Broken Circle: 
the ruminations of a 
Christian landscape architect

An Honors Thesis (10.499) 

by 

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Broken Circle: the Ruminations of a Christian Landscape Architect

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For Openers...

The Spirit joins in to help us in our weakness; for we do not know what and how we ought to pray, but the Spirit Himself intercedes on our behalf with groans too deep for words.

Rome 8:26

At times during my work on this project, it seemed as if deep sighs would indeed be the only way to communicate my thoughts. What began as an expose on the ethical values of landscape architects (especially Christian ones) became a much deeper and satisfying look at the very underpinnings of man's role in the universe. Obviously, such a topic can prove overwhelming (hence, the sighs) but it did serve to direct me along unexpected paths.

This paper is the product of my wandering down those paths. It is a sketchbook filled with the field notes from this landscape of inquiry. Just as the naturalist records selected phenomena and the photographer freezes but a portion of the total environment, so this paper investigates isolated topics of personal interest related to the panorama of landscape architecture. It does not purport some set of professional standards nor debate the existence of "Christian design." Rather, it is a collection of my thoughts on these topics and will, I hope, start others on their own journeys.
The Nature of Pollution

For if, after they have escaped the defilements of the world through the knowledge of our Lord and Savior Jesus Christ, they are again entangled in them and overpowered, the last state has become worse for them than the first.

II Peter 2:20 (RSV)

Granted, "Pollution" conjures up images of environmental damage. And a broader interpretation can relate to uncleanliness (or as Peter wrote, "defilements") at a personal level. But what is the nature of pollution, is it really so unexpected and, is it really so bad? By looking at the nature of it, perhaps Nature (as in Mother) can be found within.

Before going further, the laws of Thermodynamics, which clarify an empirical view of energy in the universe, should be reviewed.

1) There is a fixed amount of energy in the universe. This energy can change form but it cannot be created nor destroyed.

2) Energy or matter (a specific form of energy that occupies space and has weight) when "put to work" or utilized is rearranged into lower, more scattered states. This tendency to gravitate toward more random forms is known as "entropy."

These laws make it clear that the occurrence of by-products is a basic feature of our universe. Whether or not we choose to call this randomization of energy "pollution" is a matter of preference. I prefer. And I do not want to draw
a distinction between the equally nebulous quantities of "natural pollution" and "man-made pollution." Rather, I prefer to consider pollution in its broadest sense as the by-product (both good and bad) of a process or journey. (By virtue of my introduction, this paper may be a form of pollution!)

Pollution can now be defined as a randomized, more scattered, less concentrated, less accessible residual or conversely, a raw material that elicits inquiry as to its potential for further change. What is one man's empty pop can is another's aluminum ingot. And with that ingot comes a host of opportunities, each one a product of the recycler's imagination.

However, the recycler must also pay a price. The laws of Thermodynamics state that energy tends toward entropy. So to make an ingot, the recycler must expend even greater energy in restructuring its usefulness. The cost of recycling pollution (the can) into a raw material (the ingot) is more entropy (escaped heat).

We cannot escape pollution. But we can act to limit its occurrence. Our incentive is the realization that the recycled products or the re-use of by-products, good as they may seem, still result in a net energy loss and the continued production of often unharvestable pollution. The costs of doing something correctly the first time, no matter what the short-term costs, will surely be less than the costs of recycling later on. Remember Law One: energy cannot be created. We can never recreate a project with the same energy efficiency that characterized the original creation. This is not to imply that the value
of a recycled project will not rival the original. Hindsight is perfect and, as mistake-prone humans, we often tend to do things better the second time around. We need the chance to rework something so that it achieves its potential. But this process is a costly one and must be reconciled.

Having said that, I want to challenge it by asking if it is possible that, in some cases, recycling is preferable to a correctly-done original despite the entropic costs. I think such a case would be conceivable if human emotions enter the equation. Consider, for example, the man who allows his house to fall into a state of disrepair. Only when the house ceases to shelter him will he appreciate the function the house once performed. Upon rebuilding the house, he will have not only a new shelter but an appreciation for it born of his time spent without.

This consideration of human qualities and, more generally, the spiritual or supernatural world adds a parallel dimension to the understanding of Nature in pollution. Before the Fall of man, Pollution (as I broadly defined it) existed but it did not adversely affect the lives of Adam and Eve or of the rest of Creation. But the existence of man's free will and the use of it to eat of the Tree of Good and Evil set in motion the deleterious aspects of pollution with which we are so familiar (Genesis 3). Man was destined to fight with "thorns and thistles" for his existence; pollution as a direct consequence of his actions now threatens to harm him.
It is here that the idea of "spiritual recycling" comes into play. Also known as being "born again," it is God's way of overcoming the entropy of sin by granting man the "super" efficient restructuring capabilities of the original Creation. But as was noted earlier, recycling had a price and this case is no different. God sacrificed His son Jesus to reclaim man to Him. In a glorious paradox, Jesus did not fit neatly into the analogy of thermodynamics for if He had, He would have been "used up" by the "recycling" process. His resurrection overcame entropy; indeed it triumphed over sin so that man could once again be reconciled to God.

**The "GlORIOUS PARADOX"**

Laws of Thermodynamics:

(Pollution + Recycling) - Entropy = Raw Material

Plan of Salvation:

SINful man + Jesus = Reconciled man

(no entropy!)

Had man not committed Original Sin, the entropic consequences of sin would not have been incurred and harmony with Creation would have been maintained. The costs of recycling were incurred and, in a material sense, the "recycling" was inferior to the original Garden of Eden situation. But in a spiritual sense (remember the illustration of the man and his appreciation for shelter), man could not appreciate God's gift of reconciliation because he had known what it was to be without. And because of God's sovereignty over Creation, God overcame the expected entropy of sacrificing His son for the souls of mankind.

