



Sprawling Suburban Lawns of the ‘Emerald Isle’: A Dialectical Unfolding.

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Abstract: This article explores how the suburban front lawn is a special type of space, where society metabolizes with nature. Involved in this exchange are complex relationships between a diverse range of processes. These processes include the natural process of grass growth, the labour process of ‘improving upon nature’, the aesthetization process of harnessing nature for aesthetic designs and the commoditization process, in which ‘natural’ inputs are bought and brought into the front lawn. However, it is the social processes, which establishes the determinate form in which the contents of the grass ecosystem operates under. And this crucial insight allows us to critique naturalism as the determinant of the suburban grass lawn.

Key words: Marx, labour process, metabolic rift, Benjamin, aesthetic veneer, externalisation.

During the ‘heady’ days of the Celtic Tiger, Ireland globalized. As part of this globalization, Ireland exported its Riverdances and its ‘traditional’ Irish pubs and images of a fun loving people. But these media global icons were giving us a new identity which constructed a feel-good effect for the Irish people back home. And back in Ireland there were also other changes occurring which were less obvious but more fundamental to the everyday lives of the ordinary people. Nearly by stealth and certainly piecemeal, Ireland suburbanised. Fuelled by an astounding increase in car usage, our car dependency allowed us to travel greater distances to achieve our daily tasks. And in this intensified mobility, our suburbs like a slow moving tsunami began to ‘sprawl’ into the rural Ireland. In its wake, the ‘natural’ ecosystems of the agricultural countryside were being substituted for the more refined ecosystems of the suburban world. And these newly established ecosystems were not an afterthought to the necessary construction of the suburban house, but were fundamental to why those housing estates were established there in the first place, ‘betwixt and between’ the worlds of the urban and the rural. Here, in this article, I want to unfold an analysis of one aspect of this suburban ecosystem, - the front lawn. The front lawns of suburbia, although easily identified by their clearly visible presence, but as I am going to argue their very mundaneness conceals a complexity that puts them into the same situation as Marx suggested the commodity was in:

‘A commodity appears, at first sight, a very trivial thing, and easily understood. Analysis shows that it is in reality a very peculiar thing, abounding in metaphysical subtleties and theological niceties’ (Marx, p.).

And so the presence of the front lawn has become the essential natural icon for suburban Ireland as it is for most other suburbia in our globalizing world, even though grass grows so naturally in Ireland that it has created its own iconic representation of Ireland – the ‘forty shades of green’, or does it?

Marx and Engel’s rejection of ‘Naturalism’ with regard to Irish grass growth

In a preface to a book entitled The Grasses of Ireland, the authors of the preface begin:

‘We owe our international designation of ‘Emerald Isle’ to our grasslands. The Gulf Stream delivers a mildness of climate that is expressed in the greenness of the countryside and the absence of temperature extremes.[...] Our climate is summarised as mild, moist and variable. This gives us the longest season of grass growth in Europe.’ (Feehan, Sheridan and Egan, p.vi).

As a consequence of its geographical location on the westerly perimeter of Europe, Ireland bears the full brunt of ‘the first powerful downpour of the heavy Atlantic rain clouds’ (Engels, p.184). This excessive rainfall is counteracted by the stony limestone substructure which lets the water through without water logging the ground. Arthur Young teased out the implications of these natural conditions (climate and soil structure) for grass growth:

‘.the rocks here are clothed with verdure; - those of limestone with only a thin covering of mold, have the softest and the most beautiful turf imaginable.’ (Vol. 2, Part 11, pp.3-4).

Taking all of this into account, Ireland appears to be the ideal location to investigate any form of grass growth including the grassed lawn of suburbia. But Marx and Engels have provided us with a cautionary note on the apparent ‘naturalism’ of the Irish environmental conditions as the essential determinant of its domesticated plant ecosystems, including grass. Engels in his opening chapter of his unfinished History of Ireland, on its **Natural Conditions**, stated that ‘even the facts of nature become points of national controversy between England and Ireland’ (Engels, p.190). This is especially so with regard to the suitability of the Irish soil for growing of cereals against grass. This controversy spanned two periods in the nineteenth century when the Corn Laws came into existence in 1815 and after their Repeal in 1846. When the Corn Laws were passed, Ireland secured the monopoly of the free importation of corn into Great Britain. This artificially encouraged the cultivation of cereals in Ireland but after their abolition cereal production is substituted for cattle production as Marx outlines:

‘With the abolition of the Corn Laws in 1846, this monopoly was removed. Apart from all other circumstances, this event alone was sufficient to give a great impulse to turning of Irish arable into pasture land, to the concentration of farms, and to the eviction of small cultivators’ (Marx, 1971, p.115).

But Marx crucially continues:

‘After the fruitfulness of the Irish soil had been praised from 1815 to 1846, and proclaimed loudly as by Nature herself destined for the cultivation of wheat, English agronomists, economists, politicians, discover suddenly that it is good for nothing but to produce forage (grass)’ (Marx, 1971, p.115).

What Marx is drawing attention to here, was to a contemporary debate over the productiveness of Irish agriculture and whether it was determined by its natural conditions (climate and soil structure) alone or by how these ‘natural’ contents were embedded in particular social forms, which were themselves changing over time. But these specific historical forms were being determined by the colonial relationship Ireland had with Great Britain. Engelsⁱ teases out how the apparent ‘naturalism’ of Irish agriculture changes with market conditions which in turn changes the ideological pronouncements of the British elite:

‘It can be seen, however the public opinion of the ruling class in England,....., changes with the fashion and in its own interests. Today England needs grain quickly and dependably – Ireland is just perfect for wheat-growing. Tomorrow England needs meat – Ireland is only fit for cattle pastures!’ (Engels, p.190).

Therefore, in order to uncover the determination of an ecosystem, which is apparently under human control, we do not begin with the actual natural contents of the ecosystem

itself (which is the epistemological trap set by naturalism) but by explicating the social form in which the ecosystem operates under. This is the basis for Marx's famous statement on the natural laws:

'No natural laws can be done away with. What can change, in historical circumstances, is the form in which these laws operate' (Marx, 1868).

If this is true for the Irish grass ecosystems of the nineteenth century it is still true for the twentieth first century and the grass lawns of suburbia.

Unfolding the essential social form of the suburban front lawn from its discrete empirical manifestations

The ontological premise of this article is based upon the following quotation from Marx:

'The concrete is concrete because it is the concentration of many determinations, hence unity of the diverse' (Marx, 1973, 1973, p.101).

