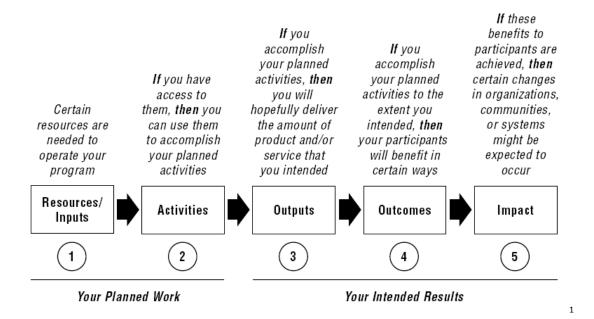
Transition Research Network Working Paper 1: Resilience, Transition, and Theories of Change

Prepared by Naresh Giangrande, with support from Tom Henfrey, Sophy Banks and Gesa Maschowski, for the Transition Network Learning Day on Theories of Change, Hamilton House, Bristol, July 3rd 2013.

Introduction

This paper is an attempt to bring together some of the theories that might inform the Transition model, to enable us to discuss how change happens. This gives us a language and structure to help us to explain or think about how change happens, and how the Transition model works. This will help us with engagement, widen the debate, and improve engagement with both the wider Transition movement and others. It will also enable us to construct a logic model:



In this way we can begin to measure and evaluate what we do – on a project level, on a Transition Initiative level, for us as Transition Network, as a movement or on a cultural level. We can begin to understand what is taking us in the right direction and what isn't.

I start with some background where I investigate some of the theories that underpin or describe the Transition movement, things like resilience and complex adaptive systems. I then move on to looking at different scales - personal, community, and cultural - to see what theories we can draw on to help us define better what we do, why, and how or why we expect what we do will create change.

This paper forms part of a wider project which is funded by the Arts and Humanities Research Council, to enable us to use research and work with researchers to further the aims and goals of the Transition movement. Some of the outputs I am expecting from this will feed into the research network and will enable us to use research more effectively by helping us in the Transition movement to understand what we are doing, and create a research and knowledge base that can critically assess whether it works.

Theories

I start with resilience, as this is an area we talk about a lot in Transition and so forms a key piece of the picture. I will look at its origins in complex adaptive systems theory, which links systems theory and complexity theory, and

¹ Adapted from Lamb, B.,2011. Campaigning for Change: Lessons from the United States. London: NCVO.

examine some of the scales of change we are working on: personal, community, and cultural. I will explore personal change theories like the trans-theoretical model of change, Wilber's four quadrants, the manic defence of trauma and splitting, psychosynthesis models of the human psyche, and Joanna Macy's work. At the community level, there is the Transition approach to community engagement and action, David Gershon's pattern language, and CED's community resilience work. At a broader scale we will investigate how theories of Sustainability Transitions can explain how change happens at a societal level.

Non-technical Resilience and Localisation

Resilience has technical and non-technical definitions and uses. The non-technical definition commonly refers to concepts like 'bouncebackability' or the ability to be strong or self reliant, to roll with the punches, to be or have access to resources or be resourced.

If we are resilient we are adaptable and able to respond to changes in our environment. It is not clear what the qualities of resilience defined as such might be, either for a community or a person. The recent book 'Resilience' by Andrew Zolli and Ann Marie Healy², using an informal definition of this type but also drawing upon scientific understandings, looks at many different types of resilience: ecological, economic, community, personal, and so on. Their analysis makes clear that while there are common underlying principles and patterns, the specific factors that promote or undermine resilience can vary from case to case.

If we take a person, we might cite qualities like drive, get up and go, stamina, mental agility or such like. While these qualities might promote resilience in some situations, in others they may not. For instance, if someone is diagnosed as having cancer this same get up and go might be a hindrance to healing, while other qualities such as introspection, ability to remain cheerful and find meaning in adversity, or capacity to process difficult feelings might lead to more resilience. So from a personal viewpoint to be resilient might mean to have access to a variety of character traits – for instance, a balance of masculine and feminine qualities - and the ability to deploy or access those most needed in a particular situation.

As far as communities go, the non-technical case for resilience is harder to make. As a person we can relate to resilience, but as a community the concept can be a bit abstract. We might be able to point to a place and see that they are doing well despite poor macro-economic conditions. For instance, communities in Southern Europe that have large numbers of cooperatives are weathering the economic downturn better than those that don't. Can we say they are more resilient?

In the book 'The Resilience Imperative',³ Michael Lewis and Pat Conaty describe several cases of significant Transitions towards resilient communities or economic regions. They identify a number of common patterns that could be predicted from technical understandings of resilience:

- Diversity in all forms (social, biological, ecological, cultural, economic).
- Modularity in elements able to operate and change independently of the rest.
- Existence of social capital through networks of trust and cooperation and promoted by appropriate forms of leadership.
- Innovation and willingness to experiment and embrace change.
- Overlap and redundancy among key governance structures, especially decision-making and ownership, operating at multiple levels.
- Effective feedback loops to return information about the consequences of any action to the community.
- Full consideration of the importance of ecosystem services.

These patterns may manifest in recurring ways: for example, Zolli highlights the importance in many different communities of 'Translational leaders': skilled networkers and facilitators of social interaction and establishment of relationships among diverse groups operating in different sectors and at different levels, enabling information

² Zolli, A. & A. Healy, 2013. Resilience. London: Headline.

