What Is Permaculture?
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Since I took my permaculture design course from Bill Mollison in 1981, permaculture has advanced on many fronts. Teaching permaculture to others over that period has taught me a lot, as well. Teaching has been particularly helpful in requiring a frequent return to basic concepts, principles, goals and ethics. In this revival issue of TIPS Journal, we have published a few of the treatments on permaculture basics that I use in teaching my permaculture design course. I have edited them a bit to make them more suitable in this context. No single treatment of basics here is complete unto itself, but only achieves validity in the full context of permaculture. This first article must lean on clarification that follows in this and subsequent issues of the journal. After all, we take six months of intensive reading, discussion, and student reports to answer this question in our online course. This article is based on post 111430 in our online course. –DH

Goals

We should begin with a look at the purposes of permaculture. Thereby everything that does not serve these purposes is not permaculture.

- Permaculture seeks to heal, restore, repair, and or maintain the ecological health of the planet, site by site.

- Permaculture seeks to improve the lives of people, lessening want where it occurs, reducing waste of over-consumption, where that occurs, and making life in general more rewarding, pleasant and enjoyable.

We do not prioritize between these goals. Where people live in perpetual or frequent want, we must address that factor first, before we can expect them to have time and energy to devote care for their corner of the planet. However, we can do so in ways that reduce, stop, or reverse ecological damage as well.

It is not a goal of permaculture to impose our views, values, and/or commitment to permaculture on others, but rather to work with them, honoring their perception of their situation. In practice, I find compliance with acceptance of others easier with people in material need than with those with material glut, so the latter is where I need to work on my approach.

Methodology

To facilitate meeting these goals, we produce a permaculture design. Permaculture is design.

The permaculture designer ascertains the goals, visions, and resources of the site’s residents, assesses the condition, resources and problems of the site itself. The permaculturist then produces a design that moves the residents toward their goal in ways that at least protect the natural features of the site, and preferably restores and heals natural features, where needed, and strengthens them. As the residents implement the design, they move toward sustainability.

The initial stages of the design process focus on a inventory of all the goals, limitations, abilities, and material resources of residents (or prospective residents), a thorough analysis of the site resources, ecological parameters, and problems, and a review of the limitations and resources presented by the larger community. The designer tries to identify all present and prospective problems early in the process. This includes apparent conflicts in the stated goals of different residents. Such ‘contradictions’ more often than not stimulate the formulation of extremely synergistic solutions.

We must know what the problems are to solve them. To solve the problems, we must also know what the resources are.

Then the designer creates a report calling for implementation of measures that achieve an integrated design, pursuing the goals of residents, resolving conflicts, and solving
problems. This design must be within the capabilities of the clients and suitable to the total context, social, political, and ecological. The design report should explicate all these achievements in utter clarity and identify the source and availability of every resource specified.

The implementation of the permaculture design is not permaculture, regardless of what you might hear to the contrary. It is gardening, construction, conservation, etc., depending on the design recommendations. To call mulching or digging a swale permaculture is like calling carpentry or excavating a footing architecture. Permaculturists must know about such practices in order to make sound recommendations, just as an architect must know about what can be done with construction techniques in order to exploit their potential. As an architect might consult a structural engineer, so a permaculturist may consult a solar designer or plant propagation expert.

Not Definable
Permaculture cannot be defined. To define something is to put a fence around it and say, ‘Everything within this fence is X. Everything without is non-X.’

Permaculture can be characterized.
What is the difference between a characterization and a definition? Instead of outlining the boundaries of a topic, a characterization identifies attributes. For example, in characterizing people, you might note that all people have livers. That would be a characterization, but not a definition. An entity without a liver would therefore not be human, but an entity with a liver could be, for example, an alligator.

Besides the physical and biological characteristics of people, we observe behavioral, interactive attributes. People are self-aware. We are toolmakers. Etc. These are traits shared to varying degrees with other entities, but if we combine enough physical and behavioral traits, we start to get the picture. If, as aliens from Alpha Centauri, we encounter a being with such attributes, we posit that they are probably people.

So what are attributes or characteristics of permaculture? In any characterization, there are attributes that are always part of the phenomenon being characterized and those that may or may not be present. All birds grow feathers, but only some (most in the current epoch) birds grow flight feathers.

