

Permaculture design for a revitalized, resilient, rural bioregion (R4) for Kintyre, Argyll, Scotland.

By Ed Tyler June 2013

Background

I have been developing this design for the past 7 years. It was first conceived as a sustainable energy design for Kintyre and has since broadened to include a whole local rural economy anywhere in the UK.

During the past 2 years I have been discussing the concept at various permaculture workshops and events and incorporated feedback into the design implementation.

The R4 concept is set out in an article on p.14 in **Permaculture Works** (Spring 2013 Vol.3 issue 13) and – in greater detail - on my website **daisy-cottage.org** (Daisy Cottage is our former home in Tarbert and is now an eco-centre and bioregional hub at the north end of Kintyre).

Summary

R4 is a nested, fractal, networked system based on four levels or circles-within-circles. There are differing scales from neighbourhood through to community, bioregion and administrative region.

It involves drawing up a table which contains all four levels and looks at themes such as energy, transport, food and green economic indicators such as locally owned businesses and resources. It works alongside The New Economic Foundations's Local Alchemy Enterprising Community Framework to assist people in building a sustainable local economy in their own bioregion.

Although it has been developed specifically for rural bioregions it can be adapted for urban regions as well. For a detailed description of the overall design see my website at **daisy-cottage.org**. It includes an exploration of the production and consumption of local food.

R4 Kintyre

The design is not just theoretical: I have been implementing it here in Kintyre for the past 12 years. For most of this time I have simply been joining in with various community projects. However, during the past couple of years I have observed the patterns underlying what I – and the rest of my local community – have been doing. I will now explore in depth various principles underpinning the design.

Design from Patterns to Details

Holmgren principle no. 7.

The design is based on all 12 Holmgren principles but above all this one. His chapter in *Permaculture* (2002) on patterns to details states: “wherever (and whenever) in the universe available matter and energy are abundant, self-organisation leads to increasing complexity of activity and structure.”

(p.130). What R4 does is clearly lay out the underlying structure supporting the many groups and organisations working for the public good (note I include here the “good” of nature ie its integrity, resilience and beauty – see note on right relationship below). Group members are often not aware of this underlying structure, but using it can greatly help their work (see below under elements and functions)

I have used several patterns as foundations for this design; they are listed below.

1 Nest

2 Fractal

3 Transition Model (Hopkins et al)

4 Ladder of Participation (Arnstein)

5 Local Alchemy Enterprising Communities Framework (New Economics Foundation)

6 People and Permaculture (MacNamara)

Each pattern is described below specifically in relation to R4

1 Nest. Holmgren has a figure describing systems nested in time and space (p.130, *Permaculture*, 2002). This inspired me from the first time I saw this several years ago and has found its way into R4, which is also nested in time and space.

The nest is a common pattern in nature: one part nestling inside another, and so on, so that the innermost is very well protected (indeed, each layer protects and supports the other). Think of an onion, how its various skins are nested inside one another.

2 Fractal. This inspired Hopkins’ *Transition Companion*. I went to one of his workshops whilst he was still developing the structure of this book. He had come up with a fractal system of differing levels of scale from level 1 to level 6. This however was abandoned in the final version in favour of “ingredients”. Personally I prefer the fractal method because it shows how the various ingredients that go into making a successful project are found to be working at differing levels of scale, from small, medium to large.

3 Transition Model. All the time that Transition Scotland Support existed I supported it and went to various events. I was also went Transition Training and held an “exploring Transition” event in my own bioregion of Kintyre as well as an Argyll -and- beyond conference exploring the way forward to create sustainable communities. All this has convinced me that the Transition model has a lot to offer.

R4, like Transition, provides a template for communities to become more resilient and sustainable.

4 Ladder of Participation

Arnstein’s ladder has several rungs on it; these rungs relate to the spectrum of participation. The context for the ladder is an organisation, usually one responsible for governing. In my case it is the level 4 local authority Argyll and Bute Council. They have produced a Better Community Engagement Manual which has the ladder as its main theoretical base. The manual was produced by the Council’s Community Planning Partnership. However, I see very little evidence to suggest that the Council as a whole has taken “the ladder” to heart. Both officers and members seem to be stuck on the first or second rung: hovering around the “consultation” end of the spectrum. This is all to do with group culture, which I discuss further in the “Reflection” section at the end.