Of course, not all men accept the offer to be born again because each exercises his own free will. And even those who do accept the offer are not guaranteed
freedom from pollution while on earth. In fact, pollution may take on even more ominous properties. Look again at the passage from II Peter (quoted at the beginning of this chapter). In the New Testament Greek, "defilements" can also be translated as "pollution." Using the terminology already employed in this work, I would like to take the liberty of paraphrasing the verse as such:

If people are still reveling in the pollution of this world after being recycled by Christ (via acceptance of his forgiveness), then they are worse off than before.

Obviously, man is still subject to entropy as the effort made to be "saved" is costly to God and difficult for man. The consequences of Original Sin (pain, suffering, death) remain. They control the world but are not in authority. That is a critical difference.

What, then, is the significance of these comparisons? Does consideration of God's redemption of man aid in understanding the nature of and the Nature in pollution? I think it does for it expresses the continuity of systems within the universe, whether they be the Laws of Thermodynamics or the Plan for Salvation. The two are connected for the Laws of Thermodynamics are the very essence of the "spiritual design" that is imprinted in all the universe. They show God's grace by making matter available to man for manipulation in a "post creation" world. The consequences of this manipulation (limits, rates, pace...entropy) do not disrupt the balance of the original creation. Pollution is merely a by-product of matter-changing processes that can be harmful to man
because of sin. As such, it should be accepted, not unexpected. This is not to say that it should be left as is. It is possible to turn bad into good. A recycled material or man may be more valued than the original even though the cost (entropy or Jesus) is great. The nature of pollution is a randomized potential to harm. But the Nature in pollution is the opportunity for creation and reconciliation.
The Land is Sacred to Us

How can the white man
   buy or sell the sky,
   the warmth of the land?
If we do not own the freshness of the air
   and the sparkle of the water,
how can the white man buy them?
I do not understand for I am a savage.

   Every part of this earth is sacred
      to my people.
   We are part of the earth
      and it is part of us.
   The perfumed flowers are our sisters;
      the deer, the horse, the great eagle,
these are our brothers;
   we are as one family.

The red man has always retreated
   before the advancing white man,
as the mist of the mountain runs before the morning sun.
We know that the white man
   does not understand our ways
and we do not understand his
   for we are savages.
Every part of this earth is the same
to the white man.
He is a thief who steals what he wants
and does not need.
He treats his mother, the earth
and his brother, the sky
as things to be bought, sold as bright beads.
He has no family.

There is no quiet in the world
of the white man. His cities assault life
and insult senses.
I have seen a thousand rotting buffalos
on the prairie, left by the white men
who shot them from an iron horse.
I am a savage and do not understand.

The Indian enjoys the soft sound of the wind
darting over the face of a pond
And the smell of the wind itself,
cleansed by a midday rain, scented of pine.
The air is precious to the red man,
for all things share the same breath;
the beast, the tree, the man.
I am a savage and this is my family.

How can the red man
sell the wind sweetened of meadow flowers
or the spirit of the beasts?
How can the white man
own the earth when it is the earth
that owns man?
The red man is a savage and does not understand.
The white man is savage and does not care.
Pollution and the Judeo-Christian Heritage

And God blessed them, and God said unto them, Be fruitful, and multiply, and fill the earth, and conquer it: And be masters over the fish of the sea, and over the fowl of the air, and over every living thing that moveth upon the earth.

Genesis 1:28 (Jerusalem Bible)

When I embarked on this study, this particular topic was to be my primary focus. However, as I researched the subject, I discovered that many pens more able than mine had already given it a good account. At that point, I broadened my scope to include a variety of other related subjects. But because I still think some mention of the relationship between pollution and the West's Judeo-Christian heritage is helpful to this work (after all, it is part of my journey), I have included here an overview of the issues involved.

The Genesis 1:28 verse has been used more than any other to pin the blame for the "ecological crisis" on Christianity. In Design With Nature, Ian McHarg asserted that early Christians read "conquer" and "be masters" and used those words as a holy mandate to run roughshod over the environment. Since Christianity is most firmly rooted in the West and since the First World is often to blame for ecological ills, McHarg made the tempting (but inconclusive) correlation between Christianity and environmental chaos as cause and effect.

McHarg was not alone in viewing Christianity as
the culprit for ecological woes. He was preceded by
Lynn White who wrote "The Historical Roots of Our
Ecological Crisis." White's work became the classic
reference point for this issue which others either ex-
panded on or challenged.

White contended that the following were the legacy
of Christianity to a post-Christian, modern world:

1) The ecological crisis is Christianity's fault.
2) Nature is viewed as intrinsically bad.
3) Man is to have dominion over nature and is con-
sidered its rightful master.
4) By extension, science and technology are approp-
riate expressions of human dominion.

As a solution to the crisis, White proposed a "return to
St. Francis of Assisi" where the idea of equality among
all creatures (including man) would be substituted for
the Christian concept of man's limitless rule over crea-
tion. He went on to say, "Since the roots of our trouble
are so largely religious, the remedy must also be es-
sentially religious, whether we call it that or not."

Richard Means expanded on this saying if the answer
lay in religion but not in Christianity then perhaps
it could be found in Pantheism. This would challenge
the moral preoccupation of "Christianity" with man's
relationship to man and would expand it to man's relation-
ship with the rest of creation. Man, animal, plant, and
machine (natural laws) would all exist on the same
moral plane.

