by participating in the design and operation of college farms, students could learn that our problems are not beyond intelligent solution; that solutions are close by; and that institutions that are often seen to be inflexible, unimaginative, and remote from the effort to build a sustainable society can be otherwise."[2]

Although Orr's list of attributes goes beyond the scope of the limits of the Urban Farm in terms of mechanics and the benefits of animals on the farm, students at the farm can enjoy practically every other benefit that Orr has identified. Such is the nature of a hands-on place-based learning system based on agriculture.

As was mentioned earlier in this project, the ASLA describes landscape architecture as a dedication to the public health, safety, and welfare and recognition and protection of the land and its resources.[3] Additionally, the mission of the profession is to lead, to educate, and to participate in the careful stewardship, wise planning, and artful design of our cultural and natural environments.4 Bearing this directive in mind, it is easy to recognize how the benefits that Orr has identified can greatly bolster a landscape architecture curriculum. These benefits are not only predictable but are happening in real time at the Urban Farm.

Nonetheless, hands-on, place-based methods, such as the Urban Farm, play only a supporting role in the general curriculum, even though they are understood to be useful. There are many reasons for this, not the least of which is time and space. Due to the rigors of becoming proficient in the large array of skill sets needed to become responsible landscape architects, the curriculum is as broad and diverse as virtually any other discipline. That a degree in landscape architecture is considered a professional degree and answers to a professional licensing body, only brings added pressure to provide a specific set of curricula. In a general sense, the justification of adding to this very crowded fixture list then becomes contingent upon the merit of what can be expected from any alternative class or method. Orr, Dewey, Berry and others have argued convincingly that not only do place-based methods bring expected returns; they are also an essential component to a pedagogy dedicated to improving ecological literacy. Few would disagree that this is something absolutely necessary to landscape architecture.

After studying how the Urban Farm performs as a teaching tool, it seems clear that there is an extraordinary opportunity to reconsider and perhaps modify the role of the Urban Farm to suit future landscape architects while considering how the program, in many ways, modifies the pedagogy. With foodshed literacy becoming the new frontier within the profession, it is clear that the Urban Farm's place in the pedagogy has added importance. This is certainly understood by students who have taken the course, however, general landscape architecture student opinion regarding the farm does not match what they say they are concerned with. For instance, a recent survey has shown that although 73% of students feel that urban agriculture is an integral part of landscape architecture, 67% would be interested in a course that focused on foodsheds and 51% would be interested in a study track or area of concentration that is centered on agriculture, over 70% will not take the class. When asked to give reasons for this surprising discrepancy, 53% said they were unable to fit the class into their schedule. This is not surprising given the difficulty cited earlier but what does seem counter-intuitive is that 53% say that other classes are more important and another 32% said that the material is not important to their professional training.

At the risk of oversimplification, two conclusions can be drawn. First, the importance of place-based ecological education - as

practiced at the Urban Farm - is under-appreciated as a method and secondly, how the Urban Farm informs in the area of food systems and their relationship to the profession is also misperceived. Considering the intrinsic connection between agrarian tradition and landscape architecture and the huge impact that agriculture has on both the social and physical landscapes, it is clear that students feel that the work being done at the farm is detached from how these issues are considered by the profession.

Much of this is indeed perception, however it provides an interesting opportunity to re-look at the program to see how it can accommodate the desires and obligations of students pursuing professional degrees in landscape architecture. Students have consistently voiced interest in foodshed related issues yet there is seemingly a misconception that the hands-on model of the class does not sufficiently connect with these issues. This is not at all surprising considering that the eventual worth and value of any hands-on place based education experience comes almost entirely from doing. This is what makes it unique and essential. Predictable class descriptions will never fully do justice to the rewards of actually being involved.

Nonetheless, tactics should be considered to make the connections between the Urban Farm experience and the field of landscape architecture more overt and in doing so, reassure landscape architecture students that the class will connect with their professional goals. That is not to say that the farm class should jettison what makes it the epitome of a responsive place-based model that meets the standards identified by Woodhouse and Knapp or the foundations espoused by Orr, on the contrary. The intention should be to continue to identify how the Urban Farm teaches ecological literacy while identifying how the class satisfies the desires and expectations that landscape architecture students bring to the collaboration. In many ways this reciprocal arrangement benefits both a pedagogy specific to landscape architecture and the unique multidisciplinary university teaching model that is the Urban Farm.

As the effectiveness of the hands-on farm model becomes more clear, efforts should be undertaken to consider how the techniques and connections that have been utilized at the farm could also be used throughout the curriculum. Additionally, the potential to better utilize the Urban Farm as an outdoor classroom, within the department, is

considerable. The farm classroom regularly hosts students from plants and media classes because of its unique setting, proximity to fine arts studios and unique collection of plant material. This interaction could be expanded to include design studios that use the farm as a precedent study when learning about urban agriculture. Studios focusing on green technologies should also utilize the farm as a potential building/learning site. Importantly, the potential for design-build style classes to work at the farm is great. This would not only help the farm by improving the functionality of the classroom but also continue a long tradition of student-built construction work that is site appropriate and accessible for later study or modification. 84% of surveyed students said that they feel that design-build is a useful studio model and the opportunity to attach Urban Farm sensibilities to this method should be exercised. This would also increase long-term security for the Urban Farm as an outdoor classroom.

Teaching students how the Urban Farm functions as a program that is entwined with the local agrarian community would also prove very informative. Due to the relatively low percentage of landscape architecture students who take the class, the wealth of knowledge within the Urban Farm program is often lost on them. The Urban Farm is a very active member of this community and students of all disciplines learn about the place they inhabit by entering into the relationships that have been developed. This is a valuable resource that should be utilized.

Future Steps

As a class at the University of Oregon, the Urban Farm is a model example of bringing a diverse set of students together to learn about something important across disciplines. Food issues and how they influence community are a vital component of an ecologically responsible education and the Urban Farm plays a unique role in presenting these issues in a direct and hands-on manner. In order to increase the effectiveness if this teaching it is useful to consider how the Urban Farm as a *program* can expand on this effort.

By addressing weaknesses and constraints some logical courses of action are identified. A specific and consorted inquiry should be focused on looking at ways to increase the impact the Urban Farm has on the department of landscape architecture, the university and the local community. The integration into the department pedagogy has

been discussed is primarily looking at how the activity on the ground functions as a place-based model. Looking at how the Urban Farm fits into the university is a different challenge.

As with most programs the primary factor limiting expansion and refinement is budgetary. In order to increase the effectiveness of the program, efforts to document and celebrate how the Urban Farm fits into university plans and sustainability goals should be increased. Doing so will both demonstrate how this type of campus-farming project adds to the university community as well as to identify how improvements can be made. Much of the inter-campus work that Urban Farm students perform goes unnoticed even though this work helps the university reach its projected sustainability and philanthropic goals. Presently this work is mostly limited to grounds stewardship, composting and volunteerism but could be expanded to include food service improvement, edible landscaping, green technology research and interaction with childcare programs. By identifying present and possible university relationships, the potential to fund this activity is increased.