5 Local Alchemy Enterprising Communities Framework

The framework is a useful pattern as it gives equal weight to economic, social and environmental issues in seeking to build a resilient system that is not dependent on the boom-and bust cycles of the globalised market economy. R4 enriches this pattern by providing a scaled framework that is specific to a particular region. It does not need to “split” itself into 3 categories, being an integrated pattern based on patterns found in nature and is, therefore, by its nature aiming to be resilient, sustainable and low-carbon. If you are interested in the Local Alchemy framework see it on my **daisy-cottage.org website.**

E People and Permaculture. Looby Macnamara advocates “anchor points” in her “design web.”

I am looking at R4 in the light of this web, observing that I have naturally paused at various anchor points along the way. Having got to the point when I am sharing this design with the wider world, it is time for the “reflection” anchor point. This will involve revisiting the vision, identifying helps and limits and be honest about unhelpful as well as helpful internal patterns in myself. Perhaps it is time for rest and rejuvenation before drawing up further plans of action. Have a look at the last section of this article.

I like Looby's suggestions. They remind me that I am part of R4, not just an objective observer. I need constantly to approach people – myself included – with an attitude of abundance not scarcity.

The Sustainable Communities Conference I helped organise and run in Argyll appears as a case study on p. 213 of People and Permaculture.

Other principles used in design

Function supported by many elements; elements support various functions.

The design has a single overarching function: the creation of a resilient, sustainable local economy. In order to achieve this goal R4 recognises several supportive functions or themes such as sustainable energy use and production, green transport, local food and culture (the same themes identified by the Transition Movement). R4 examines dozens of elements (the various volunteer/Third Sector/Self-Help/public service groups that make up any bioregion) and organise them into themes and levels.

Organising them in this way enables the designer and those participants wanting to build a sustainable economy work out how they fit in relation to each other and encourage them to work together at their optimum capacity. The design encourages all participants to see themselves as aiming at the same goal rather than in competition for limited resources (funding, person power, technology, land etc).

R4 is a framework for community planning and development – but owned by members of the public rather than by any public body that represents them.

However, it in no way suggests that R4 should work independently of the Local Authority. The idea is that community activists should work alongside the authority in achieving a resilient region. I hope that R4 will contribute to genuine, ongoing partnership between the authority and the various community organisations.

Use and value renewable resources and services (Holmgren principle no.5) R4 applies this principle to the work of community-building. People's energy, skills, knowledge and enthusiasm is an abundant resource which Transition initiatives tap into (Transitioners talk about “unleashing” this collective energy). This resource forms the basis of Looby's book People and Permaculture.

Produce no waste (Holmgren principle no.6) By organising the great variety of voluntary and community organisations into a system, each can function effectively according to its rightful place. There will no attempt to start up identical groups (identical in all but name) that will end up wastefully competing with each other for financial resources. Also, individual members of these groups will start to pull together as they see themselves as working to the same goal.

Scale is also crucial in this respect, as efficiency can be built into the system. Economies of scale can be utilised eg bulk purchasing of insulation and seeds through joint purchasing which can save small volunteer groups (yet alone individual households) a lot of money.

Integrate rather than Segregate (Holmgren principle no.8). R4 is all about integration: within and across scales. It is a strategy that unites private and public sectors, providers and receivers of services, volunteers and professionals.

It forms the basis of an integrated economic development strategy which is not narrowly focussed on the creation of conventional employment (acknowledging the need for livelihoods instead of focussing solely on the jobs market). It addresses the needs of people in a wider sense: their need for good health and wellbeing, for a sense of self-worth in that they are contributing to the wider good. It is all about feeling connected to, supported by and useful to those around them.