But when considered carefully, Pantheism does not give
an adequate solution. Pantheism and modern man have one
thing in common; both lack absolutes. Pantheism teaches
that if a god is not good enough, another can quickly
be made to give better answers to prayer. Similarly,
modern man views "morals" as pragmatic social contacts
which pit man against man and afford nature no intrinsic value. When Aldo Leopold said, "the proof that conservation has not yet touched [our intellectual emphasis, loyalties, affections, and convictions] lies in the fact that philosophy and religion have not yet heard of it," he was decrying a frame of mind that considered "morals" to be whatever will increase one's own wealth; the "absoluteness" of ideals had been surrendered. Pantheism changes what is "right" over time and post-Christian modern man needs only a 51% majority to be "right." 8

This lack of absolutes has important consequences. Pantheism places no value on individuals but focuses on the collective whole. It "gives you an answer for unity, but it gives no meaning to the diversity." 9 Pantheism also projects human feelings onto other creatures. This romanticizes nature and gives lower creation a "human reaction" while evading the integrity or reality of creation. 10 Because all created objects exist on the same plane, Nature itself is seen as unidimensional. Thus, Pantheism cannot distinguish between the "good" and "bad" sides of Nature; Nature is seen as only "normal" rather than constructive and destructive. It "is" and does not allow for diversity or relative differences.

This duality, while ignored in Pantheism, is integral to Christianity. But Christiandom, or the cultural trappings that have assimilated around the Christian doctrine, often fails to respect it. Christiandom as poorly executed Christianity is just as inadequate as Pantheism or any other religion. Christiandom is what McHarg and White should have attacked. Christianity, as it was intended by God, has a much nobler view of nature and stresses responsibility and a right relationship between man and the rest of Creation. If it were understood
and adhered to, Mottany and White would have no “crisis” to which to assign responsibility.

Specifically, how does Christianity (not Christandom) view nature? In Genesis, it is written that God created Everything out of Nothing. As Creator, God ruled his creation, but each aspect of Creation had an independent existence. To illustrate this relationship, consider a potter who makes a vase. When the vase is finished it is an independent object and not the potter in the form of a vase. To extend this illustration, if that vase leaks, it is worthless. It must be discarded not because the potter is against pottery but because the vase no longer fulfills its intended function. When Creation is perverted to uses that defile God, God purges that part of Creation. Thus, when early Christians cut down pagan sacred tree groves, they were not destroying Nature but were destroying idols. Similarly, God’s command to Moses to destroy the golden calf (Exodus 32) was a reaction against sin, not art.

Man is equal to Creation because he, like it, was made out of nothingness. But he was also created in the image of God (Genesis 1:26) and was thus set above the rest of God’s creation. Man is both in the image of the Creator (thus above Nature) and created (thus equal to Nature).

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<tr>
<th>Man as Created Being</th>
<th>Man in Creator’s Image</th>
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<tr>
<td>Infinite God (Creator)</td>
<td>Personal God (Savior)</td>
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Because of Man's unique relationship with God, the Christian treats Creation with integrity. "The Christian is a [person] who has a reason for dealing with each created thing on a high level of respect." 12 He/she draws inspiration from God's relationship with Creation. A plant is dealt with as a plant; a man is not expected to behave like a machine, etc. "Thus God treats his Creation with integrity: each thing in its own order, each thing the way He made it." 13 Because the Christian loves God, he/she should treat God's creation with that same holistic integrity. A simple maxim might be, "What God has made, I, who am also a creature, must not despise." 14 Such is the foundation of moral values: Creation has value because God created it. 15 It is absolute.

In the words of an education administrator from Tennessee, "Where have we gone wrong?" Obviously, Christiandom has not followed these tenets of Christianity. And to a great degree, Christiandom is guilty of taking the "dominion" passage out of context and abusing Creation. But that does not mean Christianity is wrong. In fact, it offers hope and a way of reconciliation between God and man. To understand this, let's return to Genesis.

The "dominion" passage was given to man before his fall into sin. As such, it must be considered in its sin-free environment. Without sin and the attenuating traits of greed, avarice, etc., "dominion" means to rule in a way that tends or nurtures that which is ruled. Indeed, Genesis 2:15 says, "The Lord God took the man and placed him in the garden of Eden to cultivate it and to care for it." In a world free of sin, man's dominion over Nature was to be a labor of love. 16

But because of the Fall, man was divided from God,
himself, other men, and Nature.17 With this division, man could not have dominion over creation as was originally planned. Instead, he was set in conflict with Nature; survival became a chore. Christiandom accepted this and gradually saw Nature as something to be used, not tended. But Christianity provides a way to reconcile man to God and Nature, thus restoring the attitudes implied in the “dominion” passage.

As the Christian strives to exercise dominion without tyranny, the emphasis is on nurturing, not exploiting nature. Since all men, including Christians, are subject to sin, Christians will not always nurture; but if it is a goal, a true appreciation of Nature is more likely. We have incentive to treat Nature with integrity in that we are accountable to God for how we use His Creation. “Man’s dominion is under God’s dominion and under God’s domain.”18 The rewards of such an attitude are a lifestyle that respects the relatedness of man and the rest of Creation and a reconciliation with God’s plan for mankind. Christianity can lead to a healing and a sense of holistic wellness among men, God, and Nature.

“Christians, of all people, should not be the destroyers. We should treat Nature with overwhelming respect.”19 Humanity must realize that all creatures have a basic right to existence; not a right as in romanticized philosophical ethics (i.e. Pantheism) but as in integral ecological ethics. Concern for other creatures is based not on pragmatic egoism (Christiandom’s “I’ll leave this tree standing so I may breathe”) but on a shared status as part of God’s creation.20 If love is given on pragmatic grounds, utility and relative prices become more important than any inherent, intrinsic value. When this occurs, the door for technology and economics to supplant both man and Nature is left open wide....
Jubile economics

... Grant me neither poverty nor riches; feed me my portion of nourishment, lest I be full and deny thee and say, "Who is the Lord?" or lest I be poor, and steal, and violate God's name.

-Proverbs 30:8-9

You shall consecrate the fiftieth year and proclaim liberty throughout all the land unto all the inhabitants thereof. It shall be a jubilee to you.