It would also be useful to document and formalize the role and functionality of the Urban Farm *Outdoor Classroom* as it functions as a campus amenity. Students from across the university visit the Urban Farm to study flora and fauna from disciplines as diverse as microbiology and printmaking. By tracking the various uses of the outdoor space, as well as the interactions of farm staff, beneficial lessons are learned by both the university in general and within landscape architecture. Simultaneously, teachers who might not be aware of the space and expertise available will be better able to avail themselves of this important part of campus.

Efforts should also be undertaken to look at how the Urban Farm program could continue to evolve and become self-sufficient. Although the class provides a significant number of student credit hours to the AAA school - and the general funds that accompany these credit hours - any increase in research opportunities and expansion would need to consider alternative sources of funding that are unavailable at this time. Towards this end, a study of the both academic and financial feasibility of developing an institute or center that will host the work being done should be undertaken. By investigating this avenue, the potential for grant revenue that would fund expansion of the program

could become known.

It is also necessary to consider and formalize the role of the Urban Farm director if these types of expansive opportunities are being considered. As has been discussed previously, the nature of a living campus farm is such that it responds to climate cycles that don't always coincide with the academic calendar. In order for the farm to function in this scenario, it is necessary for the program director to often recruit volunteers and community members to supplement student labor in order to preserve continuity in times when the class is not in session. In the present model, where the direction is comes from an adjunct instructor on a term-by-term basis, this is a challenge that will only be exacerbated by program expansion. This is a consistent challenge to campus farming projects nationwide with the most successful programs having a paid director position.

In the case of the Urban Farm, where the marketing of produce is not a part of the 'business model' and therefore not a source of revenue, it becomes even more important to identify the role that the program plays within the university and community in order to secure reliable funding for the program. Although the Urban Farm receives funding from a modest foundation gift, a significant percentage of revenue comes from student fees. Any expansion both in terms of staff or scope would require additional funds that would most likely not be available from the present number of students.

Although many of the future challenges that the Urban Farm must face are primarily linked to financial constraints, it becomes clear that by re-assessing what the farm does and how it functions as a component of higher learning, the intrinsic worth of the program is revealed and the motivation to overcome these constraints is intensified. In fact, as we look at how the program functions and what it can evolve into, the Urban Farm's value as a unique hands-on teaching venue that is singular to both a landscape architecture curriculum and at the University of Oregon, becomes clear. With this clarity comes the ability to share the lessons that have been learned by decades of work. Through this self-evaluation and refinement the Urban Farm can continue to be a shining example that David Orr would certainly agree as being a program that teaches students to be true inhabitants in a rapidly changing world.

Appendix 1

Demographic Study of Urban Farm Students: Who & Why

Over the course of this project information was gathered regarding student demographics, expectations and experience levels. Three studies were performed to look at who were registering for the Urban Farm, what were their motivations for doing so and what skill sets did they bring with them.

Registration History

The initial study looked at the registration history of the Urban Farm class over a ten-year period, beginning in the Fall of 2001. During this time period, 1835 students enrolled in the class of which, 58% were female. Urban Farm class students came from a broad cross-section of academic backgrounds with 89 individual disciplines being represented.

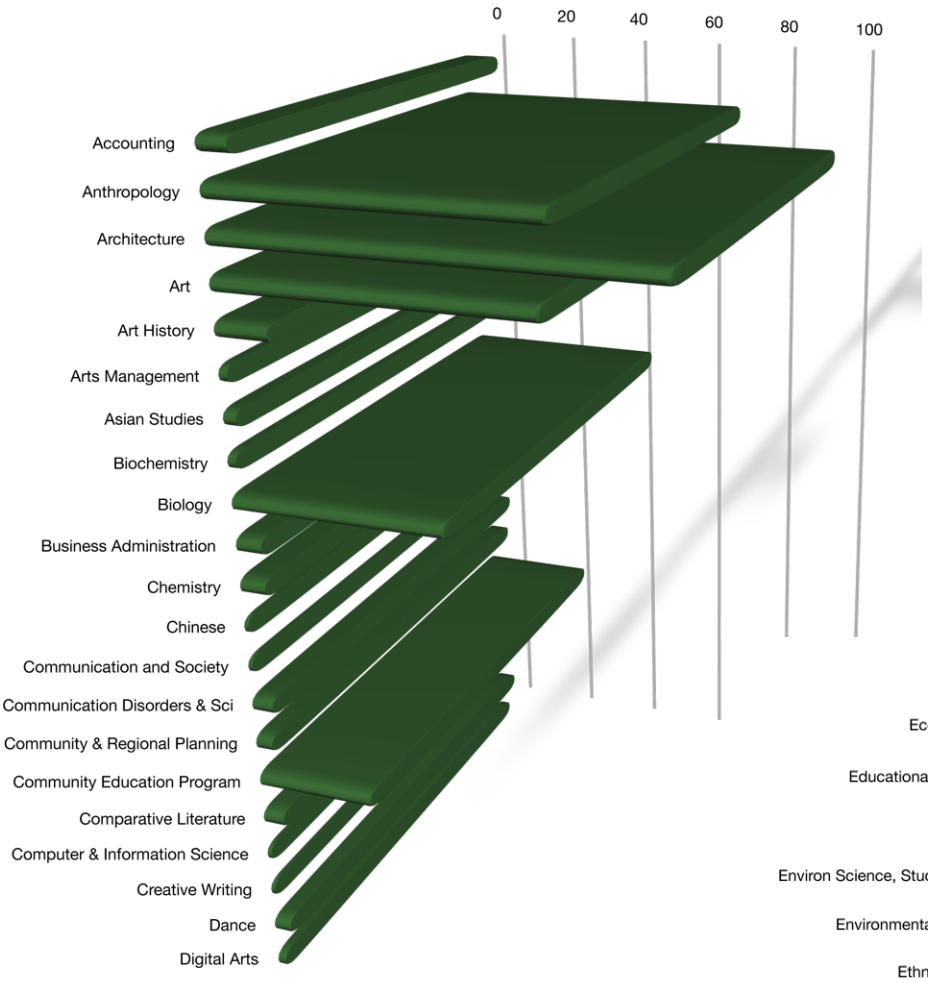
Student motivations and experience levels

