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# Cultivating Environmental Stewardship in the Suburbs

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Humans beings in modern America have an intense affect on their environment, a fact displayed clearly in the western suburbs of Chicago. Suburbs are undoubtedly a highly desirable and pleasant place to be. Pleasant, unfortunately, isn't enough. The environmental impact of the American suburb is incredibly grave. The layout of suburbs, with their focus on transportation by personal automobile necessitates huge road networks. The materials used for these roads trap and reradiate heat, causing an increase in local surface temperature. The houses people live in are inefficient, requiring large amounts of space and energy to exist in the manner we expect, an inefficiency amplified by the prevalence of single-family houses, a phenomenon less common farther east in Chicago proper. Perhaps most destructive are lawns, the clichéd symbol of suburban success. Lawns require the use of massive quantities of clean, fresh water maintaining the quality of non-native grass. Homeowners spray harmful chemicals to destroy dandelions, while dumping nitrogen fertilizer that is carried away by the rain, polluting water sources and killing off life wherever it accumulates (Houtman 576-591).

It is clear that the way people live in the western suburbs of Chicago is unsustainable. More than that, the traditional metrics by which society might determine the use of suburban space rarely even consider sustainability as a factor. "Sustainability" in this case refers to the use of resources and ecosystems at a level that does not exceed the ability of those systems to repair themselves (Houtman 9). If necessary components are used and degraded quicker than they can recover, the system that uses them can be referred to as unsustainable. But It's not just that suburbs are unsustainable. Many residents of the suburbs do not even consider the environmental impact of their way of life. Is this wrong? Is it okay to simply have the houses, lawns and roads, ignoring their potential impact on future generations? Or, does the current generation have some responsibility to preserve the Earth, so that it might exist in at least as good a state for as long as possible?

## Developing a Philosophical Framework

It is to suburban residents' benefit to live in ways that are capable of continuing into the future. It doesn't make sense to march blindly onwards, given current knowledge of the progressive worsening of the environment. Humans have a responsibility to act to ensure the longevity of their communities and ecosystems, immediately and decisively. From where they derive this responsibility, and to whom or to what, they owe it is a particularly interesting avenue of exploration.

The question of responsibility regarding the environment has been hotly debated by philosophers, ethicists and lawyers. It is clearly an incredible complex problem, and as such different thinkers have approached it from different directions.

Professor Anthony D'Amato at Northwestern University and thinker Edith Weiss take a rights-based approach to the preservation of the environment. They argue as follows: All people, present and future included, have the same right to the environment. They have the right to live in a world comparable to the generations who came before, and to enjoy the diversity of life and opportunities to prosper that existed before their time (Amato 10, Weiss 198). Weiss specifically identifies three areas of focus: conservation of options, conservation of quality, and conservation of access. Conservation of options suggests that no paths of action should be eliminated due to the

previous generation's irresponsibility. Conservation of quality requires that the quality of the world's natural resources should not deteriorate due to the actions of a generation. Finally, conservation of access means that each generation should have access to the resources of the Earth, insofar as they do not limit the potential for future generations to access them as well (Weiss 202).

This framework is hotly debated. There is a real question as to whether or not actions performed in the interest of future generations have ethical weight. British philosopher Derek Parfit suggests that they do not. He presents an interesting paradox, in which acting in the interest of future people does not carry ethical weight, because in changing our actions we fundamentally alter the people who might be born. In this sense, we no doubt create a better world to live in, but we rob those would-be bad-world dwellers of their potential to exist. How can we be beholden to the future, he asks, when our actions shape that future? Is it really possible to owe something to that which we haven't created yet? (D'Amato 191)

Weiss says the way around this paradox is to think of rights as "generational" or "planetary." That is, they are possessed by an abstract group, whomever that group might be. Weiss draws heavily on Rawls, suggesting that these rights be distributed from behind a veil of ignorance, in which each generation has no idea where they might come along in the line of succession. In this way, all generations would agree that each ought to leave the world at least as well off as it was received, if not better (Weiss 200).

There is no doubt that that current generation owes a responsibility to future generations, especially from a rights-based perspective, based on the frameworks previously explored. It is unfortunate that, given the current state of things, it seems impossible that the world might be treated in an ethically acceptable way. Instead, the best that can be hoped for is to get closer to the way things should be, or at the very least, slow the planet's degradation. This is a very important point. This paper does not attempt to solve the entirety of these problems. It merely tries to identify them, as the best way to make progress on these issues is to consider everything in context.