³ Lewis, M. & P. Conaty, 2012. The Resilience Imperative. Gabriola Island, BC: New Society Publishers.

exchange and cooperative action of the type necessary to build adaptive capacity. However, in most respects the specific factors that promote community resilience vary from place to place. There is no reliable way to determine what does and does not indicate community resilience without looking closely at the details of any particular case.

The relationship between resilience and localisation is a good example of this. It is often assumed in Transition that the ability to produce its own energy, food, and basics in life would make a community resilient. This may be so in certain times and certain conditions, and it certainly makes sense as a response to excessive globalisation. However, if local producers can be undercut by global or national businesses, then what you are doing won't be economically resilient, at least within the present system. (This is in fact what has happened in many communities around the globe in many ways over the last 40 years, and continues to this day. This makes the relocalisation message a hard sell).

Maybe the qualities of the people within the community are a good indicator of resilience? So things like level of education, and whether there is a community spirit or sense of pride in the place might be important, as might whether there is a need or even a wish to make a town a better place, civic pride or so forth. The ability of the community to respond seems to be an important quality, and a notion of the importance of local.

As The Resilience Imperative and the Totnes Economic Blueprint⁴ point out, localisation may at times conflict with resilience. The Reconomy project and Rob Hopkins' PhD⁵ both acknowledge this when they talk about 'appropriate relocalisation'. Some forms of production – e.g. manufacturing of computers and other highly technical processes – are best undertaken by relatively small numbers of specialised producers, each serving large areas such as a country or bioregion. Differences in the availability of resources or climatic conditions mean some widely desirable goods can only be produced in restricted areas.

Conceptually too, resilience theory tells us that an important factor in resilience is Panarchy – the existence of appropriate relationships among different geographical scales. In particular, links with larger scale systems can buffer vulnerabilities of local systems to extreme weather conditions or natural disasters. If Devon had a fully localised food system, the unusually wet summer of 2012 would have led to either starvation or reliance on food aid. Some more isolated societies have increased economic resilience through greater integration into national and international systems. When hurricanes devastated food production systems in the Tikopia Islands in the Pacific in the 1950s, in addition to traditional coping mechanisms people for the first time accepted international relief aid, and some young men took paid employment overseas. These permanent integrations into the international economy have increased resilience to future crises. Some lifestyles traditionally based on subsistence use of local natural resources are now only possible because the earnings of people working in the cash economy compensate for the effects of loss of access to land, population increases, ecological degradation, and changes in material aspirations. Many forest dwelling communities in Nepal, for example, remain viable only because of cash sent home by young men working as migrant labourers in the Gulf States.

Technical Resilience

Firstly, why should we care about technical resilience? Well for a start, the technical definitions of resilience were developed by ecologists who were trying to understand ecosystems and how they work. Resilience Theory came about through the realisation that linear models of ecosystem dynamics and command and control approaches to natural resource management based upon these had severe limitations. In its applications, resilience theory is a sort of biomimicry or ecomimicry approach to how humans can relate to their natural environment. What should the relationship be and how is it best to act in that relationship?

⁴ Ward, F., 2013. *Totnes and District Local Economic Blueprint*. Totnes: Transition Town Totnes.

⁵ Hopkins, R., 2010. *Localisation and resilience at the local level: the case of Transition Town Totnes (Devon, UK).* PhD thesis, Plymouth University.

⁶ Firth, R., 1959. Critical Pressures on Food Supply and their Economic Effects. *In Social Change in Tikopia*. London: Allen and Unwin. Reprinted in Dove, M.R., and C. Carpenter (eds.), 2008. *Environmental Anthropology: a Historical Reader*. Oxford: Blackwell

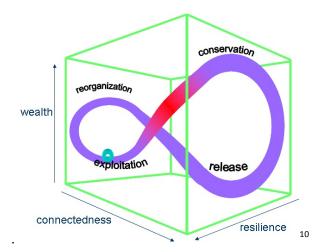
⁷ Campbell, B., forthcoming. Linking local and global in the sustainable development of biodiversity conservation. In Sillitoe, P. (ed.), Sustainable Development: an introduction focussing on the Gulf region.

It is clear that this ecologically literate (or deep ecology) approach is something to which we should pay attention. It can learn from societies, the majority in human history, that in order to ensure their long-term survival have had to regulate their relationship with the local ecology, largely through careful observation and by learning from crisis situations and mistakes. The resulting experience and knowledge/wisdom is built into management practices, customs, values, cultural stories, religious or spiritual traditions, and such like, and in this way transmitted to successive generations.

Tukano people in Northwest Amazonia, for example, see the world as bounded in space, and containing a finite amount of energy that flows from the sun to the earth and through plants, animals and humans. Customary actions that ensure the proper circulation of this energy can also, in a scientific analysis, be shown to help keep resource use within sustainable limits and so contribute to social-ecological resilience. For a society like ours that has outgrown and lost such traditional knowledge, resilience theory is critical to the science of living within earth limits, how ecosystems respond to disturbance, and to design our social and economic systems in ways that allow ecosystems to maintain their structure, functions and feedbacks, which after all are essential for healthy human cultures.

Key Findings of Resilience Theory

One of the models to come out of resilience literature is the adaptive cycle. In its simplest form it describes the cycle of birth, life, death, decay and rebirth, which starts a new cycle, and on and on. As well as detailed scientific observation, it encapsulates common sense notions such as 'nothing stays the same', and 'change can be described by a simple pattern'.