Most characteristics described below are essential to permaculture. We discuss them in detail further on. One or two are optional, but usually present. The overwhelming majority of cases includes those attributes listed as ‘optional’ here.

For the essential principles of permaculture design, see the essay on “Living Lovingly…” that follows this introduction.

Permaculture Characteristics

Conscious Design
Permaculture absolutely always means conscious design.

Habitation
In permaculture, the subject designed is almost always human habitation of appropriate scale. Very advanced permaculturists can apply the principles, strategies and other permaculture tools to larger sites as a transitional step toward appropriate scale. And sites not intended for human habitation may benefit from permaculture design approach and implementation (e.g., a wildlife preserve), though whether to call such instances permaculture is moot.

Appropriate Scale
Therefore, permaculture designers habitually respect appropriate scale as a feature of design, and always as an ultimate goal. We mean here the scale of consequence of human behavior and our ability to experience, know, and interact with that consequence. If a citizen of the USA goes to the hardware store and buys a widget made in China, s/he cannot possibly be acting within appropriate scale because the consequence of that object’s existence is
unknowable at a practical level. How were the materials produced, the mines operated, the manufacturing done? Was the object made by slaves in prison? We know only that the immediate cash may be low. We have no concept of the total cost, and we certainly do not personally experience it. So it is not appropriate scale. We discuss the attributes of appropriate scale itself later on.

FIG. 4. Layout

Sample Site plan from an actual permaculture design.

Permaculturists never call for design implementation or management activities potentially beyond the abilities of the clients. For example, in one of the first design I produced, in the early 1980s, my clients, moving from the metropolis of Boston to rural New Hampshire on retirement, were planning to cut their own firewood. My design report strongly discouraged this. Logging is tied (with agriculture) as the second most dangerous form of employment in the US. If people who do this for a living, usually starting in youth, hurt themselves frequently in the business of cutting trees, any attempt by an aging couple with absolutely no experience in this rigorous and dangerous work is absolutely inadvisable. We limit our design recommendations to what the clients can do, caring what happens to them.
Zoning for Scale

A major attribute of permaculture is a zone system that regulates human interference with our nearby environment to match suitable feedback and interaction. We place something requiring a lot of care, observation, or other interaction close to where we spend the most time, usually near the home. Something that can fend more ably for itself, and which we do not need to visit frequently for other reasons, is placed at a suitable distance. For example, we would not place a hen house at a distant part of the design site because we need to visit it a few times daily, and we need to be nearby in case of attack by predators. But a few Asian water buffalos could range in a nearby marsh that we only visit when we need to use our draft animals. If we were to milk one, we would design a paddock closer to the home for the period of lactation, possibly a corridor that the animal was trained to traverse twice daily for a reward of a handful or two of grain or carob pods (whatever).

Rational Placement

Permaculture designs place elements of the site based on rational considerations. The zone system of placement is one consideration, bridging appropriate scale and rational placement. Contour, solar access and orientation, seasonal weather patterns, soil characteristics, water table, conditions existing at the time of the design, site history, and other factors also influence placement. If the site is in a natural state, we minimize and localize where we deliberately place new elements, to achieve the most benefit for the least change. If the site is already damaged, say major erosion or deforestation for agriculture, then we place elements to mitigate or heal the damage, depending on what is possible and practical.

Wholistic

Permaculture is wholistic. It harnesses underlying patterns that perfuse this universe. Permaculturists study and seek to apply the fundamental operating patterns of this universe. It draws from any ‘field of study’ that is applicable and appropriate to specific circumstances. These patterns interact to create a discernable whole.

A permaculture design takes into account the total context, even though the design is for one place. When we look at weather records, for example, we consider trends, not merely extremes and certainly not only averages. Does the climate appear to be getting drier? How does this affect the design? Are there immediate actions, such as establishing deep-rooted plants with currently available water, that will anticipate and accommodate the impending conditions? Are there measures that will moderate the climate such as broadscale plantings of trees with certain features, e.g. olives, carob, suitable varieties of grape and fig, etc.?