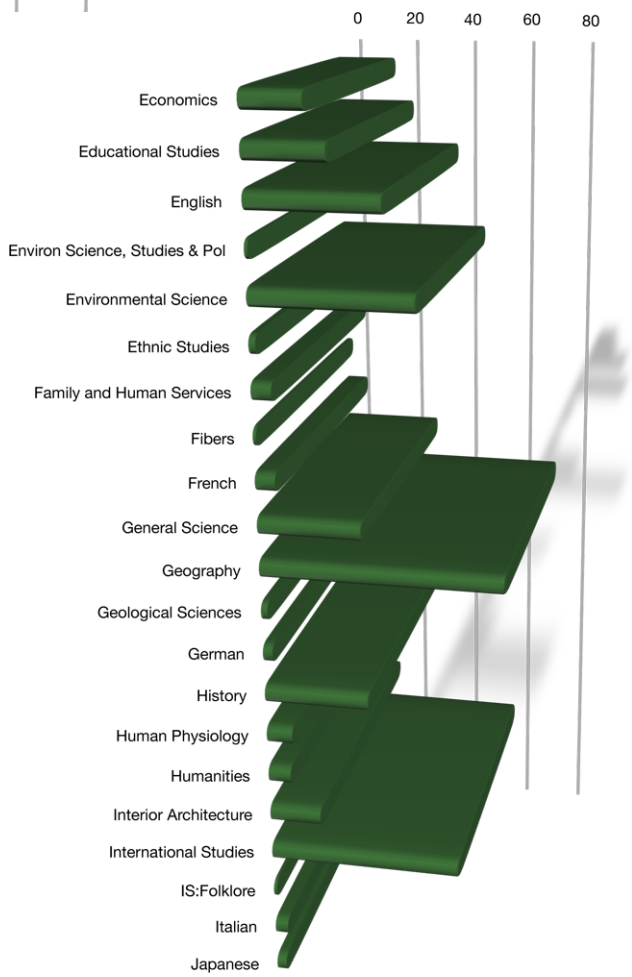
Beginning in the fall on 2009 and continuing through 2010, Urban Farm students were given the opportunity to respond to an anonymous survey which was aimed at acquiring information about why students enrolled in the Urban Farm class and what skill sets and experience levels they brought with them. Over the course of four class terms, 101 students chose to partake in the survey, 67 of which were female.

For this study, students were asked to respond to a series of questions from three themes that included: a) registration information, b) gardening preferences and experiences and c) eating habits. In general terms, when asked why they took the class, students consistently attributed a desire to learn how to grow food, work outside and learn about urban agriculture. Students also were interested in the social aspect of meeting new people.

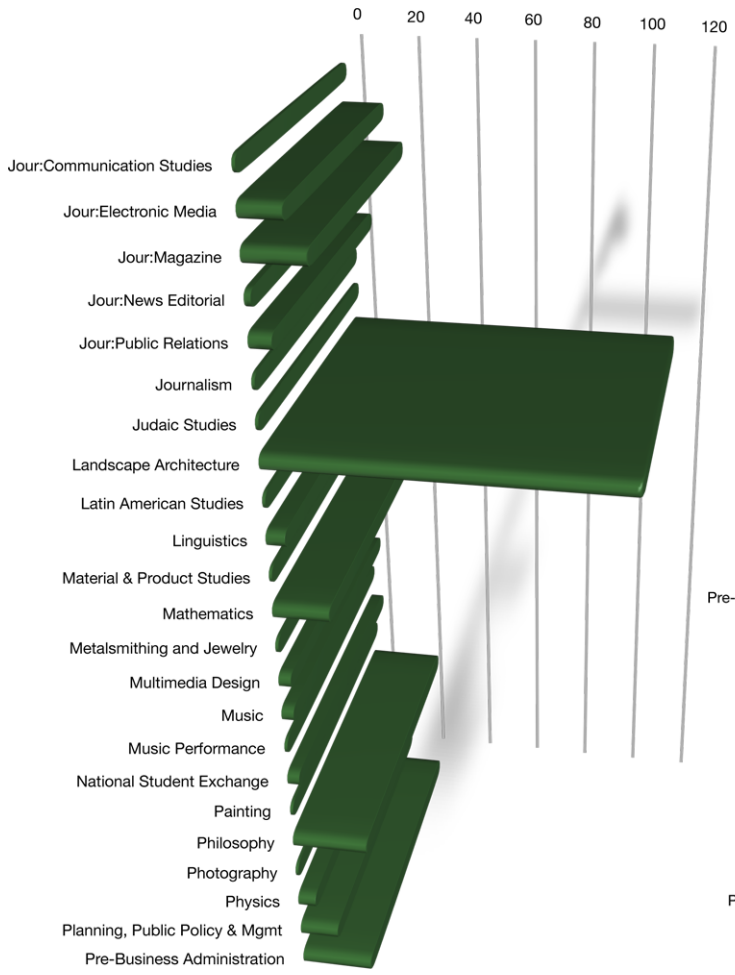
With regard to gardening, students consistently expressed that learning to do so was a large motivating factor for taking the class and that having a place to grow food was an important determinant when looking for a place to live. This is interesting because the survey also showed that students mostly did not presently garden where they living even though there is an opportunity to do so.

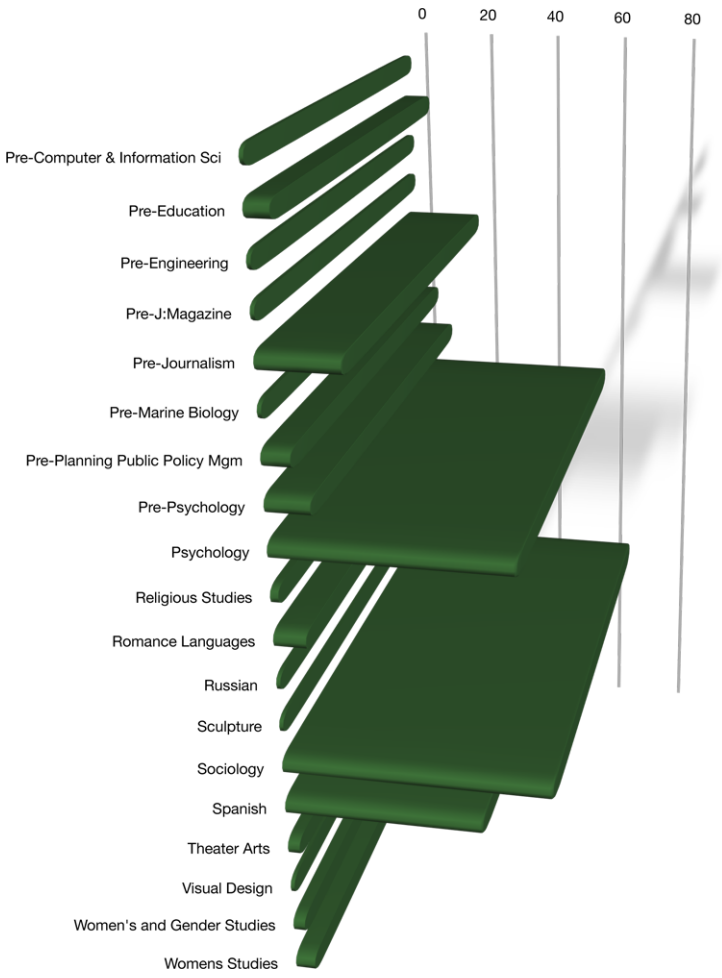
Urban Farm Demographic breakdown 2001-2010