This pattern goes something like this; in any ecosystem, there is a birth process: the ground (or ocean or pond) gets disturbed- flooded, dried up, burnt, earthquaked, volcanoed, etc. - and then the process of succession begins again. The first stage is a birth and rapid growth. Pioneer species initially colonise the space and grow quickly and spread. Opportunistic species (and organisations), with high mobility and short life-cycles are successful in this phase. It is characterised by high levels of resilience and low levels of efficiency (which are measured in relation to different characteristics) and low levels of connectivity. Every piece of the ecosystem (or human system - I think of this stage as the Wild West stage) is just going about his or her business and not greatly affected by anyone/thing else.

As growth takes place and limits of space and other resources are reached, the initial growth spurt slows, and the more competitive species – more efficient at using sunlight, nutrients, or other key resources - become dominant. The system becomes more connected and efficient, but resilience declines as some species are crowded out and the diversity of the initial phase lessens. This apparently stable phase is what ecologists used to consider the 'climax' or natural end state of a system. We now realise that, even if it lasts a long time, it is always a temporary stage. A key moment is reached where the system is at its highest efficiency and connectedness but also lowest resilience. At this

⁸ Reichel-Dolmatoff, G., 1976. Cosmology as ecological analysis: a view from the rain forest. *Man* (N.S.) II(3): 307-318

⁹ Holling, C. S. & L.H. Gunderson, 2002. Resilience and adaptive cycles. In Gunderson and Holling (eds.) *Panarchy*. Washington DC: Island Press.

¹⁰ From http://www.phibetaiota.net/2011/06/graphic-resilience-adaptive-cycle-three-dimensions/ (without permission) Accessed 13/7/2013

point it is highly vulnerable to disturbance as some factors get close to the system's limits of stability - excess accumulation of carbon in the form of trees, for example - and the reduced diversity and flexibility limits its possible response.

At some point another disturbance occurs, say an insect infestation or a fire (or a major financial crisis), leading to a greater or lesser degree of system collapse. The nutrients and other resources that were locked up in the trees and other vegetation (or dominant businesses and political and administrative institutions) are released and the cycle begins again. Individual plants or animals die, businesses go bust, but the system as a whole undergoes renewal. The resilience of the system depends to a large degree on how it navigates these phases of release, reorganisation and renewal. These are the best opportunities for it to build adaptive capacity by readjusting as necessary to changing conditions and building in protective mechanisms against future events. Resilience does not come from resisting these natural cycles, but from taking full advantage of them as learning events.

Lessons from Resilience Theory

We can see that, for example, the capitalist business cycle can very much be described in this way. Firms grow and expand, maybe get too big, bloated even, and smaller competitors come along and occupy the space previously owned by what appeared to be impregnable corporations. And before we know it formerly powerful and dominant corporations are overtaken by others, and die. Or the business cycle as a whole takes this sort of turn. Too much capacity, bad investment, over investment in certain sure-fire schemes, and then bang it goes. Firms are wiped out and the assets, buildings, and equipment get bought up at knock down prices and it all starts again, or should. Learning can or should take place particularly at this stage. The dotcom bust of 1999 led to a more circumspect investment in, and growth of, subsequent dotcom businesses. Many financial commentators however observe that the short professional lifespan of City traders, who may only experience a piece of the business cycle, can lead to reckless behaviour and a failure to take advantage of significant learning opportunities.

In addition, it's not always the case that it all begins again: external events can interrupt the cycle. For instance, in the present crisis banks which were deemed too big to fail were 'rescued'. The natural cycle of release and renewal was interrupted, and we are locked into a situation where debts still underpin the system, bad business practices remain unpunished, and the system can neither regenerate nor reorganise. The term for this is a **rigidity trap**. What should have failed hasn't, vital feedbacks have been blocked and the resources and space are not available for new ventures creating new forms of value.

On the other hand when a collapse happens, systems don't always return to an identical state or reorganise to an improved one. A new trap - a **poverty trap** - can occur, where there aren't enough value or nutrients left to enable a new cycle and the system irreversibly collapses into an inferior (less productive, less diverse...) state. If a major employer in a particular area relocates and or goes bust, levels of economic activity might not recover for years, if at all, as many former industrial areas in the UK have experienced.

A case in point is the UK government providing tax breaks for unconventional fossil fuel production rather than further subsidising renewable energy. In this way, increasingly scarce resources are squandered maintaining a system that has no future rather than invested in system reorganisation and renewal. We may not have invested enough in renewable energy systems for them to be able to maintain our social systems when we reach the point at which we need to rely on them. We will have permanently lost the resources that are at our disposal right now, and with them the opportunity to reorganise to a different type of energy system. This is an example of how a rigidity trap can create a poverty trap by keeping the resources necessary for the next stage of growth away from where they can be most effectively used. There are many further current examples of this.

System Change: Risks and Opportunities

Also a system might not return to its previous parameters of activity, but can be shifted into a different state that looks and acts very differently to the old one. Beyond certain critical thresholds – or tipping points a phase shift

occurs, resulting in a new set of feedbacks and other interconnections among elements, and very different patterns of inputs and outputs. This is what climate scientists are currently afraid of. As we pump more CO_2 and other greenhouse gasses into the air we risk setting off positive feedbacks that will take us into a new climatic regime, where weather systems operate in new and unpredictable ways.