Each conceptualization presented by the thinkers above is insufficient, however. The issue addressed in this paper, however, cannot be explored fully through rights-based ethics. Though useful in governing the way we act towards each other, an ethic that preserves the dignity of human beings might very well ignore completely the dignity of the planet.

An argument laid out by environmental lawyer Lothar Gündling takes a power-focused stance on this question. He suggests that humanity is the only species on Earth with the ability to radically and destructively change the planet through our actions. Because of this ability, humans have a fundamental responsibility to take steps to avoid this destruction. In this sense, it is from human power that responsibility is born. Because humanity could through inaction break the system, it must act to keep it intact. Expanding on Gundling's points, the fact that humans also have the cognitive ability to identify problems, and fix them, before they pass the point of being fixable is also relevant. Accordingly, humans also derive responsibility to act (Gundling, 208).

Society accepts similar reasoning in other areas of life. Consider laws governing child abuse, or the direct mistreatment of animals. It is recognized that the exploitation of something over which one has not only had absolute power, but which relies directly on one's actions to thrive, is a particular heinous offense.

Most papers on this topic take for granted that humankind has some innate right to nature, that is, that nature's value is primarily derived from its instrumental utility to people. This idea is rooted in the International Declaration of Human Rights, and is acknowledged but not defended by several thinkers. Weiss comes close when she acknowledges that humankind is part of the greater system of "nature", but doesn't take it far enough. Can a piece of a system have a right to the rest of the system, not just in a codependent way but in an exploitative and hierarchical way? This is clearly problematic. Diversity of life is what makes this planet worth stewarding over. Humans are here, yes, but they are also not alone. Humanities responsibilities must extend beyond humankind, beyond the

relationships between people or groups, and have some fundamental basis outside of the patterns and systems of society which they have constructed (Weiss 200).

A purely anthropocentric ethics is simply insufficient to address these problems. Just because humans are the most impactful part of a system, and have the most cognitive ability in a system, does not mean they are greater than that system. Any generational ethic is based on a balancing act between intragenerational, and intergenerational forces. There must be equitable use and stewardship of the environment within a generation, and there must be equitable use and stewardship of the environment from generation to generation. Beyond this though, there must be also equitable use of the environment between living things, sentient or not.

An appropriate ethical framework would draw together all of these separate ideas into a "unified ethical theory of sustainability." The focus must be heavily ecocentric; the preservation and, ideally, growth of intact ecosystems is essential. People must acknowledge the ramifications of their power, and take steps to mitigate the damage caused by wielding it. In practice, humans should assume that they will continue to do some environmental damage whether they want to or not. Society can then use the precautionary principle to put into practice habits and policies that actively work to rebuild damaged ecosystems, and bolster already existing ones. That is to say, room needs to be made for the different ecosystems that are threatened by human action.

Such an approach must also acknowledge the anthropocentric viewpoint, as humans are a significant component of the global ecosystem. This is where the generational rights argument might fit in. Weiss' criteria of options, quality, and access are entirely appropriate in this model. It doesn't make sense to try to live with zero impact on the environment; that is quite obviously impossible. What does make sense is to acknowledge that yes, humans are always going to have an impact, and in some areas that impact might be negative but as long as the system, as a whole, allows a place for everything to exist, then we can feel comfortable in the society created (Weiss 202).

## A Practical Implementation

If this ethical framework is accepted, it might then be applied to modern communities. The concept of urbanization becomes very important here. Urbanization is the movement of people away from rural areas to large cities. Urban areas, then, are the cities themselves and the network of suburbs surrounding them. These urban areas can be broken down into subcategories by their relative level of "urbanity." First, there is the metropolitan area proper. In this case, Chicago, Illinois. The city itself, and it's surrounding neighborhoods, are highly urbanized. Moving westward from Lake Michigan, one starts to encounter suburbs, which are less dense than cities. Even further west, past the Fox River are the exurbs; commuter towns that are still dependent on the core city, but start to more and more resemble rural communities. Finally, farthest west, the wide open rural spaces (Houtman 585).

For the following analysis, it is important to understand how the urbanization of an area affects its ecological impact. Urbanization has several advantages and disadvantages. The advantages of an urban community are lower ecological impact per person. This is due to smaller homes, and less traveling. Stacked housing is common, resulting in higher energy efficiency. Because things are closer together, there are more transportation options than just driving; walking and public transit are viable options. These tighter communities have more job opportunities, and can offer more services for citizens due to the density of the population served.