Use Small and Slow Solutions (Holmgren principle no.9) I have been working on this design since I moved to Argyll 12 years ago. To begin with I embarked on smallscale, neighbourhood, time-limited projects and gradually got involved in more ambitious schemes such as community planning with Tarbert and Skipness Community Trust. In essence, I have been slowly scaling up.

Use and value diversity (Holmgren principle no. 10). R4, like Transition, is all about acknowledging the diversity of efforts already being made within a community to effect positive change, be it in the area of health, caring for one another, education and learning, child and youth work, the elderly, economic development, conservation and sustainability. By providing a framework based on different levels of scale, it builds connection and resilience into all these activities and encourages the local authority to put more resources into groups such as its community planning partnership.

Use edges and value the marginal (Holmgren principle no.11)

Edges R4 creates lots of edge by engaging with numerous groups and organisations. It also explores the edges surrounding particular groups, connecting them up with other groups that have similar aims and ideals.

The marginal: in a globalised economic system based on global capital, local production and consumption is marginalized, as is unpaid work such as caring and voluntary work. R4 seeks to rebalance the economy by supporting the growth of local economic activity (or “fixing the leaky bucket” as it is sometimes called). It also encourages local authorities and national governments to provide more support for carers and those who want to create positive change in their communities.

Creatively use and respond to change (Holmgren principle no.12) At our Sustainable Communities conference Michelle Colussi of the Canadian Centre for Economic Renewal spoke of the need to “let go”. If a project, group or organisation reaches a point where it has fulfilled its purpose, it is good to dissolve it. So much energy is wasted by being put into maintaining projects which have ended their useful life. I had a good example of this with Big Green Tarbert which failed to secure further funding in 2011. At the time it was difficult to let go but other opportunities (Local Produce) presented themselves. Now, two years on, a couple of new local initiatives have started which means that BGT is reviving (probably in some new form).

Right Relationship. I am including this as a new principle. It effectively turns the ethics of permaculture into a single, all-encompassing principle. The term “right relationship” comes from the Quakers. It is defined in a book of that name as “that which tends to preserve the integrity, resilience and beauty of the commonwealth of life.” This is what Permaculture is all about and what permaculturists strive to do in all their designs.

Other designs and how they fit in to R4 Kintyre

For the past 12 years I have been implementing and evaluating various smaller-scale permaculture designs in Kintyre. These designs fit into the overarching R4 Kintyre design. Below I set out 4 phases, roughly corresponding to a timeline, which show how the designs have gradually evolved in complexity and scope. Each phase corresponds to a level in the R4 design.

Phase 1: level 1- neighbourhood.

In 2001 my son was 3 so my community activities inevitably centred around Tarbert Academy. I helped with and started up a number of projects including a wee community tree nursery based in the school garden and a plan for the school grounds. We put a wildlife hedge in the car park grounds. During this time we – as a family – were implementing a design for a productive fruit and vegetable garden at Daisy Cottage, our home in Tarbert. At its centrepiece was – and still is – an orchard.

In 2004 an opportunity arose to create a productive herb and vegetable garden in the grounds of Tarbert Health Centre, a new build with surplus surrounding land which the Health Board could not afford to landscape. This led to the founding of Tabert Healing Garden, which I currently chair.

My involvement meant that I got involved in another local group called the Tarbert Conservation Initiative.

Note that neighbourhood work doesn't stop if you are practising permaculture. In 2011 we moved to our new home, Ron Mara, in the middle of Kintyre. It is an eco-house with an A energy rating which we designed with the help of an architect, and now we are monitoring and evaluating the design by living in it. We are also developing the garden with its black-and-grey water treatment system and forest garden. Ron-Mara is part of the tiny hamlet or Balla (to use the Gaelic term) of North Beachmore and I work closely with our neighbours to build community here in this isolated spot.

Phase 2: level 2 community.

Tarbert Conservation Initiative (TCI) undertook voluntary work in the village and became the voluntary arm of Tarbert and Skipness Community Trust (TSCT), of which I became a founding member and eventually director (being the chair during 2011). TSCT works across the Tarbert and Skipness Community Council district and has developed several initiatives since its inception in 2005. I headed up a project called Tarbert Breathing Place: an informal nature reserve on the edge of the village.