The release and reorganisation phases are both resilient and sensitive to external conditions. There is high potential for both positive and negative change – where, as Holling has observed in his work on adaptive cycles, a charismatic leader like Gandhi or Hitler may significantly influence the course of events. Milton Friedman describes this state very well when he said, "Only a crisis - actual or perceived - produces real change. When a crisis occurs, the actions that are taken depend on the ideas that are lying around. That, I believe, is our basic function: to develop alternatives to existing policies, to keep them alive and available until the politically impossible becomes the politically inevitable." Naomi Klein, in The Shock Doctrine, has documented how Friedman's disciples have exploited and even engineered just such crises as opportunities to reorganise national economies along ever more extreme neoliberal principles. While I am not advocating engineering crisis - the industrial growth system is in any case causing more trouble than we can handle - the Transition movement can think of itself in these terms. It will require multiple crises to enable our ideas to achieve widespread take-up, especially as the current regime becomes even more mired in rigidity traps and even more prone to poverty traps and continues to look for solutions in the very same perspectives and techniques that caused the problems in the first place. Even now many are recognising that we can't solve the current crisis with the same tools, ideas, and practices that created it.

When a system is growing rapidly, with large and powerful success-driven internal feedback mechanisms and low responsiveness to external feedbacks, nothing but more of the same can influence the system. We are currently at a point where many systems we depend on lack resilience. Global economic systems are breaking down in ways that threaten their ability to fulfil basic needs. Very few places remain where local economies are sufficiently large, diverse, and independent of global systems to buffer these effects. So, due to both need and opportunity, it makes sense at this juncture for Transition to talk of needing to build resilience, and of localisation as a key strategy for doing so. At other stages in cycles this would make no sense at all. So to increase resilience makes sense at certain times, but it is neither an objective good nor a universal goal.

Resilience and Scale: Personal Change Models and Resilience

Another important question is what resilience at different scales is, and how these scales relate to each other. For society as a whole there might be one answer and for a community another; at a personal scale resilience might look quite different. Most work in this area has looked at linkages among ecological, social and economic resilience, with community resilience gaining increasing interest in recent years. Cultural resilience is less well explored, and very little is known about the conjunctures between any of these and psychological or personal resilience.

The Max Neef model of Human Scale Development¹³ provides a tool we might use to talk about human resilience. He proposes a framework of nine fundamental human needs: subsistence, freedom, safety, participation, leisure, creativity, affection, understanding, and identity. We need all nine to be fulfilled as human beings. In addition these needs are transcultural, and hold true across time. The only difference between someone living in contemporary Britain and an Amazon rain forest dweller would be in their use of **satisfiers** – the specific ways how they go about meeting these needs. These satisfiers depend on both cultural and personal preferences, and on the **capabilities** – the means available to a particular person, group or society.

Understanding the difference between needs and satisfiers allows us to start to open the complex and hard to grasp territory of human needs. Once we see that needs can be satisfied in many ways we can begin explore different

¹¹ http://en.wikiquote.org/wiki/Milton_Friedman. Accessed 13/7/2013

¹² Klein, N., 2007. *The Shock Doctrine*. London: Penguin.

¹³ Max-Neef, M., A. Elizald, & M. Hopenhayn, 1989. *Human Scale Development. Conception, Application, and further reflections.* New York and London: Apex.

kinds of satisfier, including those which are less material or less environmentally damaging. For instance someone might state, "I need my car." However once you have the needs-satisfiers framework you see that the car is not a need but a satisfier. You can then focus on what needs are satisfied by the car (and what needs it fails to address), and then from there it's a small jump to considering how else can you satisfy those needs.

Max-Neef identifies several different kinds of satisfier. The best are synergistic: simultaneously meeting several or all kinds of needs. An example of a synergistic satisfier would be a local food market, where in addition to subsistence you might satisfy your needs for affection, understanding, leisure, participation, and identity. The worst are violators; satisfiers which meet one need but inhibit the satisfaction of others. Going to a supermarket might satisfy, in addition to subsistence, freedom but violate the other needs that the local market met.

Intuitively, we might suppose that synergistic satisfiers would be more likely to promote resilience. They lead to redundancy and diversity because each need is satisfied in several different ways at once. They promote feedbacks as the different satisfiers are interconnected. They might allow modularity because a mechanism that provides multiple or all needs at once can more easily operate as a self-contained unit. This idea is conjectural at this point, and needs further exploration, but it shows how the Max Neef framework might improve understanding of the links of personal and other forms of resilience.

While the Max Neef framework is good at seeing how things we do in the world can affect our inner states, and start to build the relationship between them, it doesn't give us much of a framework to look at how our inner states work, and what we can learn from that to accelerate change. For that, we need other tools.

One way to bring in more understanding of our inner worlds can be found in *Ken Wilber's four quadrant model (see diagram below)*.¹⁴ This proposes that if you want to understand any complex phenomenon, as a minimum you need to look at them across two dimensions: inner to outer and personal to collective. Combining these as two perpendicular axes sets up four quadrants, each: personal inner (psychological), personal outer (behavioural), collective inner (cultural) and collective outer (social/systemic). Each quadrant is an essential feature of reality, and if we miss out or understate any one of them we limit our understanding. An appreciation of the dynamic interactions among quadrants helps us to understand how human systems work, what makes them so difficult to shift, what creates stability in human systems and society (that after all is necessary), and what broader features (social, cultural, psychological) you need to take into account to design a behavioural change process.