Accordingly, what I want to propose is that the suburban front garden is a complex entity determined by a unity of diverse processes, which originate from both the natural and social realms. The latter point is crucial as I attempt to move away from the inherent trend of sociologism (Murphy, 1995) within the vast majority of social and cultural accounts of this particular spatial entity.

In examining several discrete areas of research, much of it seemingly unconnected, it can be revealed that the front lawn is one of the most 'fundamental and function-filled component of suburban landscape and that social and environmental implications of the lawn are exceptionally important to suburban studies' (Messia,p.69). Also, as a determinant spatial entity, it can provide us with a crucial insight on how certain social relationships within modern society, especially with regard to identity, have become 'spatialized'. Equally, it can also throw light on how we attempt to idealize nature within the front garden while at the same time we degrade the immediate environment by applying a vast range of chemicals to it.

The appearance of the suburban front lawn has been conceptualized in many ways: as a consequence of the desire to escape urban congestion and the desire for healthier living in more 'rural' setting with cleaner air. In creating this 'natural' space, by replacing the concrete of the urbanscape with natural vegetation, the suburban end of this spatial and textural dichotomy, it is the grass plant which provides the 'natural' to this new spatial configuration as Ewen suggests in the following:

'If the metropolis was an overwhelming realm of rock and steel megaliths, the suburbs were defined by small-scale, single family housing, and by grass and land' (Ewen, p.224).

Also, in locating this 'natural' space in front of the house, the desire to construct a buffer zone between the house and the street was similarly achieved (Ravetz and Turkington, p.180), - a kind of verdant moat (Jackson, p58):

'There are several reasons for the 'need' of the suburban lawn. One reason is a desire to remove one's family away from the rest of the population. This is exemplified in the fact that the middle class deliberately reshaped the landscape by surrounding single-family homes with yards in their new communities to strengthen the power of the family'(Clarke, p.238).

And this was achieved by spatially reconfiguring the relationship of the domestic house to the public street by constructing a front garden between them:

'Lawns, fences and distance from the urban core minimised intrusions, allowing the middle-class housewife to exercise control over her domain, safe from threats posed by outsiders. Instead of being situated directly on the street, suburban homes had a front garden and a large strip of lawn as green insulation from the threatening outside world' (Kleinberg, 1999, p.148).

The attempted insulation of the residents from the street 'passer-bys' by creating a buffer zone was only a determinant of the spatial distancing, - it did not follow on that the ground cover would be grass. However, when we bring in the mass production techniques of suburban house building, the grass lawn becomes the ideal solution to the cultural desire of privacy on behalf of the consumer and the fordist producer of suburban house construction. The greatest exponent and originator of this approach to suburban house building was William Levitt, who built more than 140,000 houses around the world, but gets his name as the founding father of suburbia with his building of Levittown on New York's Long Island begun in 1947. Levitt described his enterprise as industrial and Fordist:

'We are not builders, we are manufacturers. The only difference between Levitt and Sons and General Motors is that we channel labor and materials to a stationary outdoor assembly line instead of bringing them together inside a factory on a mobile line. Just like a factory, we turn out a new house every twenty -four minutes at peak production' (quoted from Tom Bernard, 'New Homes for Sixty Dollars a Month', American Magazine, April, 1948, p105)..

However, even Levitt admitted that no one had discovered how to prefabricate the land (Baxandall and Ewen,p.121). But that does not necessarily imply that the land structure could not be changed to accept more easily the mass building techniques of house construction. Mass building techniques require and promote uniformity in all aspects of its operations including its land base. According to Sennett, this uniformity was achieved by the application of the abstract grid structure to physical space:

‘The grid can be understood, in these terms, as a weapon to be used against environmental character – beginning with the character of geography. In cities like Chicago the grids were laid over irregular terrain: the rectangular blocks obliterated the natural environment, spreading out relentlessly no matter that hills, rivers, or forest knolls stood in the way’ (R.Sennett, *The Conscience of the Eye*, p.52).

To build on land it is necessary to clear it and level it. Natural features of the landscape, such as small hillocks, ravines and even small waterways, are eliminated in order to create a uniform base to ‘run’ the assembly type production efficiently. The consequence of this need for land base uniformity was that topsoil and even subsoil was removed at the initial stage of site construction. After construction, some of the topsoil made its way back into the landscape, not as it existed in its natural habitat before house production but into the right angled plots and on leveled surface surrounding the newly erected houses. In this sense, it is impossible for building contractors to restore the land to its former appearance. The natural curves of the former landscape are eternally blighted by the spatial uniformity of the standing house and the necessary leveling of the terrain for the production process. What bits of the natural landscape that make it back into the newly reconstructed land (street) scape are a few trees and some of the original topsoil. The topsoil is now retained and contained in the right -angled plots of suburban homes. The newly and evenly spread top soil becomes the material base for the emergence of the front lawn. Because grass is probably the quickest and cheapest ground cover to plant in comparison to other plant ecosystems, coupled with the desire to have the buffer zone, it is not surprising that a grassed front lawn becomes the spatial form for the suburban household to engage in other social activities using the front lawn as a mediating entity.

According to Veblen, the new suburban classes were also replicating the tendencies of the various types of leisure classes to engage in ‘conspicuous consumption’. (Veblen, p) Here the lawn became a manifestation of the lower classes attempt to emulate the cultural tastes of an elite classⁱⁱ and in particular to show ‘the passer-by that the homeowner was well-to-do and aesthetically advanced’ (Jenkins, p.32). Therefore, front lawn garden appears to ‘have popped a new social soul into its body’ (Marx, 1867) where it functions to reflect the character of the house occupiers.

In ‘constructing’ a status for the inhabitants of the household, the lawn becomes invested with moral as well as aesthetic values. A well-kept lawn reflects positively on the character of the inhabitants and conversely a poor lawn is seen to degrade not only the household but also the neighbourhood. In a 1999 survey conducted by Robert Feagan and Michael Ripmeester discovered that front lawns are symbols of individual and community identities. As one of their respondents stated that ‘people who have nice lawns are nice people, hardworking. They care for their property and for themselves’ (Feagan and Ripmeester, p.629). But as another resident exclaimed, ‘If even one person lets their lawn go, it makes the neighborhood look disgraceful’ and ‘an untended lawn shows that people are selfish and don’t care about others in the neighborhood’ (Feagan and Ripmeester, p.629). Here a new physical dimension is achieved where the ‘well-kept’

and ‘tended’ lawn is constantly mowed to such an extent that a horizontal form emerges over the grass lawn. But, the process of aestheticization can go beyond this particular smooth form to include the actual content that make up the horizontal plane. This potential emerging form is concerned with the tonal consistency of the grass, which produces a monotonal effect, especially with regard to colour and texture. But this particular aesthetic form can be challenged by the physically ‘popping up’ of the demon weed within the lawn structure.