It was as a director that my community development work scaled up to include Big Green Tarbert (for which I wrote the successful Climate Challenge Fund bid as well as the bid to the Big Green Challenge). It ran from 2009-11.

Big Green Tarbert held local conferences both in Tarbert and Lochgilphead; the first exploring Transition and the second Sustainable Communities. I was responsible for a day which looked at what constituted a sustainable community. We had inputs from the head of Economic Development at

Argyll and Bute Council, Transition Scotland Support and the Canadian Centre for Community Renewal. The second day we had a keynote speech from the Scottish Government Minister Jim Mather. As mentioned earlier, it features in People and Permaculture.

TSCT is also behind Tarbert Renewable Energy, a project for a community-owned wind turbine which is ongoing.

The Trust was also successful in winning a major development grant to renovate our own Medieval castle, one of only two small communities in the whole of Scotland to succeed. We also helped the Tarbert Harbour Board with their successful bid to develop a walkway around Tarbert's waterfront: a project which has transformed the village. As a way of tying all these projects together and encourage strategic thinking amongst the 15 or so local groups we commissioned and are now implementing our own Community Plan. Another infrastructure project was the Tarbert Academy Wildlife and Nature Initiative (TAWNI), a bike/buggy trail connecting different neighbourhoods in the village which opened up a neglected green space for the school.

Phase 3 Bioregion

When BGT failed to receive further funding a group of us bid for a partnership project which involved community gardens in Tarbert, Campbeltown, Gigha and Islay (the last two being islands west of the Kintyre peninsula). We were successful and I have headed up "Local Produce" since its inception in 2011 (see local produce map in **daisy-cottage.org**). It is largely funded by the EU and is categorised as "Transnational" which has meant us building links through exchanges with a similar project in Sweden. As well as supporting our local community gardens with paid staff, we have built links with farmers and other producers, held promotional events and are trying to get local procurement for our schools and hospitals. We also started a project called the Entire Kintyre Orchard (EKO) which involved supplying free fruit trees to community groups and gardens, and volunteer gardeners.

Phase 4 Administrative Region.

Since 2006 I have been teaching PDCs (design courses) at Kilmartin House Museum in mid-Argyll. Early in 2013 a group of Argyll-based course graduates decided to set up the Argyll Permaculture Group, which includes Transition Helensburgh.

I am now giving permaculture talks to various groups in Argyll.

Pause and Reflection

My initial vision was to see the R4 model taken up by our scattered rural communities in Scotland, with a focus on

- * local pride in locally owned businesses (including of course social enterprises)
- * high quality education, skills and training (I am working with Adult Education to implant the Learning Town concept in our region).
- * local control and ownership of resources, sustainably managed all being underpinned by teams of innovative, committed, open-minded people working in partnership with the Council.

Upon reflection, and being most of the way through Looby's book *People and Permaculture*, I now see R4 in a different way. Because the basic framework is now complete, I can see it through different lenses – in this case, the “Looby lens”, since I am reading her book. It is enabling to reflect on “me” as a concerned, passionate, task-orientated sociable individual who likes being in groups to achieve things rather than working alone.

What R4 enables me to do is pinpoint how I, as an individual, can make a difference in “the system”. Permaculture enables me to think in system terms (strategic you might say).

I'll give 2 examples. As a sincere community activist I want to achieve many goals but here are a couple of them.

To get local homes properly insulated without increasing levels of condensation.

Argyll and Lomond Energy (ALIEnergy) employs several people to do just this, and has recently heard that they are to get large amounts of funding from the Scottish Government to insulate homes.

However, having run Big Green Tarbert, I know that knowledge of building technology is essential in order to avoid important unintended consequences such as increased condensation. The regionally based staff do not have the capacity to go round everyone's homes to give this advice so I have offered to be trained up as a volunteer and use my networks to see if I can recruit further volunteers and help build a volunteer network.