We have framed Transition in terms of Behaviour Change Theories which we have used to understand how to promote individual behavioural change. This area is important because the shifts in behaviour we have to make are large, unprecedented, and need to happen in a very short time frame. In the Transition Handbook¹⁵ and Transition Training we used the Di Clemente model of change. This has been further refined and developed: Bob Doppelt proposes using the Prochaska Transtheoretical model of change¹⁶ for awareness-raising. This was developed and refined from around 25 behavioural change models (including Di Clemente) as a synthesis of their common features The resulting '5D' model explains behavioural change as a 5-step process where we move from Disinterest through Deliberation to Design, Doing, and Defending.

¹⁴ Wilber, K., 2000. A Theory of Everything. Boston: Shambhala.

¹⁵ Hopkins, R., 2008. *The Transition Handbook: From Oil Dependency to Local Resilience*. Totnes: Green Books.

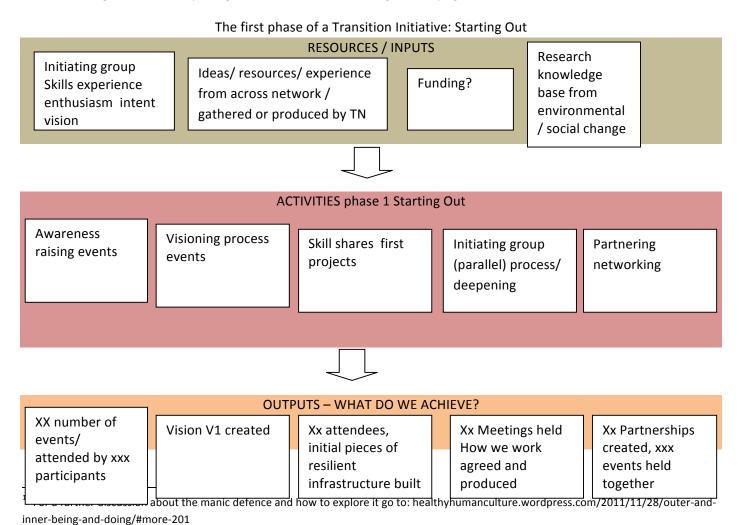
¹⁶ Doppelt B., 2008. *The Power of Sustainable Thinking*. London: Earthscan. Image taken (without permission) from http://members.shaw.ca/renaissanceservices/health/intro/spiral.gif. Accessed July 13th 2013.

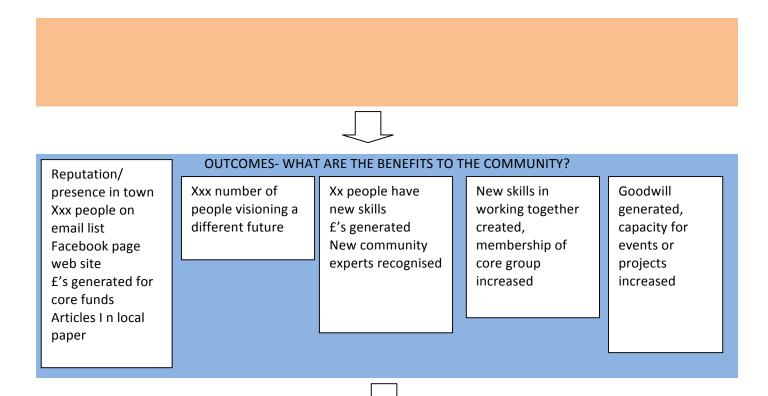
Sophy Banks has been developing applications of both the internal change process developed from psychosynthesis and the manic defence to trauma and splitting. The psychosynthesis internal change process provides a very simple model of why change can be so difficult and what we are up against in any change process that involves humans. It also helps us to understand what internal resources we find helpful and what resources support us to enable change in ourselves and in our communities. The manic defence to trauma and splitting helps to explain how we are culturally disposed to doing and thinking as opposed to introspection and feeling. Doing and thinking become a defence against feeling, which is key to embracing change. Many of our societal structures operate in this way prevent us from feeling or being, and from understanding what needs to change. Our defences in turn act as cultural brakes on any change process, and even on seeing that our current path is destroying us and our planetary systems.¹⁷ We also use Joanna Macy's process of reengaging with our emotional states in order to free us from the paralysis that can result from confronting the many destructive features of our Industrial Growth Society. It teaches us that burying feelings can be personally destructive and make it hard for us to maintain healthy psychic make-up. Freeing those held or stuck emotional states frees up the energy and allows us to remain balanced and effective in the work we do.

Community Change Models and Resilience

Community resilience remains less explored and assessed, even in relation to why or how to achieve it. The Transition movement is clearly a pioneer in that respect. I won't review the Transition model. I am not saying it's perfect, but it seems to have the elements necessary to carry a group from the 'what a good idea' stage through to setting up and running significant local projects.

One way we can start to develop out understanding of how change happens and how effective Transition Initiatives are at creating it is to develop a logic model based on the diagram on page one:





IMPACTS - WHAT CHANGES DO WE SEE IN THIS COMMUNITY?

Healthier, happier community more resilient, higher level of wellbeing

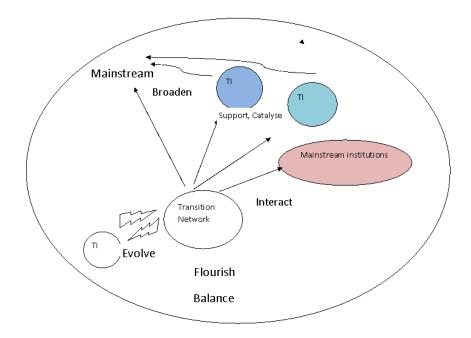
Significant contributions have also been made by many others including http://www.sarvodaya.org/ in Sri Lanka, CEDworks in Canada, and many others. CEDworks, for instance, have produced a list of community resilience indicators. Rob Hopkins outlines these and similar efforts in his PhD thesis.