This appearance of the lawn weed can cause moral outrage among neighborhood residents as Fulford comically purports in the following:

‘As the death of a canary announces the presence of gas in a mine, so a dandelion’s appearance on a lawn indicates that Sloth has taken up residence in paradise and is about to spread its evil in every direction. And when a whole lawn comes alive with dandelions – it can happen overnight, as many know to our sorrow – then that property instantly becomes an affront to the street and to the middle-class world of which the street is a part’ (Fulford, p.1).

But the potential invasion of the front lawn is not entirely restricted to uninvited plant species but can also include human beings. This is where the front garden and especially the lawn, encapsulates the social contradiction between being simultaneously a private and public social forms. According to Messia, this aspect of the front lawn ‘presents an interesting mix of public and private space’:

‘The lawn in and of itself is a piece of land, privately owned and maintained yet is in another way considered communal property whose beauty is to be enjoyed by those who live around the domicile and adds to the social and physical environment that is the neighborhood’ (Messia, p.74).

When there is no fence, wall or hedge between the garden and the public pavements, which is especially a common aspect of American front gardens, this sweep of lawnscape creates a visual sense of openness and unhindered mobility on the spatial dimension. But at the same time it actually hides the continuing presence of social relations associated with private property. Therefore, in a very real sense the immediate appearance of the spatial relationships between the differing private spaces of the individual lawns, which constructs a park-like effect conceals the actual social relations, which constructed that sweeping lawn effect, - private and individualized labour performing on their own respective frontal lots. But the aesthetic of the parklike-lawnscape merely operates at the level of the visual, - any physical movement onto the actual surface of this apparent ‘collective’ lawn may evoke the social and legal strictures associated with private property. Here we have an example of the dialectical relationship between the spatial and social (Goonewardena, p.66) as the lawn aesthetic takes on a moral dimension of collective commitment, where the lawn visually indicates the commitment that a household has for the neighbourhood. But also, the social mediates the spatial as in the existence of private property within the lawnscape. These differing social functions of the lawn, creates not only a distinction between the bodily movements of the feet and eyes

(Crandell, p.125), but also the contradictory roles they play in the suburban lawn. The eyes can wander through the lawnscape but the feet are constrained by the lawn acting as a physical boundary between private property and public pavements. This ambiguous blurring of the realms of private and public space within the 'lawnscape' of a neighborhood community and the status giving function of the front lawn indicates how spatial relations increasingly play a significant social role in modern suburbia.

In our unfolding of these diverse social forms in which the front lawn has become immersed in, which as we have uncovered are often contradictory, we arrive at the essential determining structure, where the lawn is simultaneously a societal object and a naturally growing ecosystem. Fulford captures this essential contradiction:

'Lawn-making is the art that conceals art; it is, in fact, the only aspect of gardening that hides both the work done and the nature of the plant life itself. A lawn that achieves perfection ceases to look like plant matter and resembles a fake version of itself. It has no bumps, no weeds, and no variations in colour; from a distance, the perfect close-mown is indistinguishable from Astroturf' (Fulford, 1998, p.1).

It is this essential determining contradiction that we need to analytically uncover.

Socio-ecological metabolism, metabolic rift and exhibition value

In order to unfold these complex relations of nature and society operating in this space we call the front lawn, we need to have a theoretical framework that can transgress that divide without collapsing it. Marx developed such a concept in his socio-ecological metabolism. This concept came about as Marx attempted to understand how society relates to nature and nature to society, as the following indicates:

'The production of life, both of one's own labour and of fresh life by procreation, appears at once as a double relationship, on the one hand as natural, on the other as a social relationship. By social is meant the cooperation of several individuals, no matter under what conditions, in what manner or to what end' (Marx, German Ideology).

As part of this general relationship of the mode of production, society directly engages with the forces of nature, in which there is a necessary exchange (or flow) of materials from nature to ourselves and from ourselves back to nature. Marx used the concept of metabolism to capture this reciprocal exchange of materials between a living entity and its environment. Metabolism includes both the natural and social forms of exchange and this relationship is crucially located at the level of the labour process within a particular mode of production. Marx states this in following with regard to how man engages with nature through a process of metabolism:

‘Labour process ...regulates and controls the metabolism between himself and nature. He confronts the materials of nature as a force of nature. He sets in motion the natural forces ...in order to appropriate the materials of nature in a form adopted to his needs’ (Marx, Capital, vol.1, p. 283)

Therefore, the complex relationships expressed in the concept of socio-ecological metabolism is present in all modes of production but takes on a specific form depending how it is embedded into its particular mode of production. The socio-ecological metabolism is universal to all modes of production, but the metabolic rift is only particular to some. According to Marx, the metabolic rift is found in the capitalist mode of production, especially in large-scale capitalist agriculture. The decline in the natural fertility of the soil was/is due to the disruption of the soil nutrient cycle. As crops and animal products were being produced in agricultural fields, nutrients such as nitrogen, phosphorous and potassium were being removed from these fields and shipped to locations far removed from their points of origin, especially to urban centres. As a consequence, the constituent elements of the soil that made up the products/commodities were also removed and not replaced naturally. The transportation of these nutrients in the form of agricultural commodities had two important consequences. Firstly, they created a rift in the natural soil cycle, which had to be replaced by human intervention or the conditions of reproduction in the soil structure were permanently undermined. Secondly, the excretion of these nutrients in the urban environment tended to cause pollution in the local waterways, eg. the river Thames in London in the nineteenth century. However, this conceptualisation of the metabolic rift by Marx has taken place on a macro level, between spatial areas such as town and country, between periphery and core regions and between colonising and colonised countries. But, we want to use this theoretical insight of the metabolic rift at a more micro level, - the front garden and more specifically the lawn area of the front garden. This concept will give us the methodology to deal with the complex interrelationships between the natural processes of an ecosystem and the social processes that have apparently metabolized in the front lawn garden.