-Leviticus 25:10

I have coined a word. It is "Jubile economics" and it contains my thoughts on what an economic system in a Christian context can be. It speaks of proportion, integrity, and a happiness derived of decreased wants, not increased wealth. It places a priority on treating land properly even if it takes longer or costs more (in short term dollars). The Christian, considering economic systems must ask, "Are we going to have an immediate profit and an immediate saving of time, or are we going to do what we really should do as God's children?" Such is the nature of Jubile economics.

Why is such a concept needed? Because less is more when the environment is at stake. As Schaeffer points out, "If we treat nature as having no intrinsic value, our own value is diminished." Profit is alright as long as it does not exploit others. Self-restraint is a prerequisite for successful (in the spiritual, not material sense) living. Adam and Eve did not use restraint and the rest is history.
If restraint does not characterize our economic system, what does? What is the status of that dark, mysterious quantity known as "economics?" Where did it come from and where is it going? First, I think it necessary to point out that "economics" is not some autonomous machine, independent of human actions. Conversely, it is comprised of the actions and decisions of individual people. To blame "economics" for our woes is a non sequitur; the blame must rest squarely with consumers whose indiscriminant buying bolsters an economic system.

These actions result from a self-centered interest and not the interest of the larger community. Western thought has evolved to the point where Utilitarianism is the overriding theme in economic behavior. This system divorces values from the consequences of an action so that the focus is on results. As defined in The Encyclopedia of Philosophy, "Utilitarianism is that doctrine which states that the rightness or wrongness of actions is determined solely by the goodness and badness of their consequences." This is the point made in Chapter Three where a lack of absolutes makes "morals" dependent on the expected utility of an action and its motive. People are assumed to be "rational utility maximizers." Acting on such an assumption "can produce a way of thinking in which there is no room for any thing, process, or person which fails to achieve the best end in the most efficient way." Jeremy Bentham, an 18th Century philosopher and considered to be the founder of Utilitarianism, developed a system, or "hedonic calculus," that aided individuals in
their decision making. Defined as "a method of determining the rightness of an action by balancing the probable pleasures and pains that it would produce," this calculus emphasized the ends (consequences) of an action rather than the actual means (acts).

It is interesting to note that Bentham's hedonic calculus was the forerunner of our modern cost/benefit analysis. The problems with the former have persisted to the latter and have been intensified since the "calculus" considered individuals and the "analysis" concerns whole communities. In order to achieve an empirically-defensible position, intangibles (such as the joy derived from watching a sunset or hearing the call of a sparrow) must be simplified, quantified, or left out of the equation altogether. Intangibles forced to assume a price are treated without the integrity due them as part of God's creation. Use of a utilitarian cost/benefit analysis leaves us with a market economy that stresses individual ownership of resources and leaves little room to consider future generations, other humans, or natural resources. Individual economic gain becomes paramount while serving God, His creation, and our neighbors is a secondary concern.

Wilkinson writes, "In a system which is based on the hypothesis of individual interests, detached from ties with Nature, humanity, or God, it is almost inevitable that resources held in common will be misused—or that common actions which need to be taken will not be taken unless someone can speak for the whole interconnected system, not just for one individual's interests." 8

The misuse of commonly-held resources has been termed "the Tragedy of the Commons." It characterizes the use of commonly-used goods by individuals in a way that abstracts their integrity as a part of humanity or Nature. A classic example of this is the case of a grazing field
(the village commons) which is used by several farmers to feed their livestock. Each farmer knows there is some carrying capacity or maximum ability to sustain output inherent to the field. If each farmer uses restraint and considers the total impact of all the livestock on the field, then all can use the field and enjoy its benefits. But if one farmer is greedy or careless or a “profit maximizer” he may increase his herd and put more pressure on the field. He is willing to do this because he (or his herd) enjoys all of the short-run benefits (more food) and shares only a portion of the costs (reduced field productivity due to overgrazing). These costs are known as “externalities” which are the results of an action that do not accrue to the one responsible for the action. When the other farmers realize what is happening to the commons, they will most likely increase their use of the field as well. The field will lose its productivity and the farmers will all incur costs to maintain their profit margin. These are the long-term costs of the first farmer’s original action. Instead of being satisfied with a sufficient income level and a steady state equilibrium with the land, the farmers enjoy a short-term increase in their living standards but then incur long-term costs that eat away at their living standard and push them to recoup their losses. A cycle is started.
The market economy desires growth to make the poor comfortable and the rich richer. It does not, however, recognize the effects its growth has on resource depletion, pollution, and inflation, except in monetary terms. In the rush to increase wealth, significant short-term gains may be realized only to have them eroded by the cost of externalities. Since human nature denies defeat, it is very costly (to the ego) to go back down the economic "ladder." Instead, the "psychology of consumerism" is to press ever onward in hopes that benefits will increase and costs will remain constant.

John Maynard Keynes, the famous British economist, envisioned this utilitarianism as good. If the old ideas of good and bad were juxtaposed (so much for absolutes), individuals would have a mandate to selfishly seek their own economic advancement. He also believed that such activity would create positive externalities (i.e. more jobs available) and that society as a whole would benefit. This became known as the "invisible hand" theory whereby the good of society was achieved through the selfish motives of individuals.

But Keynes disregarded human nature. Wealth and the systems of power created to accumulate it are intoxicating. What results from this hedonic reasoning is a skewing of priorities. Economic activity emerges as an all-consuming part of individuals' lives; it is not a means to an end but is an end in itself. Life becomes a "rat race," a constant effort to out-wit others. Emphasis is placed on individual concerns rather than the concerns of others. Happiness becomes a veneer supported by increased wealth, not decreased wants.
This is where Jubileeconomics applies. I said earlier that Jubileeconomics "speaks of proportion, integrity, and a happiness derived of decreased wants, not increased wealth." To see exactly what such an economic approach can mean, it is necessary to consider its Biblical basis. The Bible speaks often of proportion and a restrained use of the land.