David Gershon, in his book 'Social Change 2.0', 18 describes a pattern language for social change that comprises:

- Empowerment practices to enable the adoption of new behaviours by individuals, groups and companies
- The transformation skills capable of transforming a dysfunctional social system
- Processes for inventing and implementing transformative social innovations
- Practices to accelerate social change through the multiplying power of synergy
- How to lever and disseminate social innovation at larger levels of scale

I would like to propose a way of seeing or helping us to define where we want Transition to be taking us. One way of seeing the work of the Transition movement is this diagram:

¹⁸ Gershon, D., 2009. *Social Change 2.0*. West Hurley, NY: The Empowerment Institute.



This diagram maps the different pieces of the Transition movement and shows how each helps to achieve the strategic aims of Transition, and in addition how each influences the mainstream. So for instance Transition Network and the national hubs **Interact** with mainstream institutions. The **Broadening** function is performed by Transition Network, the national hubs, and the individual Transition Initiatives. Transition Network is also working to **Support**, **Catalyse**, and **Evolve** Transition with Transition Initiatives.

A model of Transition to healthy human culture

This work came out of teaching Sophy and I did on the Schumacher Economics for Transition course in 2012. While not a theory of change, it attempts to lay out a framework for evaluation of what is taking us in the right direction, and how we can define that. It applies the Wilber four quadrants to help us explain how change happens by setting out inner as well as outer dynamics.

We first laid out the previously mentioned Wilber four quadrant model:

Inner Personal	Outer Personal
My own feelings, thoughts, dreams, memories, beliefs, longings	My body, behaviour – things you can see and know about me
What we believe, value, aspire to, how we see the world, our shared history, sense of identify, social norms – some conscious and some less so	What we do together – organisations, institutions, physical infrastructure, systems for growing food, getting energy, the built environment.
Inner Collective (a group, a society, humanity)	Outer Collective

We then proposed that transition is a process that is taking us to a healthy culture. So we have defined the goal of Transition as health rather than resilience, resilience being, depending on circumstances, an important step or intermediate goal. We then proposed that if we look at the present we see a mix of healthy and unhealthy cultural elements, each with inner and outer and personal and collective dimensions. The journey to societal health can be mapped in this way.

We proposed a map where there are two macro-systems to consider. One is the interlocking system of inner and outer and different levels of scale that is unsustainable and destructive in the long run to self and others. The other consists of systems that are sustainable, inclusive and create wellbeing. Underneath this there is a hypothesis that we don't have a random assortment of unsustainable practices that just emerge out of nowhere, by coincidence or because we don't know any better, but that the systems are a direct expression of a belief system and related inner states of consciousness – personal and collective. Similarly the experience we have of the outer world - of systems for justice, food growing, decision making, raising children - all affect the inner world. There may be many types of interlocking inner and outer systems that would produce sustainability, and this should be borne in mind. To make the model simple enough to work with we assumed one possible destination – while acknowledging that this destination is likely to comprise a range of inner and outer beliefs and activities.

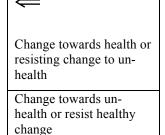
In addition, we wanted to explore how change happens between these two systems. So you might see Transition as one kind of change away from unhealthy towards healthy systems. There are many other healthy change processes taking place at the moment (see Paul Hawken's book, Blessed Unrest¹⁹). But to make the map more complete we should also consider change that takes us in the opposite direction – destroying what is healthy, creating more of the systems of ill health, or resisting or blocking positive change.

To find a name for the two systems already takes us into territory where language is difficult. From the personal inner quadrant I've heard some people talk about 'fear' being the basis of the unhealthy system. An equivalent basis for the other system might be 'connectedness', or 'love'. Many people have used 'sustainable' to describe the healthy system, so the other would be unsustainable. But in theory it's possible to have a lot of misery in a sustainable system. Transition refers to 'resilience' as the thing we want to transition to. I usually use a phrase like, "A resilient, thriving and inclusive way of living". In my enquiry I've found it hard to reduce the core quality of either system to one feature such as fear or sustainability, so I'm sticking with health and un-health. If these words don't work for you as you read what follows please substitute your own.

So the map we ended with looks something like this:

Healthy

Personal	Personal
Inner	Outer
Inner	Outer
Collective	Collective



Unhealthy / Destructive

o initiality / B controll / c		
Personal	Personal	
Inner	Outer	
Inner	Outer	
Collective	Collective	
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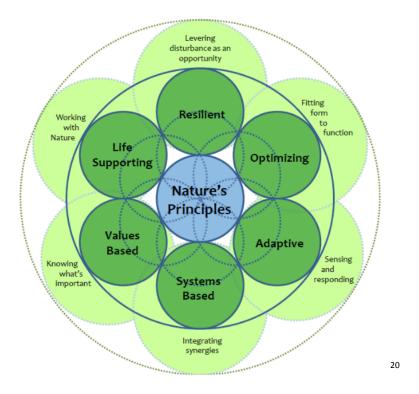
This could also be seen as an expansion of the 'double conveyor belt' image we sometimes use to explain Transition – that there is one moving conveyor that consists of all the projects, choices, groups, individual actions that are taking us towards health, empowerment, biodiversity, sustainability, inclusion, etc. and another system that is taking us towards more centralisation of power and wealth, more destruction of intact nature and people, and so on. Living in this time of transition means we have one foot on each conveyor belt: we cannot completely disconnect from the systems of increasing un-health, but we are on a journey of strengthening the ways we support health at different levels of scale. Living like this usually creates a psychological stress because of the incongruity between the two.