To stop the spread of invasive weeds: in this example, Japanese knotweed. Argyll and Bute Council has a legal responsibility to control, even eradicate it. Yet observation on the ground tells me it is still spreading at an alarming rate. Periodically Council workers will spray patches at the side of the road,

but these are usually obvious, well established ones. However, it is the small, fresh patches that can be most successfully and easily controlled, as Holmgren relates in Principles and Pathways beyond Sustainability (I also heard this corroborated by a world expert who happens to be a friend of a friend and who recently gave an informal talk in Tarbert).

The solution is to pool the observations of local nature-watchers: again, using folk “on the ground”. I know there are a lot of keen nature-watchers, both professional and amateur, across Argyll (they are attracted to our region despite the weather because of our renowned biodiversity). I am sure that, like me, they are always spotting new patches of knotweed popping up. Why can't they report their observations to a Council-moderated website? This would give the Council the much-needed information to start making a difference.

This is not me having a gripe, thinking I know better, wishing that I was the Chief Executive of the Council. Fortunately I can think in abundance terms because I am a permaculture designer.

My designing experience tells me that at the moment we are still designing systems that are preponderantly hierarchical. Hierarchies are fine to an extent. It is always said of them that they get things done. But if hierarchies do not develop strong networks they do not get things done efficiently. My two suggestions above would, I suggest, enable specific goals to be reached. The problem with hierarchies with centralised command and control systems is that they can see the bigger picture but not the detail. Computer networks can now enable us to build up a detailed picture in a creative, real-time way, and can allow volunteers at the local, neighbourhood level to contribute to successful outcomes.

Why do we not do this? Partly because volunteers and non-professionals are not seen to be part of the solution in any significant way. They are left to get frustrated, write letters to the local newspaper, struggle to form a group or organisation which then struggles to make any headway in terms of positive outcomes.

This comes back to a lack of engagement. “Those at the helm” be they elected councillors or council officers continue to struggle to maintain services in the face of cuts and act defensively rather than proactively. An example is the schools closure programme which has been shelved because of well-organised, well-coordinated opposition from local groups linked by a powerful internet-based anti-rural-schools closure campaigning organisation. As Looby would put it, this shows “scarcity” as opposed to “abundance” thinking on both sides.

R4 can easily be misinterpreted. The fact that the neighbourhood (level 1) consists only of a street of 15 or so households whereas the Council (level 4) region consists of 90,000 people can lead one to think that the vast majority of resources must go to the Council. This is hierarchical thinking without networking thinking.

Also, it depends on how we define resources. If we talk about “thinking resources” that can make a difference and cost relatively little financially, by setting up the website/database of knotweed sightings we are going to get back a huge amount of useful data: an excellent investment.

However, this can only happen if we see things in a new way; see R4 in a new way. R4 is based on nested systems and patterns such fractals and webs. If you add up all the neighbourhoods you get to the 90,000 people whom the Council represents. The neighbourhoods are the eyes and ears of the “powers that be”. Just look at the success of “neighbour watch” schemes in tackling crime.

That leads me to start consider the following possibility.

I talk to Looby as a fellow permaculture practitioner. I know that she is offering facilitation training on the subject of People and Permaculture. Maybe I can help her develop training to offer training to Council officers and elected members.

Perhaps this possibility will “emerge” as a result of our developing Permaculture networked system. Perhaps people will read this on the website and get back to me on tyleredward@hotmail.com to get involved with this idea.

Booklist plus other media

E. Tyler, Permaculture Works, Vol. 111 Issue 13 Spring 2013 p.p. 14-5.

D. Holmgren, Permaculture, 2002, Holmgren Design Services.

R. Hopkins, The Transition Companion, Green Books, 2011.

L. Macnamara, People and Permaculture, 2012, Permanent Publications.

S. Arnstein, A Ladder of Citizen Participation, JAIP, Vol. 35, No. 4, July 1969 p.p. 216-224.

P. Brown and G. Garver, Right Relationship, 2009, Berrett-Koehler Publishers.

New Economics Foundation (for Local Alchemy Communities Enterprising Framework).

Local Produce Documentary (You Tube).

www.daisy-cottage.org