However, the front lawn as a natural entity is not directly embedded in a capitalist labour process (as a commodity with its own exchange value), but it is certainly a social entity, which has a tendency to be an aesthetic object. As an aesthetic object, according to Walter Benjamin, it can have an exhibition value. Exhibition value is about creating an object so that it can be put “on view” and thereby available to be visually appropriated by others than the producers. But, not only is it on public view, it is also an aesthetic object. In ‘designing the garden’, the gardener(s) are composing an aesthetic entity which is determined by cultural conventions of composition and production. Benjamin’s concept of exhibition value simultaneously captures the public aspect of the front lawn as well as its determination as an object of artistic production.

J.S. Stein has argued that the ‘perfect lawn’ is actually a perfect antithesis of an ecological system. A perfect lawn is ‘still’ and ‘silent’ whereas a prairie or meadow is humming with life (Noah’s Garden,p138). The ‘stillness’ of the lawn as an aesthetic object is counterpoised by it being a natural living ecosystem (modified). It is this contradiction, which is the essential determining feature of the front lawn. I want to

begin our analysis by looking at a grass ecosystem, with its own the natural laws and tendencies (without human interference).

The natural meadow: grass without a labour process and therefore content without form (social)

The natural process of grass growing is to do so in a naturally occurring ecosystem. An ecosystem is a group of living and nonliving parts within an environment that interact with each other. Since we have been discussing grass, we want to concentrate here on one particular environment, - the natural meadow. Here, every element of nature – animals, insects, plants and soil – all work together to create a natural cycle of events in the meadow. In essence, an ecosystem is a cycle or process, where every part or element, perform different roles in the reproduction of the cycle. Plants feed the animals, the animals manure the land, the manure feed the soil and the soil feed the plants. Therefore, reproduction of the ecosystem in each of its forms and each of its stages is just as continuous as is the metamorphosis of the forms and their successive passage through stages (Marx, Capital, vol. 2 p.180). And since this ecosystem is in a constantly rotating orbit, every point is simultaneously a starting – point and a point of return (Marald, 2002), I want to arbitrarily begin our analysis at the soil structure.

The basic structure of the soil consists of rock particles broken down by frost and thaw action, wind and water flow to produce different textures that produce soil types. Part of the soil make-up is organic matter, - about 5% in mineral agricultural soils, which consists of vegetable and animals remains in various stages of decay – along with water and air. The organic matter provides the home for soil animals, such as insects and earthworms who are crucial in the process of soil functioning. Earthworms in particular mix and restructure soils. Their deep borrows drain the soil and bring air to the recycling bacteria; it pulls down leaves from the surface, macerating and mixing them with earth in its gizzard and the casting them forth as the fine, crumbly particles that best suits the penetration of roots. In an old pasture, earthworms in one hectare can pass about 90,000 kilos of soil through their guts in a year; in an orchard, they can, over the winter, remove 90 per cent of the fallen leaves (Viney, April 20th, 2002). By comminuting litter, soil animals play a catalytic role to the dominant decomposers, - the soil microbes. Agricultural soils commonly contain about 300 million microbe individuals per gram. Some of these microbes use inorganic compounds as energy sources. Several take nitrogen from the air and bind it into molecules so that it becomes available to the plants. However, the vast majority of soil microbes get their energy by breaking down organic matter to release it. In doing this, they also release inorganic nutrients from the organic matter to the plant roots, and so control plant growth. The microbes work to provide just the right conditions for healthy plant growth. The plants in turn feed the animals and the insects, who when they die manure the land and the cycle begins again.

However, unlike the lawn, the natural ecosystem of the meadow is not a mono -culture of grass species. It is a fine balance of differing species, which co-exist without any one specie gaining dominance. Because of plant diversity within the

ecosystem, nature on its own cannot produce a very abundant harvest of any one particular specie, either in terms of quantity or of quality. In the natural ecosystem, many seeds produced would never germinate, due to adverse conditions caused by competition from other plant specie or animal predators. Competition and its inherent dictum of 'the survival of the fittest' within nature eliminates the possibility of a plant monoculture. Consequently, plant monoculture is not a naturally occurring event in nature, it is a product of human intervention into nature. The lawn is a monoculture of grass growth, determined by human labour.

The labour process under grass monoculture: constructing the 'rift canopy'.

Lawn grass production is a result of human interference in the natural cycle of reproduction in an ecosystem. Labour intervention is determined by the need to allow grass growth to dominate other plant species. Consequently, the natural forces of the ecosystem is now determined by the social forces of the intervening labour process. For example, in order to allow the desired plant monoculture to emerge at its initial stage, it is necessary to eliminate the other plant species as early as possible. This is usually achieved by digging up the existing plants and cleaning the topsoil of non-grass species. And by sowing the grass seeds exclusively on the newly cleared ground, the conditions of grass dominance is created within the reproduction cycle of the newly established ecosystem. Subsequently, the various stages of growth of this particular plant specie become crucial opportunities for the living labour of the labourer to intervene in the cycle to provide continual protection for the 'chosen' specie against all the other potential competing species. For example, in the next stage, - of germination, the seed can be protected from seed eating predators by a number of processes, such as, machine sowing, use of netting and top-dressing. These processes allow the seed to geminate and take root. Watering may also be needed in establishing turf grass from seed. This is a delicate balancing act as the soil must be kept moist but not excessively wet until the seeds germinate (McCarty et al.p.26). In certain locations, the new seedlings will need to be fertilized after seeding.

In the initial construction of the lawn, the labourer sets in motion the natural forces of grass growth to respond to the desire to obtain grass dominance over potential competing other plant specie. In doing so the ecosystem has been modified. Modification has been achieved through human intervention. This intervention has merely operated along the horizontal plane in eliminating competition from other plants. It has not impacted on the vertical movement of the grass growth. Therefore, the process of modification is not initially concerned with the natural forces operating within the plant structure itself, it is merely establishing a species monoculture. Each type of turf grass grows at a different rate and at differing levels of fertility, which does not bother the gardener as long as grass dominance is created. This stage of development ends with the first cutting of the grass, as the intervention process moves into the actual physical structure of the grass plant itself. Mowing is the critical intervention into the grass monoculture because it creates the conditions for the emergence of the metabolic rift within this modified ecosystem. As the mowing of the grass occurs, its clippings are accumulated to be disposed of. It is estimated that a half-acre lawn would yield nearly

three tons of grass clippings a year (Jenkins, p.173). The most immediate effect of the disposal of these grass clippings is the removal of these nutrients in the clippings from the cycle of the ecosystem, as predicted by Marx in his conceptualization of the metabolic rift. However, not only are nutrients removed in the clippings but also the physical structures of the grass above the cut line. Cutting the grass removes not only the upper parts of the plant but also activities, which occur in those upper parts of this ecosystem, such as flowering and wildlife movements. This is the second stage in the modification of the grass ecosystem, where grass maintenance strategies are developed to create an aesthetically pleasing lawn. Accordingly, the cut line of the grass becomes the most visible sign of the presence of the metabolic rift in this newly modified ecosystem. The grass height line is therefore best conceptualized as the rift canopy, where its presence acts as an artificially created barrier which sheers through the natural cycle of this ecosystem. All above this rift canopy, the natural features of the ecosystem are removed by the action of mowing, all below remain but remain stunted in their development by the lack of flow from above the rift canopy. Without the tall grass, animal and bird life is restricted and thereby removing their functions from the ecosystem. Therefore, the rift line/canopy has a chain reaction on the entire ecosystem and its remaining elements. In its essence, the rift canopy is a labour activity, which attempts to 'reify' the natural processes of plant growth.