A Cognitive Approach

Permaculture is thinking in a certain way, which embraces the whole while focusing on the particular. One way to put it is that we strive to think like the Earth, to embrace the attributes of sustainable ecosystems in our design decisions. You really cannot understand permaculture until you are able to think this way. In government-operated schools, we are taught NOT to think in integrated, wholistic terms, but to use only our capability for linear thinking, if we must think at
all, and to accept authority without thinking most of the time. What passes for thinking for most of us is a pitiful shadow of what it could be.

Some people work daily with practices that are close to what we are talking about. When my wife, Cynthia, took the Permaculture Design Course, she had no background in any of the ‘subjects’ that were involved in design for our site. But as a massage therapist, she quickly grasped the wholistic nature of permaculture, for she knew that she could massage a point on the foot, for example, and relieve pain in the neck. No action is without consequence, including inaction. Informed intuition is the key to designing a beneficial approach in permaculture as in massage.

You have to become informed before you acquire the intuition to properly use what you know. Yet, I find it relatively simple to teach needed information to people who already think something like the Earth. But very informed people who only think in linear terms seem, sometimes, never to ‘get it.’

What is informed intuition? If you don’t know I can’t explain it, but with guided practice at permaculture design I can lead most people to experience it. Information alone leads to decisions that do not anticipate total consequences. Intuition alone leads to actions not based on real conditions.

Linear thinking, the basis of scientific analysis, fails, by itself, to result in responsible actions or designs because it does not take into account interactions with phenomena outside of the linear train of thought. I know that nitrogen added to soil increases plant growth, within limits, so I add nitrogen. My plants grow faster. But then they get an aphid infestation. So I go to someone who has thought about ways to get rid of aphids and buy a pesticide. This kills most aphids initially, but also kills the predators and parasites of aphids. So the consequence is that soon the aphids are back, and much worse. So I use a stronger pesticide. This sounds stupid, but it is the way most of the industrialized world conducted agriculture and even gardening for a few recent generations.

Now we have learned that with pesticides we have not only killed aphids, but also people and polar bears and organisms better at controlling aphids than are we. The intuitive person would know that poisoning our food is not reasonable. But most of us went along.

I’m reminded as I type of a conversation with a young woman when she was a teenager. We were, at her request, discussing birth control. I was, in linear fashion, listing what was available, including ‘the pill.’ At that mention, she immediately said, “Anything that fools my body can’t be good for me.” Bingo! She is now an artist, and she has more native talent for permaculture than I could ever imagine having, because of that ability to integrate and put one’s finger on likely consequences. She is not a permaculturist; but her life will always have a permacultural cast, inherently, because of her background and because of the way she thinks.

I’ve had students who knew and said that they could never function creatively. We need the linear thinkers too. But they struggle with permaculture design, having to consciously weigh the countless interactions and consequences of any change. And so their designs are flat and uninspired, though far better than not trying.

Alas, a strong temptation is to think that the intuitive factor in permaculture design is bunk, and try to be fully ‘scientific’. Most major scientific discoveries and theories are intuitive or accidental. The accidents are only noticed by people able to step out of the linear methodology and see what they weren’t seeking. This takes a special mindset, at once detached from expectations and immersed in what one is actually experiencing.

Science is not the answer. Ignoring science also is not the answer. Use everything you have.

Homocentric

While designing from wholistic considerations, permaculturists normally work in a human-dominated context. We design habitation, with an eye to also affecting
residential habits and preserving (and/or enriching) natural habitat. We usually design for people, but not exclusively. Wilderness is already designed, as is what we call Zone 5, human-impacted environs that are seldom visited by people, such as a hunting preserve. Or we may design something like a butterfly farm, that preserves species selectively. You get the idea. As I said, learn to design for human-dominated situations first.

Non-Intrusive

Personally, I never design or teach unless I am invited by the people affected. I don’t believe in do-goodism, which I see as intrusive and disrespecting. My goal is to provide training to people who want it, and encourage them to first work in their home area, doing any organizing from within the affected communities.

Practical

*If it is not practical, it is not permaculture.* In our homocentric fashion, we strive to honor the visions of residents for the site, and in our wholistic considerations, we look at factors and consequences far beyond the site. But if these visions are unrealistic, we say so. That is why we never recommend anything beyond the capability of the ‘clients’ to achieve without hardship. (See above). In circumstances of dire material want, initially our best efforts may only mitigate hardship.