There are also many disadvantages. Concentrated waste is a problem, as there is nowhere to put it. The urban heat island effect, referenced in the introduction, refers to the reradiating of heat off building materials, causing increased energy need and health consequences. Disease, violence, and traffic are all increased as well, along with a dependence on outside food and resources coming in to serve the populace. Finally, there tends to be less green space, resulting in storm water problems as

well as psychological impacts (Houtman 576-591).

Applying the philosophical framework of sustainability, it becomes apparent that urbanized communities generally have a smaller footprint than non-urbanized ones. That means, they have less of a negative impact on the environment as a whole. The footprint is largely depending on the structure of the communities in which people live. There are, however, many disadvantages. Urban communities have a hugely negative ecological impact on a local level; in fact, the "urban ecosystem" generally supplants whatever was there in the past. Other factors, like limited green space and air pollution from traffic congestion are also undesirable.

In striving for a more sustainable suburban community, it is important to recognize these competing factors and optimize them, taking the bits from each system that most readily foster sustainability. Smaller houses and tighter packed public buildings are desirable, as they reduce energy needs of a community and reduce the necessity of vehicles. Green space is also important, as ecosystem services can help lessen the strain on manmade infrastructure.

Most importantly, a sustainable community must, at a very essential level, think of itself as a community committed to sustaining itself. This is perhaps the most challenging thing to accomplish, especially in the context of the western suburbs of Chicago. Common space is essential, and people within the community must get away from the suburban concept of "my house, my lawn, my land." By working cohesively, a community can collectively minimize its environmental impact, implement programs to offset what impact it does have, and self-police those within it that would violate this dialogue. This is an incredibly complex problem in and of itself, one not readily solved simply by changing layout, but it is worth acknowledging. For the purpose of this paper, we have to assume that a community accepts the ethical framework of sustainability, and collectively wishes to live according to it. Possible strategies will be examined briefly in the conclusion. I believe strongly, however, that certain attributes regarding the physical layout of a community might encourage a lowering of the ecological footprint, and these will be the focus in this study.

Aside from the urban-rural conversation, we might also draw heavily from the Ecovillage movement to inform our decisions. Ecovillages are small-scale, intentional communities dedicated to lessening their ecological impact. The standard definition of an ecovillage, presented by sustainability-advocated and thinker Robert Gilman in the early 1990s, is a human-scale, full-featured settlement in which human activities are harmlessly integrated into the natural world in a way that is supportive of healthy human development, and can be successfully continued into the indefinite future (Bang 27). Ecovillages are, by their definition, small and self-contained, and their actual structure is unlikely to scale to have suburban applicability. Some of the characteristics of these communities can be used to inform the way we might structure a sustainable suburban space.

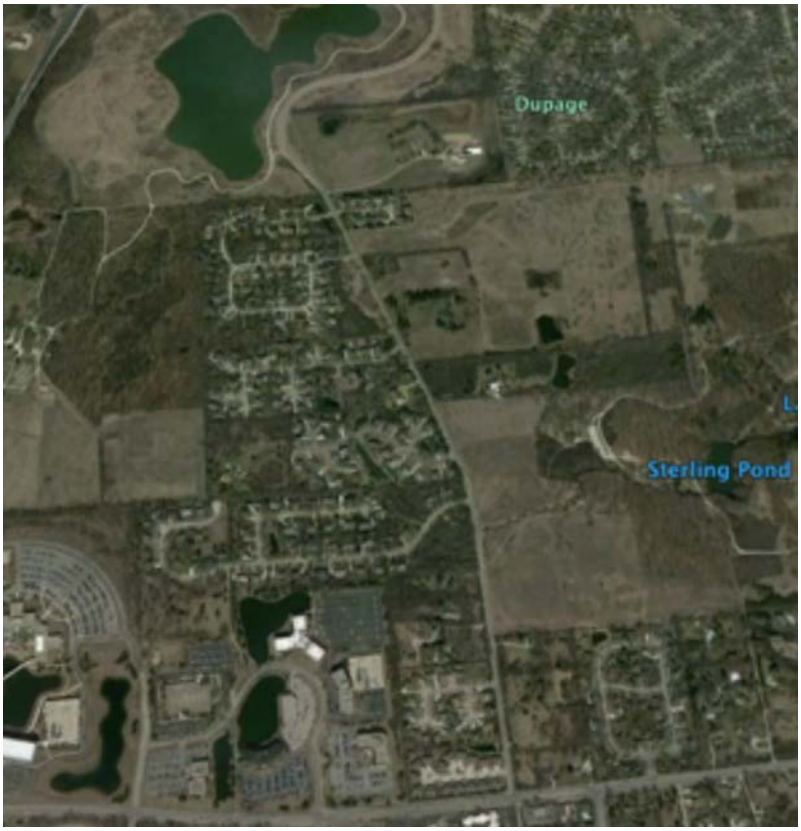
These are simply a few factors that might be taken as general guidelines for developing sustainable communities. The specifics will obviously depend on the specific geography and economic situation in a given community. The best way to explore methods of improving existing communities is through the examination of a particular, small geographic area and a consideration of how that might be easily converted into a more sustainable space.