So while this model doesn't define or help us to know what healthy culture is, it does help us to think about both systems that are taking us in unhelpful directions and systems or practices that are helpful. To understand what

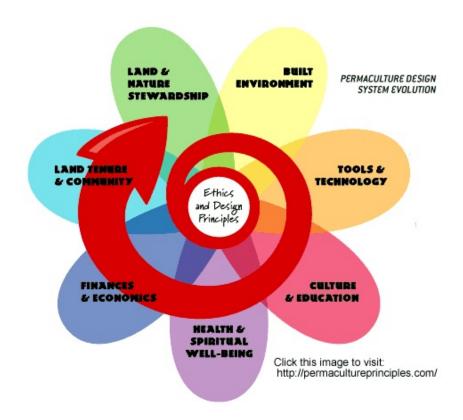
¹⁹ Hawken, P., 2007. Blessed Unrest. New York: Viking Press.

health is we can refer to the Max Neef protocol, or permaculture or other biomimicry/ecomimicry based approaches. After all if we were to look somewhere for what works for life on earth, life itself has had 3.5 billion years experience of creating healthy, resilient life forms and ecosystems, so why look anywhere else?

A graphic representation of what a system in tune with nature's principles might include is this:



Similarly we could show the Permaculture flower as another way to explain or describe a healthy human culture in right alignment with the earth:



 $^{^{20}\,\}underline{\text{http://www.businessinspiredbynature.com/pdf/Natures\%20Principles.pdf}}$

This sections has drawn together some of the key models we use in Transition to understand the ways in which we work and why. I have also included some other models like David Gershon's work to put ours into context and to see where we might have gaps in our practice.

We looked at models of how Transition works and why from the personal to the community scale. Lastly I also gave some thought to what a healthy human culture is and how we might define that as a way of framing what Transition is. Are we creating healthy human culture or resilience? Maybe resilience is one aspect, and a desperately needed, attribute of a healthy culture rather than the final destination as the ecomimicry approaches suggest.

Broader Social Change: Theories of Sustainability Transitions

Can we describe pathways, or how we can develop or think of how pathways to change can happen at a social scale? For many people, the idea of promoting change at scales bigger than yourself and your immediate community might seem overambitious, and even describing it too complex an undertaking to be worthwhile However, there are some interesting and important ideas of how a whole society can shift. We have proposed pathways for individual change, and the Transition and other models for community scale change, but what about a whole society?

A potentially useful body of theory is that on Sustainability Transitions.²¹ This asks how complex systems change, particularly in circumstances where there is a great deal of lock-in, both of resources and of institutions and processes (sunk costs in economic speak, addiction in psychological terms, in political terms vested interest in or allegiance to the system). We saw in the example above how banks are maintaining their hold on the financial system, creating a rigidity trap. They have captured the legislative and governance structure and perhaps our internal belief structures as well, and maintained their hold on the financial sector. So how can we move systems that are stuck or creating ill effects, or breaching planetary limits?

Despite the name, the academic field of Sustainability Transitions has no direct connection with Transition in practice. It examines how one **regime** (established technologies and associated ways of doing things in a particular domain, such as energy or transport) is replaced by another. An established regime may become unstable if it clashes with the **landscape**, the broader cultural and institutional context (e.g. expectations about the availability of energy and the legal and political structures that regulate the energy sector). The contradiction between, on the one hand, established regimes in many fields, and on the other public and government concerns about climate change, is one example. Regimes may also break down as a result of internal contradictions, such as those between fossil fuel dependency and rising energy prices. In either case, the outcome of the transition depends in large part on the state of alternatives to the old regime.

Transitions theory states that change initially happens at small scales, or in **niches**, where intrepid and entrepreneurial people and/or organisations experiment in doing things differently. These niches have to be somehow protected or disengaged from the mainstream, or they will be overwhelmed or smothered at birth and never reach the point where they can scale up and start to compete with the current system. The role of ecovillages, social centres, temporary autonomous zones and alternative businesses in nurturing much key Transition thinking and doing is a good example.

At the same time, with any new idea, space has to be made for experimentation to happen, different approaches need to be tried and tested, before they are viable or competitive with existing approaches or businesses. "[A] transition process can be characterised as a journey of which the final destination is not exactly known. There may be a sense of general direction (towards a sustainable society) but the precise journey changes as the traveller gains more knowledge and experience."²² Successful experiments, whether in niches or empowered niches, may be taken

²¹ Grin, J., J. Rotmans & J. Schot, 2010. *Transitions to Sustainable Development. New Directions in the Study of Long term transformative change.* London: Routledge.

²² Geels, F. W. M. P. Hekkert, & S. Jacobsson, 2008. The Dynamics of Sustainable Innovation journeys. *Technology Analysis and Strategic Management* **20**(5): 521-536.

up by people or organisations with influence at regime levels and mainstreamed. In this way, supermarkets have coopted consumer demand for organic food without changing the basic way they operate, and powerful players in existing energy systems have looked for lucrative and influential roles in emerging renewable energy markets.

