PATHWAYS TO A MORE SUSTAINABLE FUTURE

Helping nature, the environment and sustainability through lifewide action & learning

IT'S A JOURNEY

@brenna_quinlan

Content

Pathways to a More Sustainable Future
Norman Jackson

"lifelong learning is a journey of lifelong becoming, which is nothing other than learning how to live and be on this tiny planet" [1] **Unfortunately, as a species, we are not doing very well in achieving this goal and we need to work out how to do it better!**

Global context

Science tells us that our resource intensive consumptive and wasteful habits (we are using nature 1.8 times faster than our planet's biocapacity can regenerate), and continuous economic growth, are causing us to exceed key planetary boundaries[2] (see next article in magazine). Economic/ technological prosperity for some societies, has been achieved at the cost of destabilising the systems – like our climate and oceans, that enable all forms of life to flourish. We need to change the way we live if we are to have a future and that involves changing the way we think about ourselves in relation to everything else and achieving this difficult transition is a key challenge for lifelong-lifewide learning and education.

We can look at our current situation in despair – why have we brought ourselves to the edge of destruction? Or, we can look at our situation with optimism – the transition we have tomake is a necessary part of our evolution as an intelligent species. A significant part of the wicked problem of our future survival is framed by the United Nations 2030 Agenda for Sustainable Development[3] which sets out 17 Sustainable Development Goals (SDGs).

Education has it's own goal – SDG#4 "Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all" [4]. SDG#4 gives education a new role – to encourage behaviors that will support the achievement of a sustainable future. An important part of this new role is to educate ourselves into new ways of understanding and behaving, which actively embrace learning as the core regenerative enterprise of living our life.

Integrating learning and living for a more sustainable future

Lifelong learning has many meanings but one that is particularly relevant to trying to enact the SDGs at a personal level was provided by Arne Carlsen, former Director UNESCO Institute for Lifelong Learning, who said *'lifelong learning is the integration of learning and living, covering lifelong (cradle to grave) and lifewide learning for people of all ages, delivered, undertaken [and experienced] through a variety of modalities (formal, non-formal and informal) which together meet a wide range of learning needs and demands.'* [5].

This seems like a sensible proposition. Learning to live a certain sort of life, then learning through the experiences that emerge as we live that life, is the most complete and useful relationship we can recognise between our learning, our daily activities and actions and ourselves. We learn in order to live a certain sort of life in a particular environment(s) and our learning emerges, whether we like it or not, as a result of participating in that life. This is why the lifewide-dimension of lifelong learning is essential to understanding how lifelong learning can contribute to the SDGs at a personal level and it underpins our experiential inquiry into how we might learn to live a life that is more likely to help nature and the environment and contribute to a future that is more sustainable.

Why pathways?

As our cover image by Brenna Quinlan tells us learning to live a certain sort of life is a journey involving the creation and co-creation of lots of actions and activities towards some sort of goal or vision through which we gain experiences and learn in the process. In effect we are creating not just one but many pathways towards something that we may not fully comprehend. We are using the idea of pathways as a way of representing both the sense of direction and the process and transformations required to move towards a more sustainable future. It's a metaphor for the journey through which we create versions of ourselves that are in harmony with this goal.

Action and Learning for Nature, the Environment & Sustainable Futures

"Implicit in the UN's Sustainable Development Goal (SDG) Agenda is the notion that environmental sustainability is intertwined with, and underpins, the 17 Goals. Yet the language of the Goals, and their Targets and indicators is blind to the myriad ways in which nature supports people's health and wealth – which we argue represents a key impediment to progress."[6] The 17 SDGs are set at the highest level of action. They are designed and intended to make policy makers, Governments, large organisations and institutions take notice of the urgent need for change.

At the level of an individual it can be a challenge to interpret what a particular SDG might mean but this is where we can all make a distinctive contribution by interpreting the SDGs in the contexts of our own lives and actioning in ways that mean something to us. By sharing our interpretations, experiences and the results of our efforts and the learning we gain, we can collectively advance understanding.

The question arises as to which SDGs we might connect the idea of helping nature, the environment and sustainability. The answer of course is that all of the SDGs have the potential to be connected to these concerns[6] and it is for us to decide which of them have particular meaning and relevance in our own contexts and circum-stances.