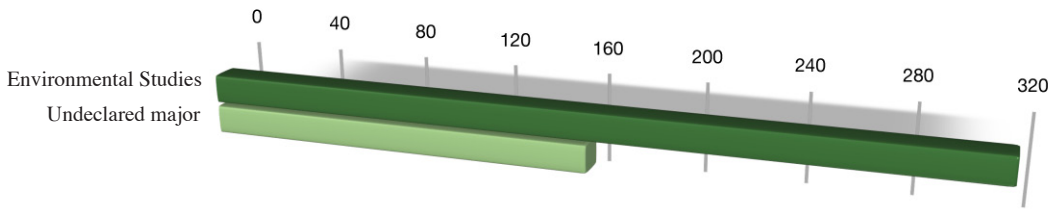




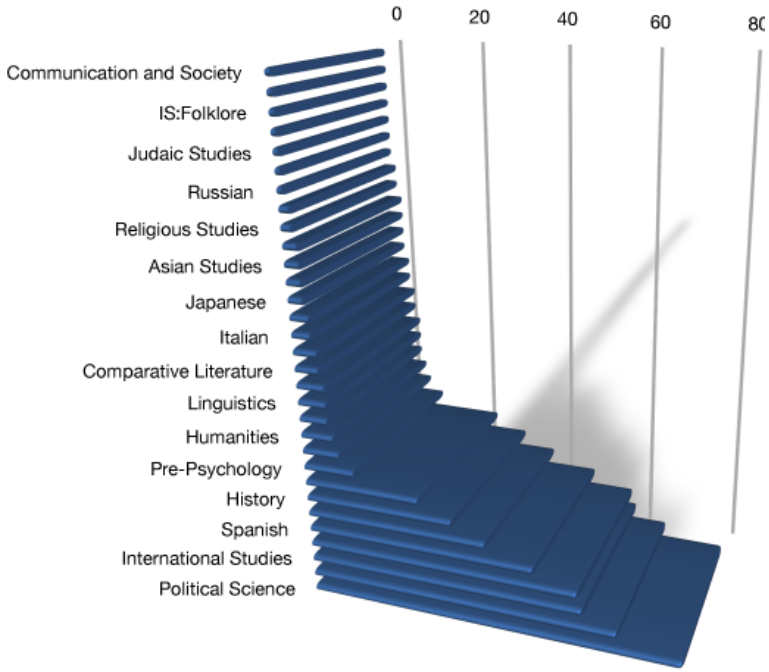
A demographic study of Urban Farm students revealed that 1835 students enrolled in the class from 89 separate disciplines with an additional 161 undeclared. Of these students, 70% were female. Similar or related disciplines were grouped for comparison as shown in blue.


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20
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60
80
100
120
Jour:Communication Studies
Jour:Electronic Media
Jour:Magazine
Jour:News Editorial
Jour:Public Relations
Journalism
Judaic Studies
Landscape Architecture
Latin American Studies
Linguistics
Material & Product Studies
Mathematics
Metalsmithing and Jewelry
Multimedia Design
Music
Music Performance
National Student Exchange
Painting
Philosophy
Photography
Physics
Planning, Public Policy & Mgmt
Pre-Business Administration

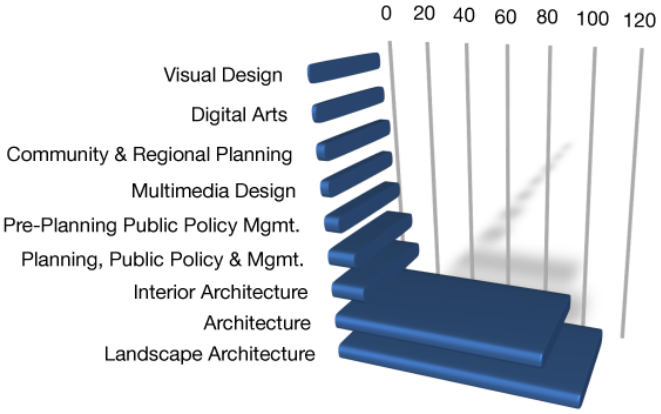

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Pre-Computer & Information Sci
Pre-Education
Pre-Engineering
Pre-J:Magazine
Pre-Journalism
Pre-Marine Biology
Pre-Planning Public Policy Mgm
Pre-Psychology
Psychology
Religious Studies
Romance Languages
Russian
Sculpture
Sociology
Spanish
Theater Arts
Visual Design
Women's and Gender Studies
Womens Studies


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160
200
240
280
320
Environmental Studies
Undeclared major