While we strive to identify all resources available for design implementation, and we become very good at this, seeing much that others missed, we never design for resources that we have not identified as available and reasonably convenient.

Therefore, *we do not recommend action that would put the client into debt* to achieve the vision. Here I mean debt in a broad sense, as in draining down the client’s energy, or draining down the nutrient reserves or water reserves of the site. Where financial debt is unavoidable, and suitable to the client’s capability to repay without hardship, we strive to inform the client of alternative economic arrangements such as SHARE, that can provide modest investments in a humane and responsible manner.

Long-term debt equals slavery to the system that caused the problems permaculture was developed to solve. We cannot yet afford to be purists in this, as for most people in Western or Westernized societies, debt is the only way to acquire a home site. We have to be rigorous about this in so called ‘developing’ societies because debt commonly results in displacement and worse poverty than before the loan.

Again, certain economic models are proven to suit small loans, typically for venture capital, e.g. for a sewing machine, in such situations. So we may need to support economic changes on a community scale. But, as mentioned above, I personally oppose intrusive activism. Leadership, in my view, should arise from within communities, and we can provide critical, but low profile support, as permaculture designers. The best approach always is to train permaculturists within the community and then exchange information and strategies with them to mutual benefit.

Transitional

Permaculture design begins with vision of what is possible and desired by people living at the site. The designer may influence this to the extent of making certain possibilities known to the residents, but it should be a vision embraced by the residents. The design, and in literate societies it should always be a written document, then describes the transition from conditions and resources of the client and site in the present to the envisioned status. This must be expressed in a step-by-step plan for actions and changes that we call the *staging*.

The capable permaculture designer achieves many synergies in the staging, such as recommending simple steps that generate income or, better, savings early in the implementation. These then help to finance more costly steps later. Certain soil building measures come before tree planting, resulting in earlier maturity and better productivity of the trees in the long run.
Some staging sequences are merely logical, such as cutting shade trees that interfere with solar access before putting up an attached greenhouse, avoiding thereby the potential for an expensive accident.

Anyone can study a bit and come up with a more or less possible and desirable vision for a site. This is not design; it is dreaming. Such dreams are pleasant. The staging connects dreams to reality by making them possible. Permaculture design staging covers a range of years, possibly even decades. During this time we move the client toward sustainability and toward the vision. Meanwhile, implementation progressively heals and/or enriches (at least preserves) the ‘natural’ features of the site. People who want permaculture designs often have come to realize that our society, and our own actions within our society, rapidly destroy not only the resource base that enables survival of our own species, but also the means of survival for most of the other vascular species on this planet. Either they go into denial or despair, and we don’t hear from them, or they want to change, often immediately.

People are not constituted to undergo major changes quickly. Such changes are catastrophes, literally, regardless of the value you place on them. We are constituted with the capacity and, to an extent, the necessity to change relentlessly, though. The most powerful feature of the permaculture vision is to indicate the direction of that change. The engine of that change is the staging, the carefully orchestrated transition. While in some cases we may want to consider staging of beyond a decade, mostly we will recommend a permaculture design review of both the vision and the implementation if we consider site development over more than 10 years, more or less.

Our society has lost the capability to exercise what the Iroquois philosophers call the 7th generation principle. Most people who have heard of this principle think it means merely looking 7 generations into the future. Actually, one firsts looks 7 generations into the past, to see what brought us to this particular present, and then, so informed, we are as prepared as we can be to look 7 generations into the future and see what the consequences of a proposed action may be.

Our society is disconnected from the continuity of time. Conditions 7 generations in the past are as alien to us as those on the moons of Saturn. Conditions 7 generations into the future are even more inaccessible because we have developed a societal engine for rapid, irresponsible, and uncaring change. I remember my father using a crank to start his automobile. His farther rode a horse to work. The horse-drawn cart of the rag man (tinker) visited my grandmother’s house regularly when I was a child. Her refrigeration was an icebox, cooled by a chunk of frozen pondwater delivered by another man with a horse-drawn cart.