The most dramatic feature of this process of plant life reification is the attempt to transgress the vertical tendencies of grass plant growth by sheering into the plant stems to create the appearance of a flat horizontal surface, through the activity of mowing. And in doing so human labour is constructing a two dimensional representation from a naturally occurring three dimensional characteristics of plant growth. The reification of rift canopy is further maintained by the attempt to preserve the physical integrity of the canopy surface. Anything that penetrates the canopy from above (fallen leaves and other plant debris) or below (worm casts or weeds) are removed. Accordingly, the metabolic rift and its most visible indication of its presence, - the canopy require a huge amount of labour input to continually maintain the grass lawn monoculture. However, this labour input can be lowered somewhat by the use of technology, especially chemical technology.

The 'chemical' moments as an attempt to curb the Rift

According to environmental scientists and landscape designers an 'industrial' lawn rests on four basic principles of design and management: - composed of grass species only; free from weeds and pests; continuously green; and kept at a low, even height (Borman et al, 1993,62) However, this definition of the 'industrial' lawn is essentially confined to its aesthetic appearance rather than on how it came about through a production process. Defined as a production process, it would be determined by a combination of a 'natural' ecosystem, a labour process and a technological process. The latter two processes should be seen as an attempt by the gardener to overcome the problems, which have emerged with the presence of the metabolic rift in the growth cycle of the grass ecosystem. But 'righting' the rift must be achieved within the confines of the

aesthetization framework, as the strategies adopted need to, at least, maintain the aesthetic appearance of the lawnscape if not to enhance it. But getting the 'balance right' has proved to be difficult with a number of unforeseeable consequences, not only for the immediate lawn ecosystem, but also for surrounding and wider ecosystems. The gardener has been 'helped' by capital, in providing labour saving devices in the forms of lawn machinery and lawn chemicals.

The chemicals provided by industrial capital intervene in the lawn ecosystem in varying ways and at differing stages of the growth cycle. Even before the grass is sown, knock-down chemicals, in the form of herbicides, can eliminate all vegetation in the soil. After clearing the soil, pre-emergence treatment of chemicals can prevent weed seeds germinating and finally post emergence treatment will kill all weed plants (Jenkins, p.162). In eliminating the competition from other non grass species, the application of these chemicals encourage not only the initial establishment of grass growth but also lower the amount of labour input needed to construct the lawn. However, chemical applications continue beyond the construction stage to become increasingly part of the maintenance strategies of the lawn itself. This occurs to such an extent that the lawn becomes dependent upon the application of chemicals to reproduce itself as a single species of grass ecosystem. Along with herbicides, pesticides and fertilizers can be added to the 'natural' process of grass production, with each application performing a particular function in the overall reproduction of this enhanced ecosystem. But the crucial consequence, is that these chemicals become a near determining factor in the life cycle of the lawn, - the aesthetic lawn, as they become increasingly part of the production process, their use may be initially seen as a labour saving device, but in the long run they can actually have the opposite effect. 'Saving labour' and keeping the grass short can create further dependency on chemical intervention by increasing the amount of interventions required to keep up the appearance of the 'perfect' lawn as Weigert states in the following.

'The shorter the lawn, the faster it dries and the quicker it changes color, thus the more it needs to be watered; the shortness allows more water to run off; if clippings are removed, the more it must be fertilized to keep it healthy enough to resist the range of threats from pests or weeds. Because they must be watered and fertilized frequently, short lawns grow more rapidly and thus require more mowing. They do not provide cover for a variety of insect life that may keep each other in check. Shortness makes any 'illness' immediately visible. Threatening invasions require rapid intervention, typically some kind of 'cide', i.e., the suffix from the Latin word 'to kill' is used to refer to toxics, such as pesticides. Finally, short grasses never go to flower or seed. Needed seeds must be purchased and spread.' (Weigert,p.86).

However, the chemical impact on the overall health of the immediate grass ecosystem may have a number of unforeseen consequences. For example, quick release fertilizers (water soluble) become available to plants almost as soon as they are applied to the lawn. However, the overall effects are short-lived and sometimes even harmful to the lawns' long-term health. Because a quick release fertilizer will produce rapid leaf and

shoot growth, it can in certain cases cause excessive growth in leaf and shoots and thereby reduce root growth and can cause leaf burn. This makes the grass plants more susceptible to draught and disease. However, even beyond the immediate ecosystem, more damage can occur through the medium of run-off. Soluble fertilizers can easily be washed away by rain. This run-off can enter other ecosystems beyond the physical confines of the lawn. Therefore, the lawn chemicals through run-off creates unknown biochemical links to other organisms in the soil, to birds, to animals and to ourselves. These links may be damaging the health of these other organisms. Having created the problem, the chemical industry has attempted to cure it by producing slow release fertilizers. Slow release fertilizers are an alternative to the soluble fertilizers because nutrients are released at a slower rate throughout the season. This allows the plants to take up most of the nutrients without wasting them through leaching. However, there are some drawbacks associated with their use. Because the rate of release is dependent upon soil moisture and temperature, the availability of nutrients to the plants may not be constant or predictable. In short, nutrients released slowly may not be available when the plants need them. Again, capital comes to the rescue, by providing a new product, - the blended fertilizer, - one that mixes slow-release with soluble fertilizer. In this range of new products, each new product was an attempt to overcome the difficulties created by its predecessors, as they intervened in the natural cycle of the lawn ecosystem. In this way, capital was responding to problems it itself had created in its intervention strategies in the 'natural' lawn ecosystem.