Alternatively, niche activities may upscale and completely replace a defunct regime. When niche players increase in numbers, they may get better at cooperating and mobilising resources. In this way they become an 'empowered niche', able to challenge the existing regime and potentially replace it. This raises questions like whether Transition is such an empowered niche, and if it could (or should) become one. We might also think about where the cracks are in existing regimes — in terms of resilience theory, where phases of stability are giving over to release and reorganisation - and what opportunities this provides to advance alternatives. The successful experiments are then taken up by the entrepreneurial actors in society and mainstreamed. There may also be other mechanism by which innovations are mainstreamed. These might be where the changes in society (or the social technical regime) are so great that at such times, they release significant potential in the form of unemployed people or resources. If new ways of working like coproduction or social enterprises can take advantage of this, it might help them become competitive with existing more market-driven ways of working.

The practices of social enterprises or community owned businesses, and social innovations like collaborative consumption, or worker and consumer owned cooperatives may, for example, be more in step with change engagement processes and member support structures like mentoring and collaborative group practices. These inherent advantages might enable them to outperform conventional businesses when instability in the dominant regime weakens the hold over resources that conventional businesses currently enjoy. The social enterprise, community, and cooperative niches have already created a number of successful food, energy, and other enterprises that are being widely replicated, so the potential exists for quick scaling up. These new working methods provide many synergistic satisfiers, and it is likely that new regimes based upon these will be more resilient as a result. They are also more in tune with landscape level changes such as greater levels of public awareness of sustainability and social justice, and political rhetoric about community and co-production, however empty in practice.

Other landscape level changes may make new ways of working even more compelling. For instance, the internet as a facilitator of collaborative consumption clearly enables different forms of business models. It is hard to see how collaborative consumption businesses like zipcar could scale up without it. Internet campaigns can reveal the hidden social and environmental costs of globalised capitalism and force changes in companies' behaviour far faster and more effectively than was possible just a few years ago. Innovations spread faster, and the scaling up from ideas to practice is accelerated.

Another significant change is in the financial landscape, which has become an unstable environment where changes are more acceptable. People are looking for a way out of the stale dilemma of Keynesian stimulation versus neoliberal austerity. New ways forward are gaining at least an audience. Being closer and connected to your customers spatially and culturally, the way an organic vegetable box scheme or CSA is, might be much more important in a low financial growth environment where defensive business practices become the norm, compared with, say, the prototyping and rollout of franchised models better suited to high financial growth environments. The customer loyalty that multiple-human needs-delivery business models create could be crucial in a time of economic contraction, and just might be an idea whose time has come.

Either way, we are seeing regime changes due to multiple pressures from changing social, financial, political, cultural and environmental landscapes, and an enormous number of constructive niche-level responses to these. The Transition model describes these changes eloquently and adds weight to these ideas, and so helps us to understand the processes whereby small changes somewhere in a system can lead to its fundamental reorganisation.

Another useful insight that comes from some not yet published research into urban transformations looks at the capacity for change that exists within existing systems and actors, or whether the impetus for change is likely to

emerge from actors outside of the system. It also looks at whether (either inside or outside) there likely to be a coordinated response or whether changes happen emergently or chaotically. Intransigent systems with low capacity for change (think Greek tragedy- power driven by hubris) can make change inside a system impossible. The actors outside of a system may or may not possess the capacity to coordinate change. Disruptive change can just happen due new technology for instance, or landscape changes like peak oil, climate change, or economic instability.

Sustainability Transitions theory, as we have seen, is a useful body of work, but it also has some important limitations. It seems to assume key roles for central government and established market structures in promoting sustainability transitions, which many involved in Transition might question. It also generalises from a small number of case studies, and learning from quite top-down processes. In the past few years researchers like Adrian Smith and Gill Seyfang have begun to link this theory with their work with grassroots sustainability movements, and to look at connections with resilience theory. Comparison with theories of change developed by active Transitioners might be another way to broaden the horizons of this research area.

Summary and Conclusion

Resilience theory, in particular the Panarchy metaphor, gives us an accessible and compelling way to link human change to ecological change and attach useful narratives to both. By applying the wisdom of biomimicry and ecomimicry to human systems we can understand how to act in ways that align with the features of biosystems responsible for their inherent sustainability.

In addition, the adaptive cycle model of resilience theory can help us to locate the need for resilience in systems, in space and time. It helps us to understand this not as an absolute goal but as relevant to particular places at particular times. It also provides us with a framework to know where and when the leverage points in a system are, and the dangers of allowing human systems to come out of alignment with the adaptive cycle in the form of poverty and rigidity traps, as well as how to intervene in both.

Resilience Theory highlights the necessity to look at differ scales and the relationships between them. At the individual scale, if we wish to create behavioural change there is a significant wealth of knowledge and research that demonstrates that we must take into account the psychological or inner quadrants. If we do, we can construct robust change models. These inner approaches give us valuable insights into how to intervene and why many interventions have been unsuccessful.

Theories of sustainability transitions in turn allow us to understand how change might happen on larger scales, and how small niche experiments might scale up into larger system change. Although we can never use these models to predict how or in what way change might eventually happen, they may be able to provide us with valuable insights into leverage points, system instability and landscape changes which lead to change even when the incumbent regime seems intransigent.

Although models are only approximations of the real world, I hope that taking a look at selected models can generate a increased ability to think strategically, create logic models which then enable us to measure our results. This in turn will provide feedback, which is a prerequisite for learning. Learning in turn enhances our ability to act swiftly and powerfully to create the changes our world so desperately needs.