'Helping' Nature and the Environment

The basic proposition underlying our inquiry is that we can all do more to live on this tiny planet in ways that : a) are less harmful to the environment and the life it contains and b) make a positive contribution to the understanding, appreciation, and where possible, the sustainability and regeneration of the world we inhabit.

In a general sense we are talking about taking action to improve the health of our environment. We can achieve this by being more aware of our environment and the living things within it and of the effects we are having, and where possible develop habits and practices that minimize any adverse effects.

We can go further by adding new activities and projects to our life through which we are able to make a positive, regenerative, difference to our environment and or influence others so that our effects are amplified. There are many ways in which we can do this through the roles we perform for example as parents/grandparents, partners, friends and colleagues, teachers, gardeners, artists and many other relationships and ways of being.

Underlying our proposition is another proposition – that by connecting to and 'helping' nature we are helping ourselves. There is much research that demonstrates the beneficial impacts of being connected to nature in terms of improving our own physical and or mental health. There are benefits to our health from exercise as we experience nature through walking, running, swimming and many other activities but there are also benefits to our mental states. Contact with nature is associated with increases in happiness, subjective well-being, positive affect, positive social interactions and a sense of meaning and purpose in life, as well as decreases in mental distress[7].

It would be very interesting to explore these reciprocal relationships between the actions we take to improve the health of our environment and the potential beneficial impacts on our own health and wellbeing as we take action to help and care for our environment.

Finding Inspiration – in nature and the environment and working for a sustainable future
Without 'will' nothing will happen but we all need to discover the motivations to change what we do or add new activities to an already busy life. Sometimes we are inspired by the very idea of trying to help someone or something, sometimes the something inspires us or perhaps there is something in the process, our relationships or what emerges that sustains our actions. Perhaps also simply by interacting with other people who share our beliefs and values can be helpful. Our aim is to understand the nature of the motivations that encourage and enable us to commit to pursuing our pathways to a more sustainable future.

The aim of our inquiry was to encourage people to challenge themselves to act in ways that make a positive contribution to nature, the environment and sustainability in line with any of the Sustainable Development Goals[3] that they choose. We anticipated that the outcomes from participants' journeys would be both *personal* e.g. learning how to live a life that is more in tune with the needs of our tiny planet and in the process creating a better version of ourself, and *communal* e.g. we gain as a community by encouraging, helping and supporting each other. The content of this magazine reflects this. The first part of the magazine summarises participants pathway stories based on the narrative used in a set of digital stories that can found at: https://www.lifewideeducation.uk/pathways-stories.html . The second part of the magazine includes three articles that are based on the community providing responses to questions and two articles that seek to provide conceptual perspectives drawn from our inquiry.

The facilitators—Melissa Shaw, Jenny Willis and Norman Jackson, would like to thank all participants for their commitment and community spirit to our lifewide learning inquiry.

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Facilitators
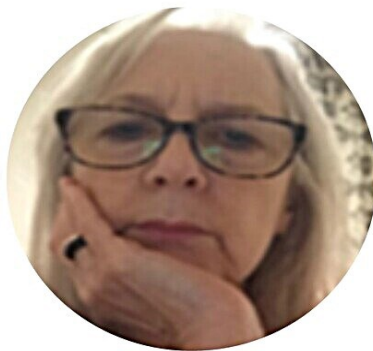
**Norman Jackson**   **Melissa Shaw**   **Jenny Willis**

Earth Beyond Six of Nine Planetary Boundaries
New Report Stockholm Resilience Centre

Existential threat

Concern for the health and wellbeing of our planet and the ecosystems that support all life is at the heart of our inquiry into how we can, as individuals, communities, collectives and societies help nature, the environment and   sustainability. The Sustainable Development Goals frame the complex set of problems humans have created that threaten the sustainability of the planet, human civilisation and living things more generally, but the planetary boundaries scientific concept provides another way of visualising the nature, scale and seriousness of the challenge we are facing.