**Field Analysis**

The small area of Milton Township, in DuPage County, Illinois will serve as an example. Milton Township was chosen as it is representative of the typical Chicago suburb, with a few key economic differences. The township occupies 35 square miles, and has a population of almost 120,000, all of whom live in urban communities. The average household size is 2.7 people, which is very close to the state average of 2.6. The estimated median household income as of the most recent census numbers is about $77,000 a year, significantly higher than the state average of about $54,000. Property value mirrors these numbers; the mean estimated value of a detached house is about $444,000, well above the state average of $252,000. The township has a high population density, 3389 people per square mile, and relatively low unemployment compared to the rest of the state. The vast majority of it's residents (about 60%) live in detached homes that they own themselves. Almost all the residents heat their houses with natural gas, almost all of them drive cars to work. Work, for most residents of Milton Township, is white-collar professional employment (GNIS Detail, Milton Township)

Essentially, what we are looking at is a community that is "shaped" like others in the state, in terms of where people live and how they get around, but is significantly more affluent. Houses are big, yards are nonnative grass, and though the people are packed closer together than in a rural environment, they are far more spread out than in an urban setting. Public transportation isn't used by the community, nor does is it a particularly viable option, given the way homes are laid out in relationship to businesses. These factors result in a unique set of challenges when considering how it might be made more sustainable.

The specific area of focus is one small portion of Milton Township, on the southern end of the City of Wheaton. The area along Leask Lane, bordered by Rice Lake to the north, Warrenville Road to the south, the Morton Arboretum to the east, and extending to include a series of particularly affluent residential areas on the west can serve as a sort of laboratory, in which this paper will apply a few specific concepts and consider their impact on sustainability.




**The Lawns:**

In this area, in typical suburban fashion the houses are surrounded by large, non-native grass lawns, with some lightly wooded areas.

Grass lawns have a massively negative impact on the environment for a variety of reasons. First, they require large amounts of fresh water to flourish. Second, for them to resemble the green fields expected in a suburban environment, they require large amounts of herbicides and fertilizers. They do not absorb water well, and as a result a large amount of these chemicals will runoff, polluting the water supply in their drainage area (Houtman 323).

A more sustainable solution would be to replace these lawns with native prairie grasses. Prairie grasses are beneficial in a variety of ways, not the least of which is that they will flourish without human intervention. Prairies provide a home for a huge number of plants and animals, secure the soil, and absorb huge amounts of water, alleviating the problem of runoff caused by shortgrass lawns. They also help to prevent flooding, a problem that has plagued this area in recent years.

A side benefit is that planting these grasses will expand an already existing ecosystem. Across the road to the east is the Schulenberg Prairie, a segmented ecosystem of the Morton Arboretum. By increasing the size of this ecosystem, it will make it heartier, and more resistant to human activities. Although the habitat will still be fragmented by the road running between them, a consistent plant life will help flora and nonhuman fauna in this area thrive. Certain species can only thrive in “core” ecosystems, meaning the center of a large area of uninterrupted ecosystem (Houtman 153). By increasing the overall size of this ecosystem, it will create more “core” and allow more area for these species to exist.

**The Roads:**

To the north of the residential area is Danada County Forest Preserve. Throughout this forest preserve, extending west into Herrick Lake Forest Preserve is a series of crushed limestone paths, ideal for walking, jogging, and biking. The paths, however, do not connect in a direct and obvious way to the residential areas, preventing their use as anything more than an occasional recreational device.

By connecting the paths south to the residential areas, a new automobile-free transportation network is accessible to the people living there. The paths already connect to Danada just to the north, a key economic center in the area. As it stands, residents need to walk or bike along a busy road to get there. Connecting these two points will allow residents to use the paths to get to their shopping destinations, eliminating the need for automobiles for a large number of activities. This has the added benefit of directing people through open, natural preservation space in their daily activities, encouraging a connection and understanding of the ecosystem in which they live.