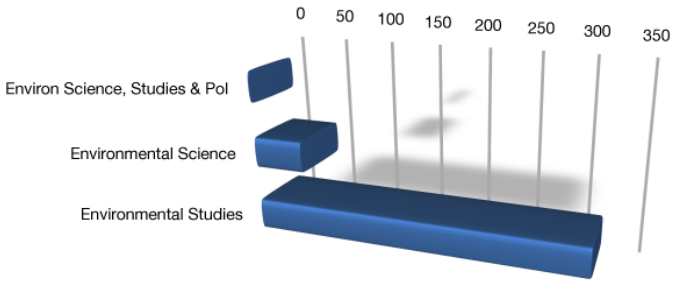
Social Sciences and Languages



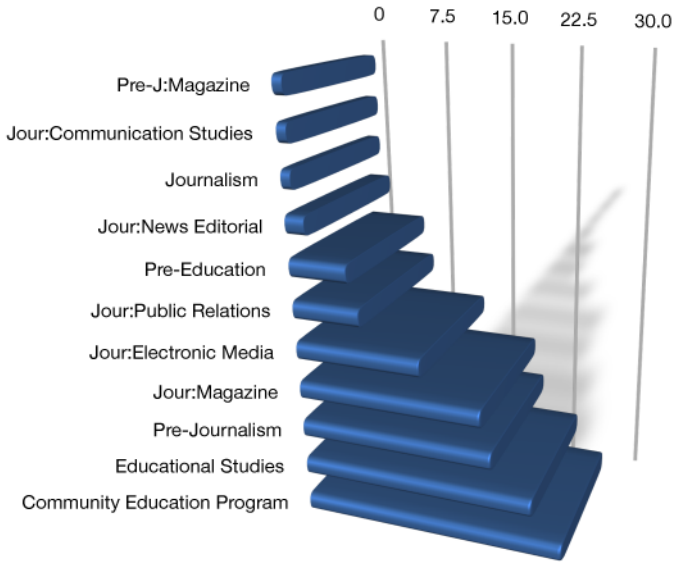
Architecture and Allied Arts



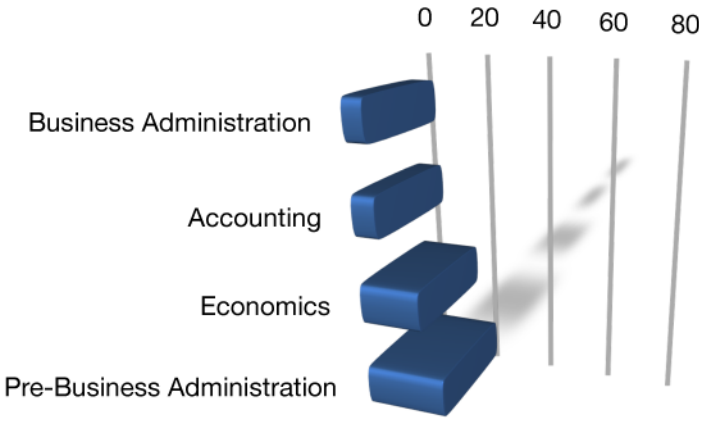
Environmental Studies/ Sciences



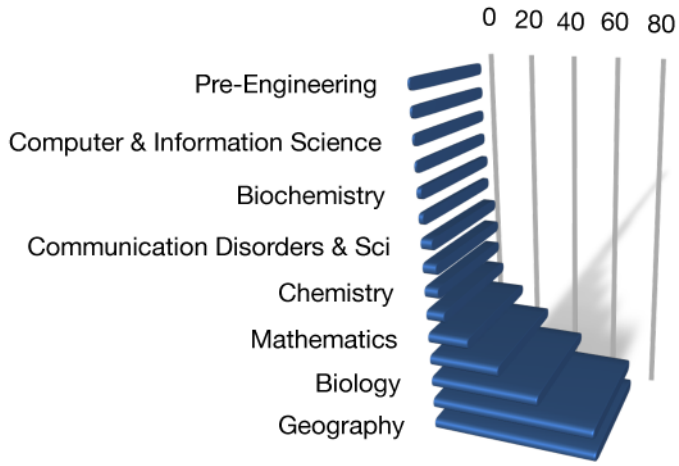
Education and Journalism



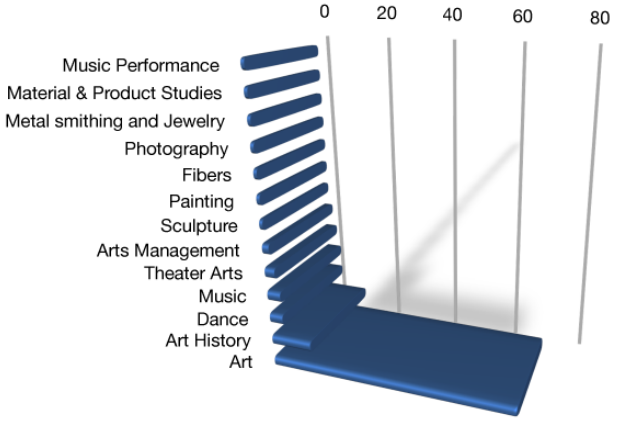
Business / Economics



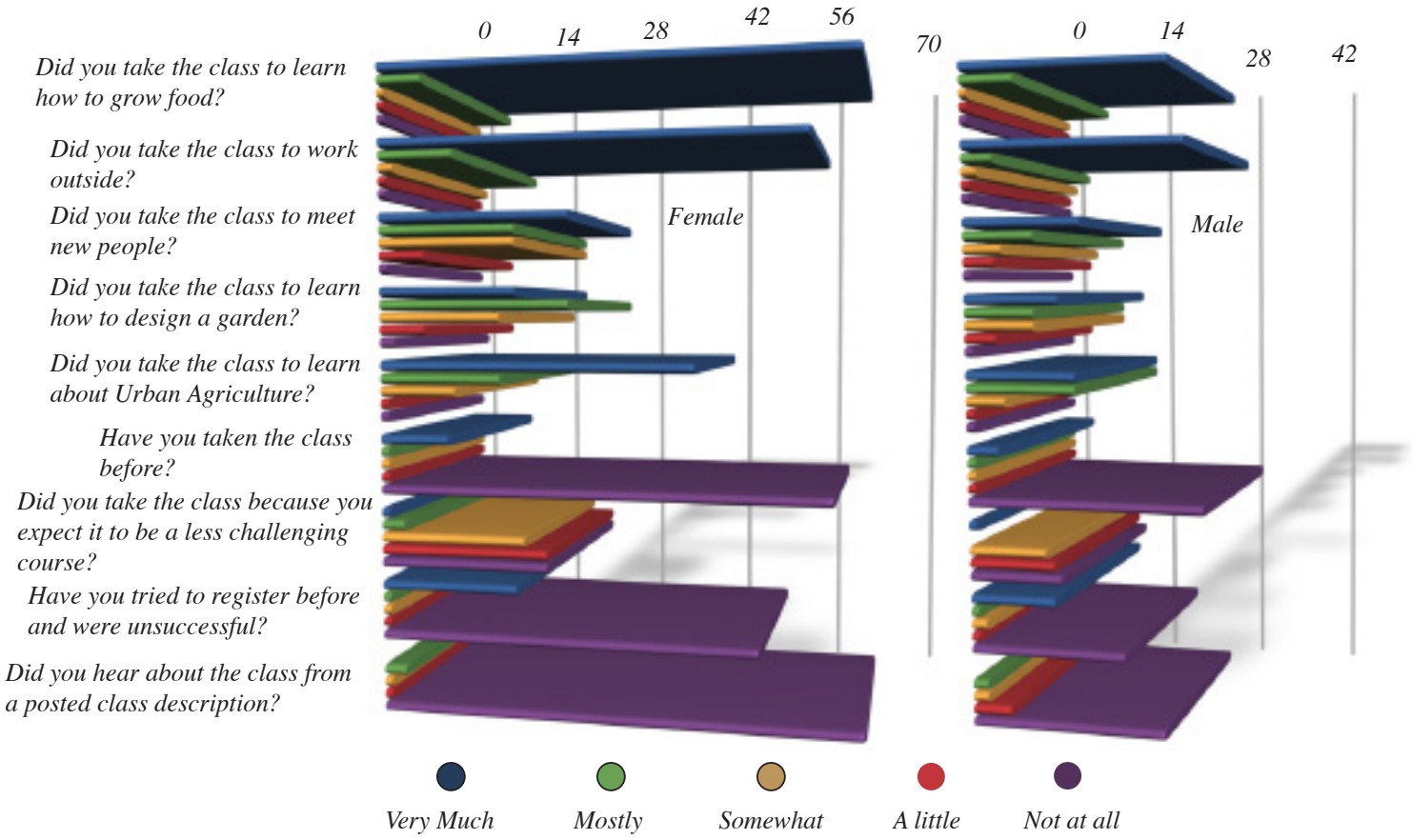
Mathematics and Hard Sciences



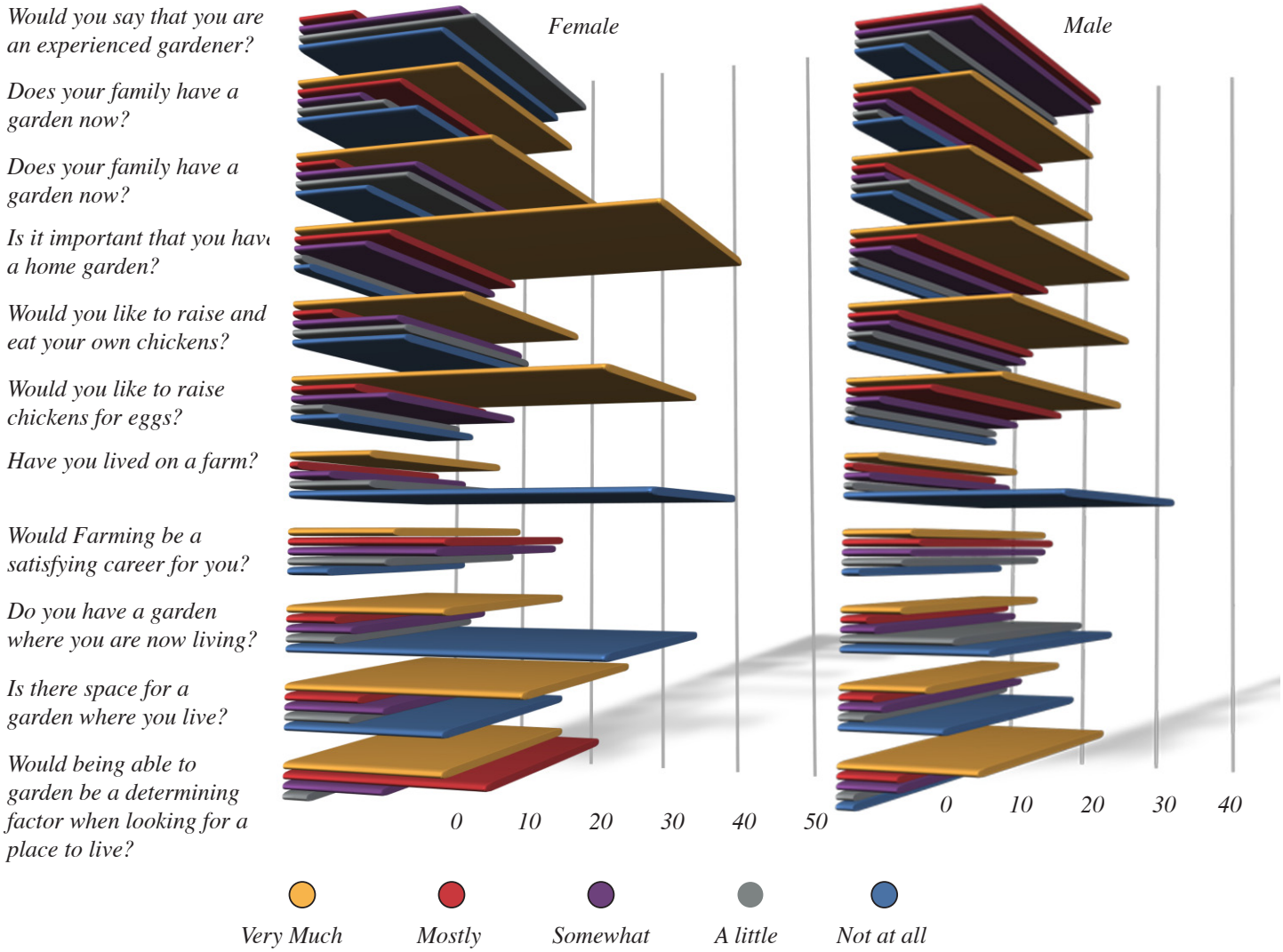
Art and Music



Urban Farm Student Survey / Motivations for Taking the Class

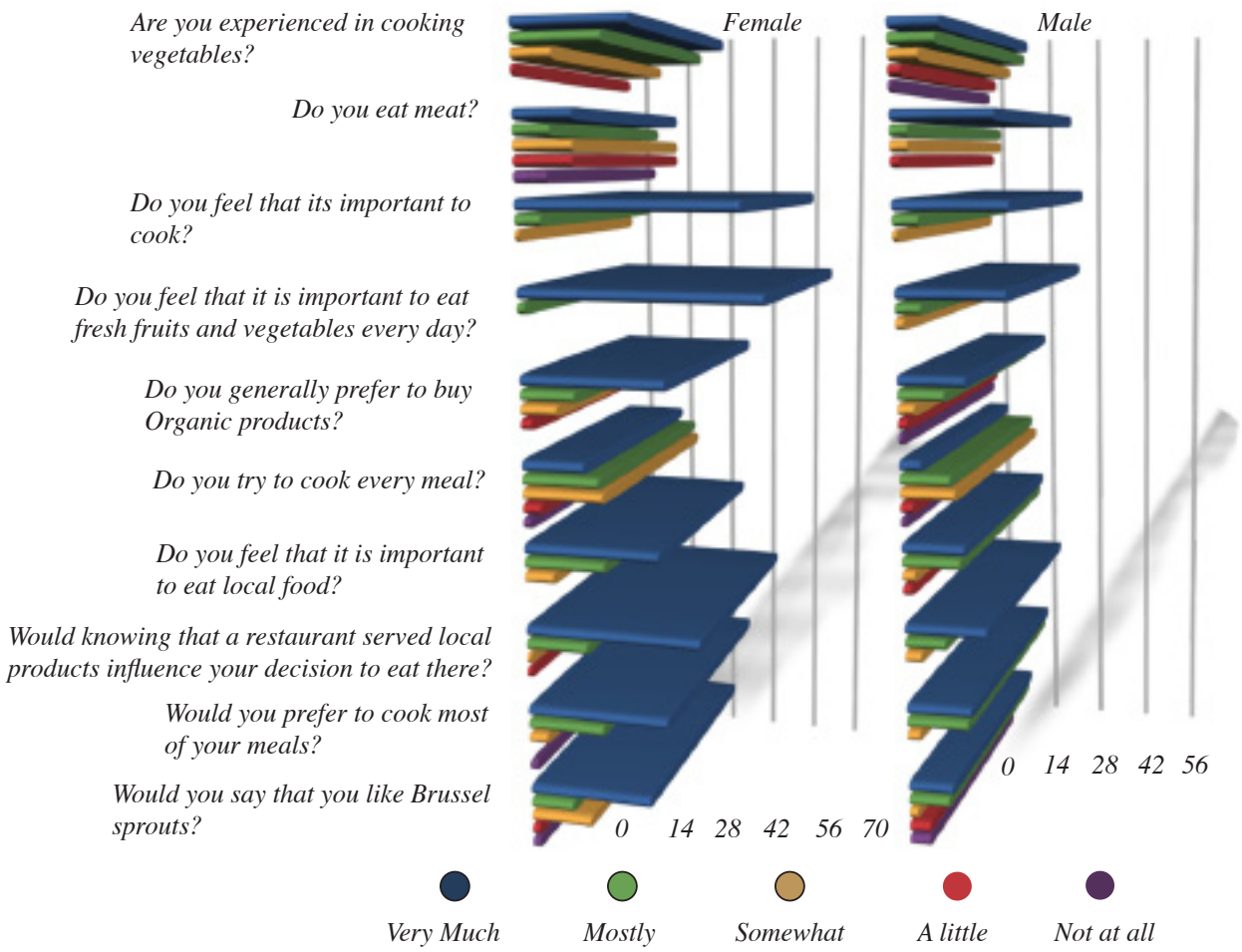


Urban Farm Student Survey : Gardening Experience and Preferences



Student survey results of gardening experience and habits show that they are strongly in favor of having a home garden and have indicated that being able to garden would influence their choice of where to live. In an apparent contradiction, a large percentage of students do not have a garden where they live even though they have indicated that there is the opportunity to do so. Because the majority of students do not consider themselves to be experienced gardeners and said that they took the course in order to learn grow food, the lack of needed skill sets seems to be the largest contributing factor that discourages student from gardening.