Figure 1 9 planetary boundaries
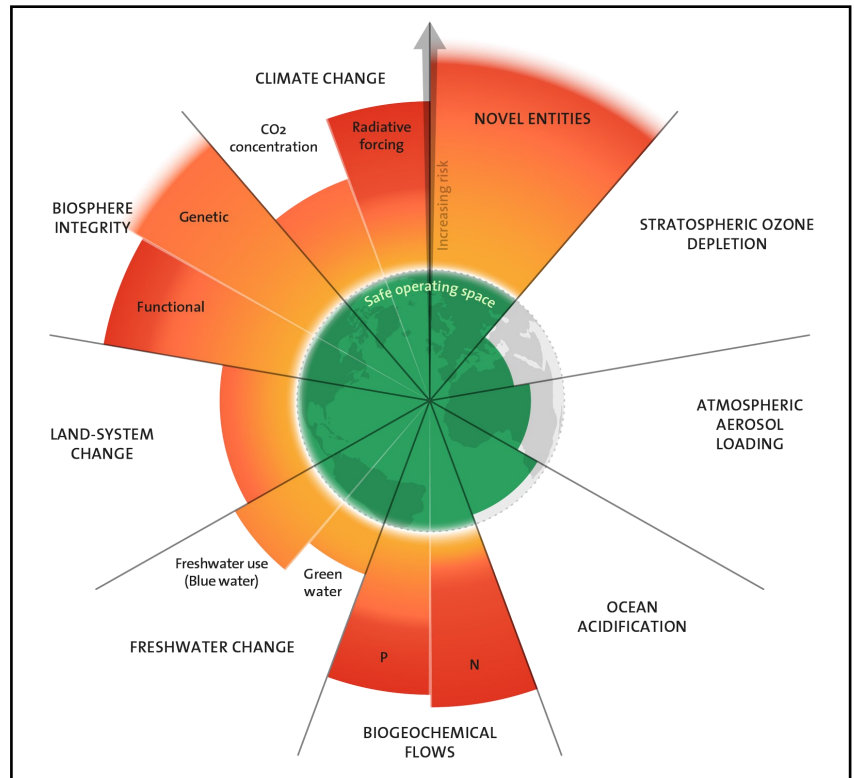
A new report by the Stockholm Resilience Centre tells us that human activity affects

the Earth's climate and ecosystems more than ever which risks the stability of the entire planet. **For the first time ever all nine planetary boundaries that define a safe operating space for humanity, have been assessed, and six of the boundaries are now transgressed (Figure 1).**

The speed with which we are damaging these key planetary systems is shocking when we see the pattern of chang-es over time (Figure 2). *"This update on planetary boundaries clearly depicts a patient that is unwell, as pressure on the planet increases and vital boundaries are being breached. We don't know how long we can keep transgressing these key boundaries before combined pressures lead to irreversible change and harm,"* says Centre researcher and co-author Johan Rockström, Director of the Potsdam Institute for Climate Impact Research (PIK)

Figure 2 Changing global boundary patterns over time.

2009 — 3 boundaries crossed

2015 — 4 boundaries crossed

2023 — 6 boundaries crossed
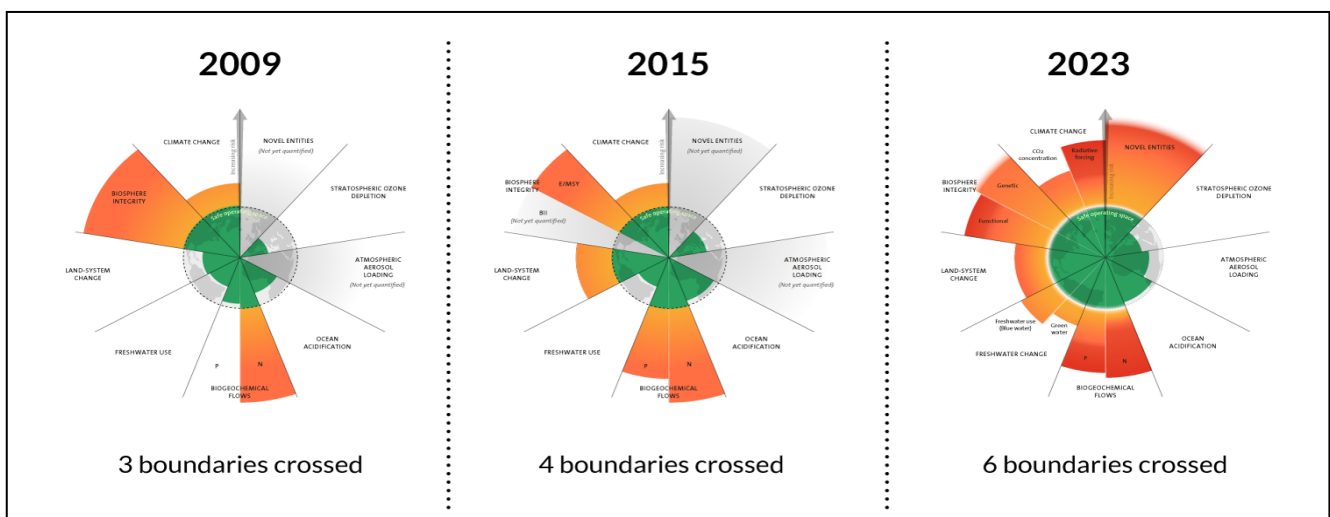
The new study is the third major assessment of the planetary boundaries framework, first introduced in 2009. It is the first to provide a complete check-up of all nine processes and systems that maintain the stability and resilience of our planet. While transgressing a boundary is not equivalent to drastic changes happening overnight, together they mark a critical threshold for increasing risks to people and the ecosystems we are part of. Lead author Katherine Richardson, professor in biological oceanography and leader of the Sustainability Science Centre at the University of Copenhagen explains further: *"We can think of Earth as a human body, and the planetary boundaries as blood pressure. Over 120/80 does not indicate a certain heart attack but it does raise the risk and, therefore, we work to reduce blood pressure. The boundary for ozone depletion was exceeded in the 1990s but – thanks to global initiatives, catalysed by the Montreal Protocol, this boundary is no longer transgressed."*