This also stands true to the south and southwest. In an ideal, sustainable community, people would live relatively close to their place of work. The professional centers to the south, as well as the large technology firms to the southwest are as of now cut off entirely from the residential space except by road. Connecting these with paths would also cut back the need for automobiles and pavement, combating the negative environmental impacts of both of these factors.

**The Houses:**

If we look at the houses in this area, we can see a few obvious trends. First, they're very large. There are also about 200 of them in the surveyed area, which based on average household size means about 540 people in this area. If these residential areas were remade to more closely resemble urban housing, it would drastically reduce the ecological impact of the people living there. This might look like conversion into upscale condos, either in a flat, spread out configuration or ideally a stacked configuration as is characteristic in Chicago proper. This, however, is simply not a viable option. The economic value of these houses is massive, approaching half a million dollars, and it is unlikely that any of the owners would want to convert, let alone enough of them to make removal a real strategy.

If we grant that standalone houses aren't going away in this area, there are many things that can be done to make them more sustainable. If the lawns and sparse trees are instead converted to prairie, houses can expect to receive much more direct sunlight. This makes solar energy a somewhat viable option, despite sunlight limitations in this geographical area. Limited use of solar panels could offset some heating and cooling costs, lessening the reliance on natural gas.

Perhaps the easiest thing that can be done is simply bringing the disparate houses together through communal space. A community garden in the large property in the middle-west of the residential areas could provide a public space for neighbors to congregate and take an active role in their nutrition, increasing the overall health of the community. Public buildings could be incorporated into the residential area, such as a small convenience store or grocery store in order to mix commercial and residential land, fostering the sense of neighborhood community we see in the city that is often lacking in the suburbs. There are many small steps that can be taken to create a greater sense of community, and thus a greater sense of place in the greater system- factors that contribute directly to a more sustainable lifestyle.

**The System:**

Thus far, the focus has been on retrofitting the already existing structures. The changes are incremental, and actually very viable in a real world scenario. Consider though, for a moment, what this community might look like if every single member committed themselves fully to the ethic of sustainability.

If all components are implemented, there might be a residential areas completely converted into low-impact, eco-friendly housing. They would be built out of natural materials that do not degrade into toxins, insulated heavily with natural materials as well to ease climate-control costs, and occupy a much smaller physical footprint. The land freed up by these houses would become communal space. A small-scale farming operation, as well as several small gardens would dot the landscape, with areas not used by people reclaimed by native grasses and vegetation. There would be small businesses integrated fully into the community, so that people would live, work, and consume without being disconnected from their sense of togetherness. Those who did need to commute to work wouldn't be more than a bike ride away, as this community would naturally and easily serve the employees of the technology firms on its periphery.

What would occur is total integration of sustainable practice into everyday life. Sustainability wouldn't be something a person does. It would be an inevitable consequence resulting in a new lifestyle. In this way, this community would mirror an ecovillage-style commune, but with a suburban twist. Society would accept that it was going to have an environmental impact, and take steps outside the area of influence to mitigate some of this agitation (Bang 27)

## Conclusion

The western suburbs of Chicago are inherently unsustainable. They're degrading the quality of the land they sit on, compounding intense ecological issues that are seen increasingly around the country. The things that are not only seen as normal, but are actually demanded of residents of the suburbs only serve to accelerate a process that began the moment people started to live in a way that degraded their environment faster than it could recover.

An ethic of sustainability is essential, not simply because it preserves the environment, but because it allows the discovery of a lifestyle that can continue for generations. It is far preferable to recognize the most egregious violations, and correct them as quickly as possible, so that people might ease into their new roles voluntarily instead of being thrust into by necessity.

By all accounts, this isn't some abstract timescale of centuries, affecting a world we can't yet imagine. Our actions are already affecting us. They will continue affecting us. The people who will have to make these radical decisions are our grandchildren, our children, and even ourselves.

In this paper, I have outlined a framework by which we may judge our actions, and in judging confirmed the negligent nature of our lifestyles. I then examined a particular community, and offered a few simple, common-sense solutions to improve its long-term viability.

The question is, why aren't we doing these things already? These problems aren't new. We've identified them before, we know they exist, and we know that they're accelerating. We are uniquely equipped in this community economically; we have enough wealth here to make the economic transition to sustainability easily. We simply lack the willingness.

Figuring out how to persuade people to make necessary changes in their lifestyles to ensure the sustainable use of this planet will, I think, will end up being the great question of our generation.

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