However, if capital was unable to overcome the difficulties associated with the rift, it did not stop it trying to solve other problems in the life cycle of the lawn. For example, the problem of thatch is another attempt of chemical penetration into this grass monoculture. Thatch is a layer of dead roots and grass blades that build up just under the lawn surface. It can block water, grass seed and chemicals from reaching the soil. Initially, the problem arose in the early Eighties, lawn owners in the U.S.A. were told that thatch increased the susceptibility of the lawn grass to insect and disease problems. Capital soon set about 'solving' this problem for the gardener. However, it was soon realised by the scientific community that the problem of thatch was in fact a problem caused by capital itself rather than the natural processes of the lawn. The increase in thatch in lawns was directly linked to the increase in chemical applications to the lawn. Micro-organisms and earthworms that naturally break down the thatch layer in the lawn were being killed by the chemical fertilizers and pesticides. The solution was simple but not profitable. Stopping the use of chemicals allowed the lawn to recover, but it took a minimum of three years to restore the biological health of the soil (Jenkins,168).

However, the use of chemicals as a form of intervention in the grass monoculture is ideally suited to its task. Chemical intervention has a near magical quality about it as they pass through the rift canopy without damaging its aesthetic appearance. It is at this material intersection that the technological process of chemical application directly interacts with the aestheticization process without seemingly having any detrimental effect on each other. And it is also at this same metabolizing intersection that the rift canopy can take on another social form, - the aesthetic veneer.

The labour processes under the lawn aesthetic: maintaining the aesthetic veneer

The material structure of the rift canopy is determined by the human activity of mowing the grass. On this rift canopy emerges the aesthetic veneer, which establishes the lawn as an aesthetic object. The veneer impregnates the rift canopy with aesthetic qualities made up of a number of characteristics. With regard to the lawn colour, green is sought in preference to brown or yellow. Its' desired texture is smooth rather than rough and its density should be thick rather than thin. Its tonality should be monotone rather than mottled and its tactility should be soft rather than harsh. And finally, its height ought to be low rather than high. These qualities and their relationships to each other determine the structure of the aesthetic veneer. And as an aesthetic veneer, it can perform many differing functions in the composition of the garden as a whole, as a foil for the more dramatic planted beds, a green foreground to the dwelling, and creating the illusion of space etc.

A 'poor' lawn occurs when the natural ecosystem breaks out of its aesthetic straitjacket, destroys the 'order' of the canopy with the 'chaotic' movement of nature. The immediate effect is that the rift canopy breaks up as the grass naturally grows into clumps and dykes of differing heights. As a consequence the aesthetic qualities of smooth texture, of thick density and of low height disappear from the now shattered aesthetic veneer. If this situation is allowed to continue and the natural ecosystem re-emerges from its 'iron cage' of human intervention. It is a certainty that the grass monoculture will be invaded by native weeds, which will destroy the remaining aesthetic qualities of the aesthetic veneer, of green colour and its monotone characteristics. Therefore, the rift canopy and the aesthetic veneer resting on it, need to be constantly maintained through human intervention. The degree and intensity of human intervention may vary from household to household depending on the subjective desires of the direct labourer(s) and their ability to fulfill their gardening dreams for their lawnscape. For example, a croquet lawn in England needs to be mowed every second day for about forty-five minutes. It may also need to be scarified, - removing the dead grass and moss during the growing season. Watering may also need to be done during a dry period. Weed removal is a constant task and in some seasons aeration is required by solid and hollow tyning. On lawns that are cut very low, worm casts have to be removed in order to discourage weed growth and prevent the blades of the lawn mower being blunted. However, it is possible to maintain the rift canopy and yet abandon the aesthetic veneer, by just cutting the grass/weeds and abandoning the grass monoculture. If any traces of the aesthetic veneer remain, they can only be appreciated from a distance, where the aesthetic qualities of colour and smooth texture are perceived to be maintained but the other qualities are lost. The conclusion to be reached here is that the rift canopy and the aesthetic veneer are the result of two distinct labour processes. The rift canopy can be maintained by mowing alone, while the veneer is composed of many types of labour interventions beyond the mere cutting of the grass. For example, the aesthetic qualities of green colour, monotone appearance, thick density and smooth texture require a variety of labour activities such as weeding, scarification, and aeration. Worm killing, top dressing, overseeding and water irrigation may also be required to maintain the aesthetic veneer. These labour and

technological interventions into the natural cycle of grass development are determined by the demands of maintaining the lawn aesthetic. Some of interventions will be needed on a constant basis during the growing season, while others will only be required when the need occurs. In drought weather conditions for example, the amount of watering will have to be increased in order to maintain the grass growth and preserve the aesthetic veneer.

However, unlike the mere preservation of the rift canopy, the presence of the aesthetic veneer invites a close inspection of its compositional qualities and thereby creating the conditions for a gaze of long duration. This is so because the aesthetic veneer has a greater propensity to exude the properties of exhibition value than the rift canopy. Therefore, the aesthetic veneer of the front lawn, like any artistic object, encourages contemplation of itself with a connoisseur eye, while the lawn with just a rift canopy attempt to get away with a glance (Slater, 2009, p.100). In short, a lawn canopy needs only to be accepted as adequate, while the lawn veneer needs to be extolled as it seeks status for itself and its author, - the gardener.

The estranged labour of the lawn maintainer: ‘betwixt and between’ the forces of nature and society

The lawn as we have conceptualised it is in a similar situation to Marx’s ‘freshwater fish’ in his work, - German Ideology:

The ‘essence’ of the freshwater fish is the water of the river. But the latter ceases to be the ‘essence’ of the fish and is no longer a suitable medium of existence as soon as the river is made to serve industry, as soon as it is polluted by dyes and other waste products and navigated by steamboats, as soon as its water is diverted into canals where simple drainage can deprive the fish of its medium of existence. (German Ideology, p.58/59)

Both the natural forces within the ‘medium of existence’ of the fish and the lawn have been modified by society. The process of modification in the case of the freshwater fish has been determined by industry and with regard to the lawn by the aesthetic forces that are imposed upon the grass lawn ecosystem.