When you harvest the crop of your land neither mow to the very edges of your field nor glean what has been dropped in harvesting; leave it for the poor and for the foreigner. I am the Lord your God.

Leviticus 23:22

The land shall not be sold in perpetuity, for the land is Mine; for you are strangers and sojourners with Me.

Leviticus 25:23 (RSV)

Woe to those who join house to house, who add field to field, until there is no more room, and you are made to dwell alone in the midst of the land.

Isaiah 5:8

They covet fields, and seize them, and houses, and take them away; they oppress a man and his house, a man and his inheritance.

Micah 2:2

When the admonishments are ignored, environmental chaos results. Therefore the land mourns, and all who dwell in it languish, and also the beasts of the field, and the birds of the air, and even the fish of the sea.

Hosea 4:3 (RSV)
While these verses reflect a rather negative evaluation of man’s land use practices, God also provided a series of laws designed to foster a mutually-beneficial relationship between man and the land. Listed here in order of annual frequency, they were:

The Law of Gleaning
When you harvest the produce of your field, do not completely mow the edge of your field or gather the gleanings of your harvest. Do not glean your vineyard bare or gather scattered grapes; leave them for the poor and for the stranger. I am the Lord your God.

*Leviticus 19:9-10*

The Law of Tithing
At the end of every three years you shall bring out the full tithe [one tenth] of your produce for that year and deposit it within your city; and the Levite, since he has no property or inheritance with you, the resident immigrant, the fatherless, and the widow shall come and eat and be satisfied; so that the Lord your God may bless you in all the work you undertake.

*Deuteronomy 14:28-29*

The Law of the Sabbath
Put in your crops in your land for six years and gather its harvest; in the seventh year let it rest and follow it, so that the needy among your people are fed, and what they leave,
the field animals may eat. Similarly with your vineyard and with your oliveyard.

Exodus 23:10-11

The Law of the Jubilee

You shall consecrate the fiftieth year and proclaim liberty through- out all the land unto all the inhabitants thereof. It shall be a jubilee to you. Everyone of you shall go back to his own property and each to his family. That fiftieth year shall be a jubilee for you. During it you shall neither sow, nor harvest the volunteer crop, nor gather the grapes from the unpruned vines, for this is a jubilee. It shall be holy to you; you shall eat from what the field yields.

Leviticus 25:10-12

These laws provided an economic system that nurtured the whole of Creation and respected the diversity found within. Rest for the land kept it fertile. By leaving margins between fields wildlife habitats were maintained. The poor, the traveler, the orphan, and the widow were all given the opportunity to acquire food. Every seventh day allowed recuperation, every seventh year provided a vacation with food for all, and every fiftieth year required a return of the ancestral estate. It seems an ideal system to answer the plea in Proverbs 30:8-9 (... Grant me neither poverty nor riches....). The Tragedy of the Commons is mitigated; needs are met but desires, if they exploit other humans or Nature, are not. Utilitarianism is turned on its head. The result is a theocracy that relies on voluntary restraint
to achieve equilibrium with the land and a just system
of resource distribution for all members of society.
...Let justice roll down like waters,
and righteousness like an ever-
flowing stream.

Amos 5:24 (RSV)

Such is the nature of Jubileeconomics.
To Manage God's Earth

After a long time the master of those servants came back and settled accounts with them. The one who had five talents came forward and brought five more talents, saying, "Master, you entrusted to me five talents; look, I have gained these other five." His master said to him, "Well done, good and faithful servant, you were trustworthy in a little, I will appoint you over much. Share the happiness of your master!"

Matthew 25:19-21

"On the one hand, the steward is singled out for a special responsibility: the steward is truly answerable for what happens in the household. All the same, the steward is one of the others - by no means superior to them, having no absolute rights over them, and is liable to judgement because of his treatment of them. The steward is different, but the steward is also the same." 1

It all sounds so familiar. Earlier, I investigated the dual status of man (as part of Creation and as created in the image of God) and how that pertained to the "dominion" passage in Genesis. Dominion over Nature was to be a labor of love, intent on nurturing, rather than exploiting, creation. Man with dominion was meant to both rule Nature and be held accountable to God.

The Bible makes it clear that the earth is for man to
take care of, not to own. "...The whole earth is mine," says God (Exodus 19:5). Psalm 24 adds, "the earth is the Lord's, and everything in it, the world, and all who live in it." We are to be as the servant serving his master in the Matthew 25th passage. We are to use what God has entrusted to us with great reverence. We are trustees of the land, not owners. Our call to stewardship is characterized by its dominion by delegation, servant orientation, and accountability.2 "In short, the steward will treat Nature sparingly, shrewdly, and caringly."3

In the spirit of Jubilee economics, stewardship requires a knowledge of ecology—the economics of Nature— or risks ignorance of that which is being managed.

Not only are there significant relationships among economics, ecology, and stewardship, but the words themselves share a common heritage. From the Greek word "oikos," meaning "house," comes "oikologos" which literally means "the knowledge of house," or ecology. Combining oikos and "nomos," meaning "law," produces "oikonomos" which literally means "house law." This is the translation for both "stewardship" and "economics."4 When "house law" is applied to
the conduct of household affairs, "stewardship" is used. When "house law" is expanded to the management of society as a whole and the distribution of goods and services, "economics" is used.

The relationship between stewardship and economics can be very sympathetic. In fact, Jubileeconomics is really a synthesis of the two. Humanity has many opportunities to integrate the idea of stewardship into everyday economic activities. Recycling is one application (see Chapter One). Another is what I call "front-end tithing" where tithes are made at the beginning, or "front end," of the production cycle rather than at the end.