Urban Farm Student Survey / Food Habits



Appendix 3
Current landscape architecture student impressions related to the Urban Farm class

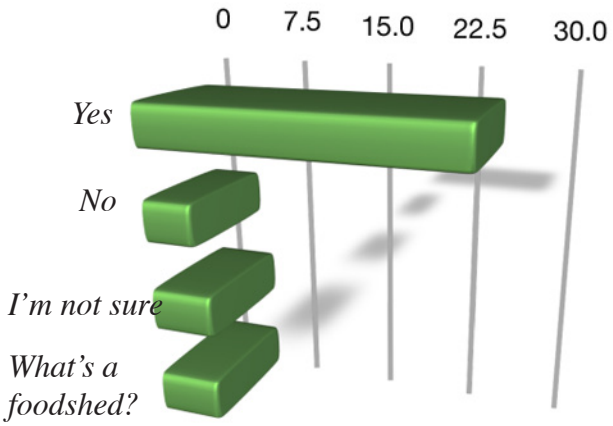
Survey Results

Current students in the landscape architecture program were surveyed about their feelings regarding the Urban Farm class and issues relating to urban agriculture and related study tracks. Student response was very positive when asked whether urban agriculture was an integral part of the profession and a strong majority of students are interested in agriculture and foodshed issues.

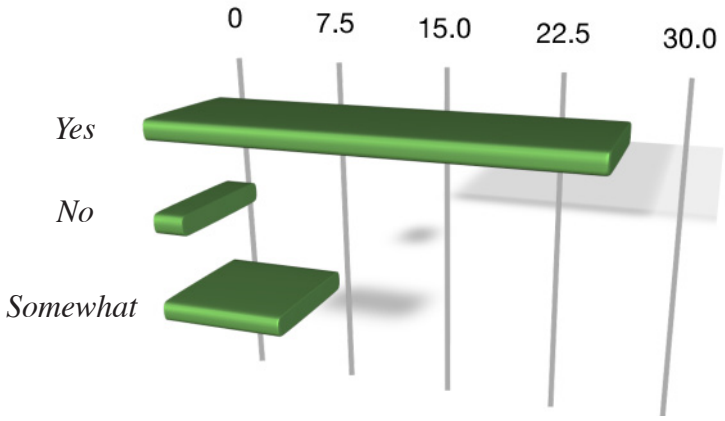
Despite this general interest, over 70% of landscape architecture students do not intend to take the course. The reason for this is mostly split between the opinion that other classes are more important and that it is too difficult to fit the class into their schedules. A number of students also responded that the material was not important to their professional training and that they were already fluent in the subject matter.

Although the test sample was limited (37 students), there seems to be an incongruity between what students perceive urban agriculture and foodshed study to be and what is taught at the Urban Farm.

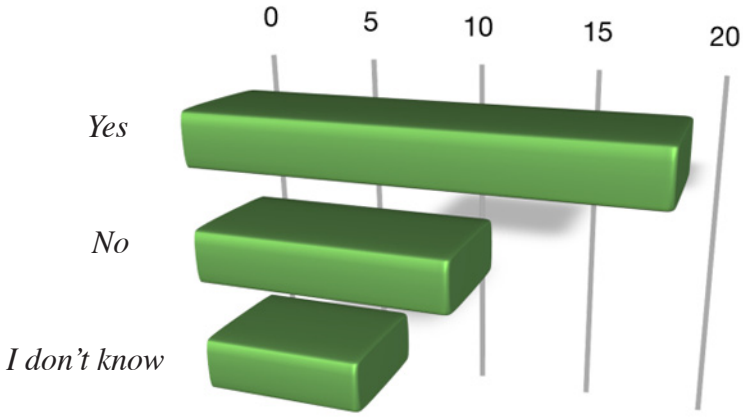
Would you be interested in a course that focused on foodsheds and their relationship to landscape architecture?



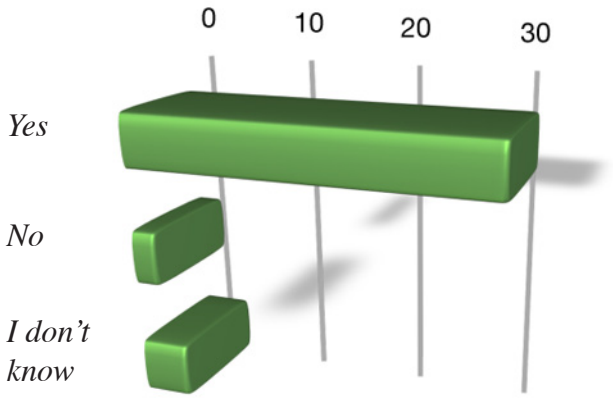
Do you feel that urban agriculture is an integral part of landscape architecture?



Would you be interested in a study track or area of concentration centered on agriculture?



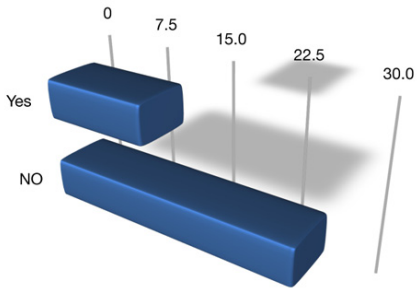
Do you think that design-build is a useful studio model?



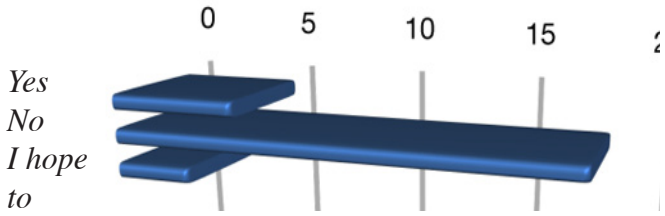
When asked if they thought whether design-build is a useful studio model, students responded very positively. Judging by the obvious interest in agricultural issues along with strong support for design-build, combining these themes in a studio format seems to be a tactic worth considering. A modest example of this was a successful 2010 summer studio centered on 'Horticultural Building Systems'.

An effort to articulate how the activity taking place at the Urban Farm connects with the profession should also be implemented and possible modifications to the syllabus to suit landscape architecture students should also be considered. However, careful attention should be paid to insure that the essential benefits that are associated with the program's multi-disciplinarity are not compromised should the syllabus be modified.

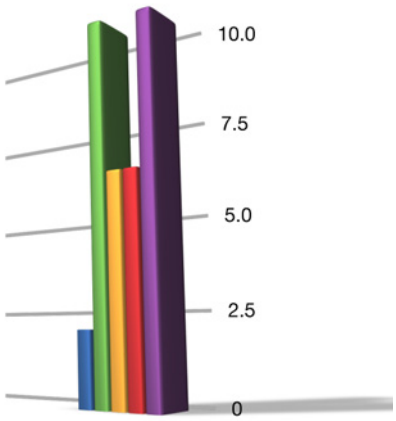
Have you taken the Urban Farm class?



If you have not taken the Urban Farm class, do you intend to before you graduate?