As we have discovered the process of modification that has occurred in the production of the front lawn has two stages in its development. The first stage is the construction of the lawn as the labourer sets in motion the forces of nature under his/her direction. Here, the social forces of intervention into the natural cycle of the grass ecosystem are dominant as the natural forces are curved to the designs of creating a grass monoculture, - constructing the physical ‘form’, in which the ‘contents’ of the grass ecosystem has to operate within. In the second stage of modification, - the maintenance strategies stage, the natural forces come to the fore as they determine when the labourer can intervene to retain the lawn canopy or/and lawn aesthetic veneer. Although, the natural forces are modified in the ‘medium of existence’ of a monoculture, they crucially maintain the propensity to develop and grow, especially vertically, on a continuous basis. Subsequently, this natural

tendency of the grass plant to break up the smooth lawn canopy, determines the timing of the social interventions. In this situation, the labourer responds to the growing demands of the lawn ecosystem. The labourer must curb these natural forces in order to maintain the lawn canopy. But in doing so, these modified natural forces and their relationship to the social forces of intervention, become the basis for the 'externalisation' of the labourer's activity in the production of the lawn aesthetic. Marx outlines the nature of externalisation in the following:

The externalisation of the worker in his product means not only that his labour becomes an object, an *external* existence, but that it exists *outside him*, independently of him and alien to him, and begins to confront him as an autonomous power; that the life he has bestowed on the object confronts him as hostile and alien. (Marx, Early Writings, p.324)

In the context of the timing of social interventions, the externalisation of the lawn producer is determined by the natural growing rate of the grass plant. Although, he/she has 'bestowed' life to the lawn in creating it, the gardener now has to live with and work with that creation, which with regard to the timing of its growth development does seem to have a life of its own. The externalisation of this labour is determined by the constant need of the labourer to respond to the growth patterns of the grass plant and maintain its aesthetic veneer. Therefore, the estranged labour of the gardener is initially determined by the natural tendency of the forces of nature to move away from not only being a monoculture but also away from being 'strait-jacketed' into being a reified object of canopy with an aesthetic veneer. However, there are wider social forces affecting the grass maintainer beyond merely responding to natural time of grass growth, which further heighten this estrangement, and they are determined by the changing nature of society itself.

These wider social forces that impact on the production of the aesthetic lawn revolve around the issue of time. Specifically this is concerned with finding the time to 'do the lawn'. It is estimated that to maintain a modest home lawn involves 150 hours of labour in a year (Jenkins, p.19). And this time element has to be found within the work-leisure patterns of the gardeners. This relationship is itself determined by the householders position in the labour market. With regard to the USA, work patterns have dramatically changed over the last two decades or so. Juliet Schor in her work, *The Overworked American* (1991) estimated that the typical American worked approximately 160 hours per year than she or he did twenty years ago. This is equivalent of working 13 months every year. As the amount of time increased at work, less time can be allocated to leisure pursuits such as gardening. But mowing the front lawn has still to be done. With increasing time demands being imposed on the occupiers of the household, the front lawn may become a troublesome burden rather than as an 'escape' from the constraints of everyday life. In this new social medium of existence, the front lawn and the necessary work upon it becomes an object which has created a relationship of estrangement for the householders as they become increasingly squeezed 'betwixt and between' the forces of nature and the forces of society. However, a number of strategies can be adopted to release one from the 'iron cage' of 'doing the lawn' and thereby act as countertendencies

to this process of estrangement. One can hire a gardener to do the gardening for you. Also, one could construct a symbolic lawn garden by paving over the garden area of the front yard. Finally, one could retire from work, where the retirement age sees an increase in people's enthusiasm for gardening. But the choice of these strategies is very much determined by the lawn maintainers position in their own 'natural' life cycle or by their ability to buy in labour and thereby avoid dealing with the combined forces of nature and society on the front lawns of suburbia.

Conclusion: the Front lawn as a complex entity 'because it is the concentration of many determinations (processes), hence the unity of the diverse' (Marx)

The apparent paradox of the mowed lawn is that its appearance in the immediacy of viewing creates the impression of it as a reified entity, which belies (and even denies) its ecological essence of being a living process, - a modified ecosystem determined by a metabolized unity of natural and social laws of motion. And further more as an aesthetic object, with its veneer, it tends to be a space of representation, - representing the ideal of perfect harmony between nature and society where the lawn is perceived as the pinnacle of the evolutionary relationship between nature and society, - a social order imposed upon nature's chaos. The lawn as a medium for representing this utopian union further distracts our attention away from the reality that its production is increasingly determined by chemical inputs and the risk that this trend may be damaging the health of the 'natural' entities on both sides of the socio-ecological metabolic divide. Therefore, the front lawn continually extols the highest virtues of nature and art, but is increasingly dependent on the use of more and more artificial means of production, especially chemicals. In this light, the global front lawns of suburbia, to paraphrase Benjamin, could best be summarized as an estranged work of art and nature in this age of chemical reproduction.

Postscript: The determining 'roots' of Irish grass: its diverse social forms:

Having completed our conceptual odyssey into the abstract moments of the metabolized processes of the front lawn, and returning to the particular grass growing systems of Ireland we now possess the conceptual tools to challenge the apparent dominance of 'naturalism' in interpreting the grass growing abilities of Ireland. In Ireland grass appears 'natural' because it is so extensively grown as the following suggests:

'Grassland covers a multitude of topographical and geographic sites: from acid upland grassland to productive neutral grassland, from flooded callows to turloughs and dry limestone grasslands.[...] Grassland is so commonplace we hardly notice it. Yet it is our most important vegetation type - it covers most of the landmass. Horse racing, football, hurling, golf, tennis, and bowling are all played on grass. We see grass on road and railway verges,.....'

In short, grass is the physical mantle that covers Ireland and this mantle effect is determined by the dampness of the climate. Engels suggests that Young was one of the first to propose this connection:

'Arthur Young considers that Ireland is considerably damper than England; this is the cause of the amazing grass-bearing qualities of the soil. He speaks of cases when the turnip and stubble-land, left unploughed, produced a rich harvest of hay in the next summer, a thing of which there is no example in England' (Engels, p.185).

But dampness has to be considered as part of the natural content of the various types of grass systems identified above, in that it determines the propensity at which grass grows but not why and how it grows. This is determined by social form under which the grass content is allowed to grow. Our investigation of the front lawn uncovered how the specific social form of the aesthetic dominated the grass ecosystem of the lawn. However, the other grasslands of the 'Emerald Isle' and their specific social forms await to be analyzed.

End Notes

¹ Engels reiterated the same essential point but crucially extended the range of ideologues to include Irish landlords and he also pointed out the social implications of this ideological position for the native Irish people:

'From Mela to Goldwin Smith and up to the present day, how often has this assertion been repeated – since 1846, especially by a noisy chorus of Irish landlords – that Ireland is condemned by her climate to provide not Irishmen with bread but Englishmen with meat and butter, and that the destiny of the Irish people is, to be brought over the ocean to make room in Ireland for cows and sheep!' (Engels, p.185).