There are two ways to offer a tithe. The first, and more common, is to buy inputs as cheaply as possible given a certain level of quality, produce and sell an output, and then tithe 10% from the payment. The tithes may then be used to support various mission works and aid those less economically fortunate. The second method is to make "enlightened purchases" of inputs. These may cost more initially but they are "enlightened" because they are sold by the economically disadvantaged themselves and bought by those who would otherwise tithe later. In effect, the welfare of the tithing is circumvented and the poor receive not only the money directly but also the support for their industries. This way of distributing funds is also more efficient due to the Second Law of Thermodynamics. "Recycling" of funds from rich to poor is best done directly without the entropic bureaucracy of a welfare system.

Such "front-end tithing" may yield smaller profits and less of a tithe from those profits. But it treats all members of society with integrity by breaking traditional distribution patterns and allows tithing to be in an active, not just monetary, form.
Two Ways to Tithe

- *Usual.*
  - Buy Inputs Cheaply
  - Produce Goods & Services
  - Sell
  - Tithe 10% from Profit

- *“Front End.”*
  - “Enlightened Buying”
  - Reduced Output
  - Sell
  - Tithe 10% from Smaller Profit

.: Quantity of Tithe $\geq$ Quantity of Tithe, but tithe of “Enlightened Buying” more than makes up the difference.

Stewardship is a double-edged sword. All people, regardless of position or social station, are eligible to be stewards. Yet because of that accessibility, all are accountable for their actions. Stewardship requires commitment to priorities and responsibilities and absolutes, to integrity and restraint in every action. "Stewardship is hopeless and meaningless unless it involves long-term courage, perseverance, devotion and skill. This skill...has to do with everyday properties in the practical use and care of created things"—with "right livelihood.""
"It's good to know about trees. Just remember nobody ever made any big money knowing about trees."
Landscape Architecture: Of Prophets or for Profits?

The word “land” is mentioned 1701 times in the Bible. 1

The chapters of this work have been organized around a basic progression, one similar to the one I made as I discovered landscape architecture. It began with the recognition of a problem (pollution). Then, it looked at the historical perception of the problem (Western Judeo-Christian culture). Further investigation led to a study of the systems that foster continuation of the problem and ways to change or mitigate those systems (economics and stewardship, respectively). Now we are at the point of asking, “What is the next step; what can I do?” When I asked that question six years ago in response to my observations of the scourges of suburbia (or “the Malling of America”), I answered, “Landscape architecture.” Honestly, my thought process was not quite as smooth as this, but I did choose to enter the profession because I saw it as a medium to address social problems in a positive, uplifting way. Landscape architecture became my point of arrival, not departure.

Upon “arrival,” I learned that I had far to go. I became more aware of the prevailing attitude that allows land to be considered in purely short-term economic terms rather than as an integral part of God’s created world. From the Puritanical view of an evil wilderness and a myopic interpretation of God’s “dominion” command in Genesis, to today’s economic utilitarianism, our landscape has been regarded as an entity separate from ourselves. Land is not valued for its regenerative qualities; one does not find solace on the land. Likewise, food comes
from grocery stores, not California or Costa Rica. Such attitudes will not change through legislation or governmental control. If a land ethic is ever to be ingrained in the souls of men, it must rise from a grassroots level. Thomas Jefferson's political and social model of the yeoman farmer must become at least an attitudinal, if not physical, reality through social evolution, education, and innovative, humble design of the built environment.

I realize that such major change must begin with me. I must be committed to work for these ideals. I can start by recognizing that where I am is "home," that it is the "best place in the world," and then work to improve it. As a landscape architect, my professional actions must emanate from my professed beliefs and lifestyle. The manner in which I choose projects, clientele, materials, develop other creative expressions and celebrate creation must be consistent with my design philosophy.

In response to my beliefs, I have conceived of what I call the "3-Ds" of spiritually-relevant landscape architecture. They are:

1. **DECENTRALIZATION**: Emphasis on the local community scale and the creation of symbiotic/holistic environments. This may include self-sufficient energy systems for the elderly or poor, recycling community wastes, and the fostering of a regional perspective of one's community predicated on environmental ecosystems rather than arbitrary political boundaries. To do this may require amending civil law with the law of Nature to give a longer-range perspective to judicial and legislative actions.

2. **DESPECIALIZATION**: Use landscape architecture as the foundation of a land ethic upon which other services may be offered. The landscape architect may not be a designer of built environments at all but rather be a designer of social systems involving business management, social work, politics, and environmental law.
3. DIVERSIFICATION: Encourage a variety of project types, clientele, and systems of interaction (i.e. front-end titling) by offering a multitude of services to address the unique needs of the region.

From the midst of these suggestions comes, as a splinter of sunlight from between the storm clouds, the realization that our stewardship must be constantly evaluated (remember, we are accountable for our actions) regarding its respect for Nature and an exhilarating relationship with it. Without that respect and excitement, we stand to lose. "The death of 'joy' in Nature is leading to the death of Nature itself." 2

To treat Nature and the materials that comprise it with integrity is to foster a sense of "rightness" with it all. "If we are to have something beautiful, a landscaping that is going to stand with strength, we shall have to keep in mind the integrity of the terrain and the integrity of the material used." 3

There are several ways to treat building materials and terrain with integrity. One is to encourage native, rather than exotic, plants to maintain the harmony of the originally-designed ecosphere. Another is to treat a brick like a brick and be creative within its "brickness" and not ask it to be a board.