I’m not that old (70 as of this writing). I own a refrigeration unit that I can place in my air-conditioned car and plug into the ‘cigarette lighter’. (Quotes because a cigarette has never been lit in that vehicle.) It is a routine matter to visit ‘children’ and grandchildren who live 2000 to 3000 miles away. From my home in Florida, USA, I can write an email letter to Willem in South Africa, who gets it less than a second after I send it. I was forced to practice drawing letters after school to get my handwriting certificate as a very young child, using a pen I had to repeatedly dip into an inkwell. I never learned to write legibly or to spell well, though I became a writer. At the first opportunity, I learned to type. After a few decades, I acquired a word processor, so I would not have to retype when all my spelling errors were corrected by someone with that ability. Finally, I got a computer. (It took me six months to figure out how to make it show the words I typed on the screen.) I type this now on a computer on my lap that is several hundred (literally) times as capable as my first Mac Plus. My spelling errors are underlined in red as I type and I can set my computer to accept words not originally in its dictionary and to correct automatically spelling errors that I commonly commit. I will send the finished draft of this article
to friends in Oklahoma and South Africa without ever using a sheet of paper or leaving my chair. Depending on when they get around to reading it, I might get a reply back before lunch. These are enormous changes. The great convenience of much of this ‘progress’ is incontrovertible. But what are the consequences? And how can we imagine 7 generations of such change. My grandchildren hardly can relate to life as I experienced it as a boy.

We have seen some consequences of the perfection (in terms of reliability and performance) and proliferation of the automobile and failed to question if the progress is worth the cost. Is it worth it for the many children, now adults, whose intelligence was diminished by exposure to lead in the age of leaded gasoline? Is the ability and freedom to drive at speeds in excess of 70 mph worth the destruction of forests due to acid rain? What is my computer costing the generation that has grown up with such devices? Again, back to the 7th generation principle, can such folks really look backward and forward with intelligence and perspicacity when their dominant experience is virtual instantaneity?

Ethical

A clear and simple code of ethics governs permaculture. If the code is violated, the result is not permaculture. No exception or mitigation compromises these ethics within permaculture. Three of the commonly known ethical principles are care of people, care of the Earth, and, poorly understood by almost all permaculturists, ‘give away surplus.’ I treat these and other permaculture ethics later. Right now, let me say that the final ethic, dispersal of surplus, was offered as an option only when I took the permaculture design course from Bill Mollison in 1981. So, while I believe it has important merit, I cannot regard it as binding people who entered permaculture with the understanding that it was optional. I can only endorse it for myself.

I feel that the ethic is better stated as “Thou shalt not hoard.” All ecosystems store surplus as a buffer against bad times. Prudent people do the same. So one person’s ‘surplus’, is another person’s strategic reserve. I grew up in cold temperate climate where, by the time crops could produce any food, there was less that two months until killing frost. Storage is second nature to me. I don’t give away tomatoes unless I’ve canned all I’m likely to use until the next growing season, adding some extra as a hedge against a bad crop year.

The other qualifier on what to do with surplus relates to responsibility. As we discuss in the “Living Lovingly…” article, one must place elements in the right place at the right time to behave responsibly. So giving away ‘surplus,’ is work, design work, finding the most suitable recipient and the most suitable time. Pissing away ‘surplus’ by giving it out willy-nilly is irresponsible. Permaculture is a movement for behaving responsibly.

One more point, and then you can look up the discussion of ethics for more detail. In my view, any unethical behavior violates permaculture. Therefore, I will not certify permaculture students who violate copyright. So no part of the permaculture design, including the presentation of information, should be in any way unethical, as I see it. Information is mostly in public domain, only the way it is presented being subject to ownership. But many people serve an innate laziness and refuse to acknowledge this distinction, justifying, they think, failure to reformat the information in their own way when they wish to use it.

Gaiacentric

Like the Yin and Yang symbol, permaculture has two centers. Care of people and care for the earth. Unlike the Yin and Yang of traditional Chinese culture, these are not at war with one another, at least not within permaculture. People exhibit disproportionately powerful force. Otherwise, we would not be able to cause the extinction of millions of species and the destruction of most ecosystems on the planet. So-called ‘pure’ environmentalists ignore people at their own peril. So people are responsible to repair as much of the planet as we can, and to learn to work with the natural
systems of ecological repair and healing, before our own species becomes extinct.