¹¹ With regard to the American emerging suburban middleclass, it was an outgrowth of a desire to achieve the European aristocratic ideal of a tamed and beautiful open space (Teyssot, p.20) as had been obtained by the robber barons of the Gold coast. (Baxandall and Ewen). The grass lawn was introduced into Ireland by the Anglo-Irish landed elite as they create 'Little Englands' in their parklands and thus demonstrating that colonialism can operate not only on the cultural level but also within the ecological (Slater, 2007).

Works Cited

- Baxandall, R. and Ewen, E. 2001, *Picture Windows. How the suburbs happened*. Boulder Col.: Basic Book.
- Beck, U. 1995, *Ecological Politics in an Age of Risk*, London, Sage.
- Benjamin, W. 1992, *The Work of Art in the Age of Mechanical Reproduction, Illuminations*, London, Fontona Press.
- Bernard, T 1948, *New Homes for Sixty Dollars a Month*, *American Magazine*, (April).

- Chevalier, S. 1998, From woollen carpet to grass carpet: bridging house and garden in an English suburb, in *Material cultures. Why some things matter*, edited by D. Miller, London, University of London Press.
- Bormann, H. et al. 1933, *Redesigning the American Lawn: A Search for Environmental Harmony*, New Haven, CT; Yale University Press.
- Clark, C.E. 1986. *The American Family Home, 1800-1960*. Chapel Hill, North Carolina, University of North Carolina.
- Constantine, S. 1981, Amateur Gardening and Popular Recreation in the 19th and 20th Centuries, *Journal of Social History*. Vol.14.
- Crandell, G. 1993, *Nature Pictorialized: 'The View' in Landscape History*. London, John Hopkins University Press.
- Ewen, S.????, *All Consuming Images: The Politics of Style in Contemporary Culture*, Boulder Col., Basic Books.
- Feagan, R. and Ripmeester, M. 1999, Contesting Natural(ized) Lawns: A geography of private green space in the Niagara Region, *Urban Geography*, vol.20, no.7.
- Feehan, J. et al, 2012, *The Grasses of Ireland*, Ireland; Teagasc,
- Fishman, R. 1987, *Bourgeois Utopias: The Rise and Fall of Suburbia*, New York; Basic Books.
- Foster, J.B. 1999, Marx's Theory of Metabolic Rift: Classical Foundations for Environmental Sociology, *American Journal of Sociology*, 105,2: 366-405.
- Fulford, R. 1998, 'The Lawn: North America's Magnificent Obsession', *Azure*, July-August.
- Goonewardena, K. 2005, The Urban Sensorium: Space, Ideology and the Aestheticization of Politics, *Antipode*.
- Groening, G. and Schneider, U. 1999, Design versus Leisure: Social implications of functionalist design approaches in urban private gardens of the twentieth century, in *Leisure/Tourism Geographies- Practices and Geographical Knowledge*, edited by David Crouch, London, Routledge.
- Jackson, K.T. 1985, *Crabgrass Frontier: The Suburbanization of the United States*. New York, Oxford University Press.
- Jenkins, V. 1994, *The Lawn: A History of an American Obsession*, Washington, Smithsonian Institution Press.
- Lowen, S. 1991, The Tyranny of the Lawn. *American Heritage*, (September).
- Mc Carty, L. et al. 1995, *Florida Lawn Handbook*, Gainesville; University of Florida, IFAS.
- Marald, E. 2002, 'Everything Circulates: Agricultural Chemistry and Recycling Theories in the Second Half of the Nineteenth Century', *Environment and History*, vol.8.
- Marx, K. and Engels, F. 1964, *The German Ideology*, London, Lawrence and Wishart.
- Marx, K. 1973, *Grundrisse*, Middlesex, Penguin Press
- Marx, K. 1975, Economic and Philosophical Manuscripts (1844), *Early Writings*, Middlesex, Penguin Books Ltd.
- Marx, K. 1976, *Capital*, vol.1, Middlesex, Penguin Books Ltd.
- Marx, K. and Engels, 1978, *Ireland and the Irish Question*, London, Lawrence and Wishart.
- Messia, R. 2003, 'Lawns as Artifacts: The Evolution of Social and Environmental Implications of Suburban Residential Land Use', *Suburban Sprawl: Culture, Theory and*

- Politics*, edited by M. Lindstrom and Hugh Bartling: Lanham, Maryland, Rowan & Littlefield.
- Mumford, Lewis. 1961, *The City in History*, New York: Harcourt, Brace and World.
- Murphy, R. 1995, Sociology as if nature did not matter: an ecological critique, *British Journal Sociology*, vol.46, no.2.
- Ravetz, A and Tuckington, R. 1995, *The place of home: English domestic environments 1914-2000*. London, E. and F.N. SPON.
- Robbins, P. and Sharp, J. 2003, Producing and Consuming Chemicals: The Moral Economy of the American Lawn, *Economic Geography*, vol.79, no.4.
- Schor, J. 1993, *The Overworked American: The Unexpected Decline of Leisure*, Basic Books.
- Sennett, R, 1991, *The Conscience of the Eye*, London, Faber and Faber.
- Sime, J. 1993, What makes a house a home: the garden? in M.Bulos and N. Teymur (eds), *Housing: Design, Research, Education*, Aldershot, Avebury.
- Slater, E. 2007, 'Reconstructing 'Nature' as a Picturesque Theme Park: The Colonial Case of Ireland', *Early Popular Visual Culture*. Vol.5 (3).
- Slater, E and Peillon, 2009, 'The Suburban Front Garden: A Socio-Spatial Analysis', *Nature + Culture*, vol.4, no.1.
- Teyssot, G. 1999, *The American Lawn*: Princeton, N.J. Princeton Architectural Press.
- Stein, S. 1993, *Noah's Garden*, Boston, Houghton Mifflin Co.
- Veblen, T. 1934, *The Theory of the Leisure Class*. New York: Random House.
- Viney, D, 2002, *Irish Times* (newspaper), April 20th.
- Weiger, A. 1997, *Self, Interaction, and Natural Environment: Refocusing Our Eyesight*: Albany, State University of New York Press.
- Weigert, A. 1994, Lawns of Weeds: Status in Opposition to Life. *The American Sociologist* (Spring)
- Young, A. 1897, *A Tour of Ireland -1776-1779*, London, Cassell and Company.
-