All of man's building impacts the land in some way. Cut trees cause erosion, paved surfaces cause increased water runoff, grass lawns promote expensive monocultures, and changing gradual wetland edges into sharp manicured banks destroys wildlife habitats and upsets fragile ecological balance. To realize and mitigate these impacts will do much to truly help us design with Nature rather than against it. Such an approach will keep our senses open to the laws and lessons of Nature and will become ever more endearing with time. "Of landscapes, as of people, one becomes tolerant after one's twentieth year.... We learn to look at them, not in the flat
but in depth, as things to be burrowed into. It is not merely a question of lines and colours, but of smells, sounds, and tastes as well; I often wonder if professional artists don't lose something of the real love of earth by seeing it in eye-sensations only.4

In Chapter Two, I mentioned that "more able pens" had written on pollution and Christianity. Well, in researching maxims for landscape architecture, I came across another "more able pen," though it was not that of a landscape architect. In his book, The Gift of Good Land, Wendell Berry writes of "good solutions." I think they are very appropriate for "stewards of the land"—landscape architects. Good solutions should:

1. Accept given limits and rely, as much as possible, on what is at hand
2. Accept the limitation of discipline
3. Improve balances, symmetries, and harmonies within a pattern
4. Solve more than one problem and not create new ones
5. Embody a clear distinction between biological and mechanical order
6. Have wide margins so that the failure of one solution does not imply the impossibility of another [Leviticus 19:9]
7. Answer the question, "How much is enough?"
8. Be inexpensive and not enrich some people at the expense of others
9. Exist only in proof and be enacted by those who will bear the consequences of mistakes if they fail [Minimize externalities from those who "use" resources but do not "care" for them; "The hired hand hand is not the shepherd who owns the sheep. So when he sees the wolf coming, he abandons the sheep and runs away. Then the wolf attacks the flock and scatters the sheep."

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it. The man runs away because he is a hired hand and cares nothing for the sheep." John 10: 12-13] "A good solution, then, must be in harmony with good character, cultural value and moral law." 6 Berry's book abounds with insightful, practical ideas on how to live in "right livelihood." At the risk of quoting him excessively, I want to share these passages. How can you love your neighbor if you don't know how to build or mend a fence, how to keep your filth out of his water supply and poison out of his air; or if you do not produce anything and so have nothing to offer, or do not take care of yourself and so become a burden? How can you be a neighbor without applying principle—without bringing virtue to a particular issue? How will you practice virtue without skill?" 7

Stewardship is hopeless and meaningless unless it involves long-term courage, perseverance, devotion, and skill. This skill...has to do with everyday proprieties in the practical use and care of created things—with 'right livelihood.'" 8

Does not Christianity imply limitations on the scale of technology, architecture, and land holding? Is it Christian to profit or otherwise benefit from violence? Is there not, in Christian ethics, an implied requirement of practical
separation from a destructive or wasteful economy? Do not Christian values require the enactment of a distinction between an organization and a community?

Application [of these ideals] is the most important work, but also the most modest, complex, difficult, and long.¹⁰

To use knowledge and tools in a particular place with good long-term results... is a small action, but more complex and difficult, more skillful and responsible, more whole and endearing, than most grand actions. It comes out of a willingness to devote oneself to work that perhaps only the eye of heaven will see in its full intricacy and excellence. Perhaps the real work, like real prayer and real charity, must be done in secret.¹¹

Berry speaks of many things: of being attuned to Nature, to natural processes, systems and cycles; of encouraging diversity not specialization; of emphasizing biology and culture, not industry and economics. He proposes a lifestyle characterized by a humble consideration of proportions, limits, borders and margins. Perhaps most importantly, he advocates application of these principles in everyday life, in all actions at home, work or play.

By taking these suggestions to heart and assuming the dual role of stewards and spokespersons for the land, we
as landscape architects can prioritize our work and act as delegated caretakers of God's creation. We can answer Wilkinson's call for someone to "speak for the whole interconnected system, not just for an individual's interests." This will put landscape architects at the leading edge of integrating stewardship with utilitarian economics and will move us one step closer to combining a land ethic with philosophy and religious practices, with Christianity and Christiandom.
0 What's In a Word?

Let no one deceive you with empty words, for because of such things God's wrath comes on those who are disobedient. Ephesians 5:6

This may be dismissed as just a question of semantics, but I think it may be profitable, or at least intriguing, to look at this topic nonetheless. In the professional milieu of landscape architecture, there exist several words that, if considered carefully, may connote meanings inconsistent with the ideas of stewardship mentioned earlier. Doubtless, there are many more such words than I will mention, but hopefully it will make us all aware of the words we use, our intended meaning, and the actual message sent.

For example, when we use the word "development," are we implying (consciously or not) that the project at hand is completing something unfinished? Is it in the realm of of stewardship to say that a series of houses placed on, or even integrated into, the land is bringing that land to completion or fruition? I think man's actions on the landscape should be called "alternatives" rather than "developments." This would allow the project to be evaluated on grounds other than those purely economic. For who can argue against something that is "completing" the land? But if something is viewed as an option or alternative, it is more open to evaluation and mediation.

If the "alternative" frame of mind were employed, perhaps someday, the word "develop" could be used as it is used in psychology. For example, when a child "develops," he
or sue matures by experiencing alternatives. Mistakes may be made along the way but even they will hopefully aid in the child's development. So it is with land. If the land "develops" rather than is "developed," it has the opportunity to experience change through alternatives. Such a process would consider man-the-steward and provide for his betterment, too.

"Improvement" is a word similar in use and abuse to "development." As such, I think it, too, should be replaced by "alternative."

In strip mining, "overburden" refers to the "spoil" above the to-be-mined mineral. As a "burden," the contents would surely be akin to trash (and perhaps it is "trash" in economic terms). In reality, though, "overburden" is more than worthless rocks. It is top soil, plants, animals, and microorganisms; it is part of a specific, well-defined, and integral ecosystem.