The species and assorted ecosystems of Mother Earth are worth protecting in their own right, of course, having what Mollison calls ‘intrinsic value.’ But even the purely self-interested person has a stake in planetary health—we are one of those species and if we do not re-integrate our behavior within local ecosystems, we will not survive.

Permaculture Design is Explicit

Part of being practical is to be explicit. In this case, it means preparing a written design (with graphics, too, of course), not something that we have merely ‘in our heads.’ The design we have in our heads is too easy to finagle. It is too easy to slip off into some poorly considered action, to conveniently ‘forget’ stringent requirements, etc. Even research shows us that human memory is mostly synthetic. And obviously mistakes on paper correct more readily and with less adverse result than mistakes made on the land itself.

Permaculture is not...

On the first day of the three-week Permaculture Design Course that I took in 1981, Bill Mollison began with a long list of things that permaculture is not. I don’t recall them all, but they included

- Permaculture is not organic gardening.
- Permaculture is not edible landscaping.
- Permaculture is not tree crops.
- Permaculture is not sustainable agriculture.

...and so forth.

Permaculture is design, a special kind of design produced by a way of thinking that cannot be described to people who do not already have it.

Use of photographs helps make design recommendations more concrete to residents who will implement them.
Catch 22?

So am I being cute and evasive, here? How can one think like the Earth if I need to already do it to know what you are talking about?

There is a solution, a way of learning permaculture that works. Instead of only hearing about permaculture design, you can find someone who has mastered permaculture, at least to a reasonable degree, and work with him or her as a guide, to lead you through the design process. This is the goal of what we call the Permaculture Design Course. Traditional societies achieved this through shared experience in the patterns of ritual, story, and social structure.

The real Catch 22 today is trying to find someone who thinks like the Earth when you don’t know what that is. Maybe you’ll find the real deal, or maybe you’ll find an instant expert who knows everything about how we can restore environmental health because s/he took a 72 hour training.

In talking about this with my wife, Cynthia, who is a medical professional, I suggested that permaculture is as complicated as brain surgery, therefore should require as much training before one operates on others (as opposed to designing your own residence). She replied that permaculture is vastly more complex than brain surgery.

In that case, you may ask, how can the average person ever hope to master permaculture design? Well the comparison between permaculture and brain surgery is valid to a point, but not beyond it. People are not designed to be able to do brain surgery. We are designed to live on Earth. It doesn’t matter, as far as the validity of my point goes, whether you think that the Designing Force was the result of a Divine Hand, or whether it was the result of random events shaped by natural selection. (Or if you think that there is no difference between the two viewpoints.)

We are made to live on the Earth, just as are a snake or a fungus or a whale or a violet. Most (maybe all) organisms appear to be capable of self-organizing into ecosystems, which then co-evolve, the living entities adapting to their system of mutual support, and the system, the ways in which organisms connect, adapting as well.

Tribal societies were part of that mutually adaptive process. “Mistakes” were made and corrected, at times, by the self-organizing process that characterizes life as we know it. These people brought experience, intellect, intuition and all other faculties to bear, developing ritual, art, stories, and other patterning behaviors that improved their suitability to their environment and their ability to live within it and make it stronger.

Again, Permaculture is Transitional

But in this case I mean that permaculture itself is a transitional tool to bring us back to a culture truly integrated with our environment. This will not be an easy road, because we have and exercise the power to move, in mind and/or in body, from environment to environment at speeds no true culture can accommodate. So permaculture may need to be with us for a good while, as we try to fathom how to have a culture that suits us where we live at the moment, or, even less likely, that is tailored to the region where we live permanently.

Improbable as that eventuality may be, it is our best bet to survive long enough to evolve a sustainable culture adapted to the conditions that we have created for ourselves.

Permaculture Design Course Online

Details of our annual Permaculture Design Course Online may be downloaded from our web site, www.barkingfrogspermaculture.org. As we complete this issue of the journal, we ready for the 14 consecutive cycle of the online course.

Details of the course are also found in the Advertisements file, a separate folder in the CD version of TIPS Journal. Self-study versions of the Course CD or the full course reading package are available from Yankee Permaculture, publisher of TIPS.