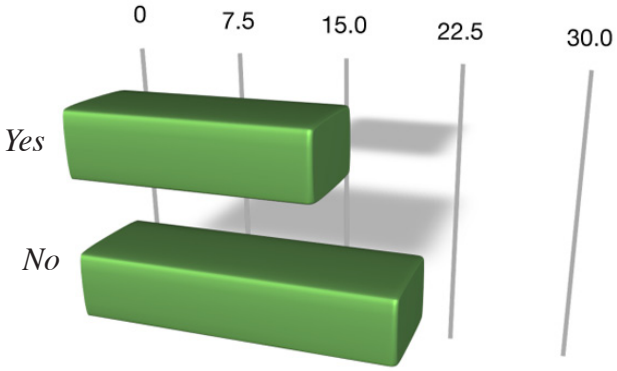


If you do not plan to take the Urban Farm class, why?



- *Not interested in the subject matter*
- *Other classes are more important*
- *Not important to my professional training*
- *I am already fluent in the subject matter*
- *I cannot fit it into my schedule*

Should the Urban Farm be a required class?



Notes / References

Chapter 1

1) Kenneth Helphand, Lecture notes from History of Landscape Architecture course.
Michael Laurie, *An Introduction to Landscape Architecture* (New York: Elsevier, 1986), 16

2) Laurie, 1986, 17

3) John Dixon Hunt, *Greater Perfections: The Practice of Garden Theory* (Philadelphia: University of Pennsylvania Press, 2000) 15

4) Laurie, 1986, 17

5) Tal Alon-Mozes, *Landscape Architecture and Agriculture: Common Seeds and Diverging Sprigs in Israeli Practice*, (Landscape Journal 28:2-2009 pg.166)

6) Hunt, 2000

7) Hunt, 2000

8) Laurie, 1986, 17

9) Ibid

10) Wendell Berry, *The Way of Ignorance* (Shoemaker & Hoard, 2005)

11) Alon-Mozes, 2009

12) Michael Pollan, *The Omnivore's Dilemma* (New York: Penguin, 2006)
Wendell Berry, *Home Economics* (New York: North Point Press, 1987)
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14) Wendell Berry, *Home Economics* (New York: North Point Press, 1987) pg. 184

15) Ebenezer Howard, *Garden Cities of To-Morrow* (London, 1902. Reprinted, edited with a Preface by F. J. Osborn and an (London: Faber and Faber, 1946)

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2) Laurie Lane-Zucker in her forward to David Sobel's *Place-Based Education: Connecting Classrooms and Communities*, (Great Barrington, The Orion Society, 2004) pg. iii

3) *Ibid*

4) David Gruenewald, *The Best of Both Worlds: A Critical Pedagogy of Place,* American Educational Research Journal, May 2003, vol. 32. No.4, pp 3-12

5) John Dewey, *My Pedagogic Creed*, School Journal vol. 54 (January 1897), pp. 77-80

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15) Sobel, 2004, pg. 7

16) University of Oregon, Department of Landscape Architecture Mission Statement, http://landarch.uoregon.edu/department/values

Chapter 3

1) American Association of Landscape Architects (ASLA) definition of the Profession. http://www.asla.org/

2) Alexander Pope's Epistle IV. A full transcript of Pope's epic poem can be found here: http://rpo.library.utoronto.ca/poem/1632.html

3) Orr, 1992, pg.90

4) Ian McHarg, *Design With Nature,* (Garden City, New York, Natural History Press, 1969) 19

5) Orr, 1992

6).Gruenewald, 2003, 12

7) Berry, *Home Economics*, 1984, pg.76

8) Ibid. pg. 50

9) Albert Fein, *A Study of the Profession of Landscape Architecture*, Sponsored and published by the American Society of Landscape Architects Foundation and the Ford Foundation. 1972 Pg. 5-15.
In his 1972 introduction to what was to become known as the Fein Report, Executive Committee Chair, Theodore Osmundson wrote: *This Technical Report is the complete documentation of the first major study and evolution of the profession of Landscape Architecture since its inception by Frederick Law Olmsted over 100 years ago*. Although this report is now 40 years old, it contains valuable lessons for a field dedicated to self evaluation and forward-looking behavior.

10) Ibid 5-7

11) Ibid 5-22

12) Ibid 5-1

13) Surveys of past and present Urban Farm students were conducted over the course of this project. An additional survey of current Landscape Architecture students also informs this study. Survey information can be found in the appendix of this document.

14) Steve Solomon, *Growing Vegetable West of the Cascades*, *Fifth Edition* (Seattle, Sasquatch Books, 2000) pg. 6

Solomon's book remains for many the authoritative how-to book for growing food in the Willamette Valley. Solomon taught the Urban Farm class during the spring and summer in the early 1990's.

15) Orr, 1992, pg. 90

16) Ibid, pg. 91

17) Ibid pg. 90

18) Wes Jackson, *Consulting the Genius of the Place: an Ecological Approach to a New Agriculture*, (Berkeley, Counter Point, 2010) xi.

19) Tom Lehrer, *Bright College Days* from *Too Many Songs by Tom Lehrer* (New York, Pantheon, 1981) pg.66

20) John Dewey, *My Pedagogic Creed,* School Journal vol. 54 (January 1897), pp. 77-80

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22) Henry David Thoreau, *Walden and Civil Disobedience: Authoritative Texts* (New York, W.W. Norton & Company, 1966) pg. 32

23) Frederick Law Olmsted, *Papers 3*: (Baltimore, Johns Hopkins University Press, 1997) pg. 196

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25) Aldo Leopold, *A Sand County Almanac*, (New York, Oxford University Press, 1949)

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29) United Nations General Assembly's World Commission on Environment and Development (WCED), Brundtland Report, 1987
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3) (http://www.greenreportcard.org/report-card-2011/categories/food-recycling)

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2) Berry, 1984, pg. 173

3) Wendell Berry, *Think Little from A Continuous Harmony: Essays Cultural & Agricultural* (New York, Shoemaker & Hoard, 1972)

4) University of Oregon Campus Plan, Pattern #11. A complete list of University of Oregon Campus Plan policies and patterns can be found here: http://pages.uoregon.edu/uplan/plandoc/CampusPlan/CampusPlan.html

5) Christopher Alexander et al, *The Oregon Experiment* (New York : Oxford University Press, 1975)

6) University of Oregon Campus Plan. Policy 5, Replacement of Displaced Uses

7) Bettman, 2002

8) ASLA, Professional Mission Statement (http://www.asla.org/MissionStatement.aspx)

9) Murray Bookchin, *Ecology of Freedom: The Emergence and Dissolution of Hierarchy*, (Cheshire,1982)

10) Orr, 1992, pg. 88

11) Fritz Haeg, Will Allen, Diana Balmori, *Edible Estates: Attack on the Front Lawn*, (Metropolis Books, 2010)

12) New York Times Book Review of *Edible Estates* can be found here: http://topics.nytimes.com/top/reference/timestopics/people/h/fritz_haeg/index.html

13) Laura J. Lawson, *City Bountiful: A Century of Community Gardening in America*, (University of California Press, 2005) Lawson's *City Bountiful* is widely considered the most comprehensive volume on the history and impact of community based agriculture.

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16) Department of Landscape Architecture Head Stan Jones quoted in Landscape Architecture Magazine, Apr 1998, pg. 46

17) Ron Lovinger, Class lecture notes from his course, *Understanding Landscapes*

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3) ASLA definition of the profession: (http://www.asla.org/leadershiphandbook)

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