And so it is in a world governed by utilitarianism, not Jubileeconomics. Unless a plant or animal has a direct "use" to us, it has no value. Plants become "crops." All else growing with the ecosystem of those "crops" becomes a nuisance deemed unworthy to live. In silviculture (forestry), the desired trees are the "resource" and anything else growing in the understory is removed. Even decaying trees are eliminated to make room for living trees. However, this disturbs the life cycle so that, in the long term (and economics always seems to have difficulty with the long term), the health of the "crop" is damaged to the point where expensive fertilizers must be employed to maintain the viability of the "crop."
These are just a few words that come to mind. As I said earlier, I am sure there are many more similar examples. What is important, however, is that we recognize that our word selection may have connotations that we would not desire or that may unconsciously color our interpretation of God's creation.
eight

Walled-in Pond

Like God, I am creator. My mind my "magic wand." I pray that I shall not conserve. A sterile walled-in pond.
A mathematician confided
That a Möbius band is one-sided.
And you'll get quite a laugh
If you cut one in half,
For it stays in one piece when divided.

Anonymous

A journey of any length will doubtless provide experiences that become more enjoyable or understandable with time. It is tempting during such journeys to rest a while to reflect on those experiences and, perhaps, glean new insights from them. So it is with this journey. It is now at a resting point, not an ending point, and holds promise of additional interpretation. Here, something is needed; a walking stick picked up on the way, if you will, that will embody the past and accompany the future, that will give stability and order to lessons learned and problems not yet encountered. The "walking stick" I propose is a model, a simple yet profound summary of this journey. It is called "Broken Circle" and it symbolizes many relationships encountered herein.

 Broken Circle is a response to two models already implied. The first is the Taoist/Panteist notion of a holistic, cyclical universe. In it, everything is relative; man is constant in a changing universe. Humility is strength, emptiness is fulfillment, peace results from chaos. One does nothing and leaves nothing undone. The second is the Christian concept of time as a line, straight rather than circular. It emphasizes progression along the line (i.e. the time between the first and second comings of Christ).
Neither model accurately reflects all that I feel about religion, ethics, and Nature. But both do contain elements that do appeal to me. In the cyclical model, I like the idea of reoccurrence and holistic containment. But I do not agree with its implication that a cycle is as efficient the second time around as it is the first. This runs contrary to the laws of thermodynamics. Similarly, the timeline model lends itself well to the idea of adventure and progress, but it also tends to lessen the importance of things not "progressive."

Broken Circle is an attempt to combine the positive qualities of the Taoist/Pantheist and Christian (East and West) universal models. A circle cut is a line, straight or crooked. Now imagine this cut circle as a rounded plane. By twisting the plane once and connecting the ends, a Möbius strip is made.

The Möbius strip is the logical extension of the Broken Circle but it has qualities of both a whole circle and a straight line. Like a line, it has only one side and one edge. And like a circle, one can move in one direction and return to the starting point (although this takes two full circuits or a 720-degree rotation. One full circuit will actually arrive at a point exactly opposite the origin).

The fascinating properties of the Möbius strip point over and over to paradoxes. While on this journey, I have noticed many paradoxes which, when viewed collectively, have shown the existence of a commonality: Broken Circle-into-Möbius-strip portrays it.
Look again at pollution. It is the byproduct of a production process (a time line model externality). It can also be a raw material for another product (a holistic universe model). But since entropy occurs, pollution is not a complete part of a holistic universe (Broken Circle model). By "twisting" pollution (time line, Broken Circle) into a raw material, a Möbius strip results complete with qualities of other models and a distinct personality of its own.

I have already mentioned religion and models, but I should also point out that if a Möbius strip model is used, it is possible to find a "common ground" between the Taoist/Pantheist and Christian beliefs. Such ground would be characterized by a holistic regard for Nature and an affinity for absolutes. The result would be a philosophy that would foster a paradoxical land ethic: Nature to be commanded must be obeyed.

These are only two situations which lend themselves to the Broken Circle model. Many more exist. But it is not for me to point them out. The Möbius walking stick is in your hand; continue the journey and seek other relationships using this model to understand them....
Footnotes

Intro.
1. All Biblical quotations are from the Berkeley version, 4th ed., unless otherwise noted.

One
1. Genesis 3:18
2. James Strong, Strong's Exhaustive Concordance of the Bible, p. 79B.

Two
1. My poem is based on a speech by Chief Seattle given in 1854. The speech was reprinted in Nadine Hundertmark, Pro-Earth, pp. 3-4.

Three
1. Among those especially valuable were Nancy Watkins Deny, "On Values Revisited" and Francis A. Schaeffer, Pollution and the Death of Man.
3. Lynn White, "Two Historical Roots of Our Ecological Crisis."
11. Ibid, p. 49.
15. Ibid, p. 47.
16. Christ's later examples of laying down his life for men and His relationship with the Church give post-Fall pictures of loving dominion.
17. Nature was also divided from Nature. See Chapter One.
18. Schaeffer, Pollution, p. 70. See Chapter Four for more on accountability and stewardship.

Four
1. Schaeffer, Pollution, p. 83.
2. Ibid, p. 87.
3. This condition is known as achieving "Pareto optimality."
4. For an excellent discussion of this evolution, see Loren Wilkinson, Earth Keeping.
5. As quoted in Wilkinson, p. 146.
7. Webster's New Collegiate Dictionary
9. The underlined portion is cast around the rim of the Liberty Bell.
10. In each Jubilee year, land transactions from the previous 49 years were to be reversed, thus keeping each family tied to the land and independent of other land holders.

Five
4. This etymological study is in both Schaeffer, Pollution, p. 11 and William E. Gibson, "Stewardship and Economics," Pro-Earth, p. 77.

Six

1. As counted in Strong's *Exhaustive Concordance*.
2. Schaeffer, *Pollution*, p. 11.
5. Berry, pp. 140-143.
8. Ibid.

Seven


Nine

1. For this limerick and other intriguing insights into the world of topology, see Dr. Crypton, "Loba Does a Möbius Strip," *Science Digest* (Feb. 1982): pp. 62-64.
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Toynbee, Arnold. "The Genesis of Pollution." Horizon XV, No. 3. 1973