The freshwater boundary now addresses both green water (invisible water, held in soil and plants in farms, forests etc.) and blue water (visible water in rivers, lakes etc) – both boundaries are transgressed.

As another first, a new approach for dynamically assessing biosphere integrity has been introduced. This reveals evidence of impaired functioning of ecosystems, showing that the boundary was already transgressed during the late 19th century when global agriculture and forestry saw their first major expansions.

In light of these new outcomes, the researchers emphasise that Earth resilience goes well beyond climate change.

"The planetary boundaries framework helps scientists to track and communicate how these rising pressures are destabilizing our planet. Earth is a living planet, so the consequences are impossible to predict. That is why we are working more and more with policymakers, businesses and wider society to try to mitigate pressures on all boundaries", stresses co-author Sarah Cornell of the Stockholm Resilience Centre at Stockholm University.

The boundary for ozone depletion was exceeded in the 1990s but – thanks to global initiatives, catalysed by the Montreal Protocol, this boundary is no longer transgressed. Katherine Richardson, lead author

Deploying comprehensive computer models and simulations has played a major part in the study. Computer models of Earth system functioning are used to study interactions between climate and ecosystems in the biosphere. Simulations were done for several hundred years in the future to allow not just processes that react relatively quickly to change, but also the much slower Earth system processes that ultimately determine the outcome of environmental change caused today.

"Science and the world at large are really concerned over all the extreme climate events hitting societies across the planet as we move through the third human-amplified El Niño in only 25 years. But what worries us, even more, is the rising signs of dwindling planetary resilience, manifested by the breaching of planetary boundaries, which brings us closer to tipping points, and closes the window to having any chance of holding the 1.5°C planetary climate boundary," Johan Rockström says.

The new planetary boundaries assessment underlines the tight and complex links between people and planet. It gives a basis for more systematic efforts to protect, recover and rebuild Earth resilience.

"Ultimately, it highlights the environmental consequences of living in the Anthropocene, and our responsibility as future stewards for the planet", concludes co-author Ingo Fetzer of the Stockholm Resilience Centre at Stockholm University.

If we ever needed reminding of the urgency and scale of the problem we are trying to engage with through our self-educational pathways inquiry, then this report does the trick!

Overview of Pathways Projects
Jenny Willis

Background

Over recent years, LWE has been investigating the nature of the sustainable development goals (SDGs) and attempting to make them meaningful at the micro, personal level. Between March and June of 2022, we explored:

the Sustainable Development Goals and what it might mean to live in ways that are more likely to create a future that is more sustainable (…) the relationships and interdependencies between action, creativity and learning for healthy, sustainable, regenerative futures and individuals' own health, wellbeing and development as a human being.[1]

This reflected my own hypothesis that *"the SDGs are aimed, fundamentally if not explicitly, at enhancing wellbeing, that of the individual, the local community, the wider community and the global environment, from climate to geography, including economic wellbeing and stretching beyond the present generation to those yet to be born."*[2]

By 2023, the next stage of our inquiry again addressed the need for immediate environmental action and reinforced our indivisible connection with nature. The project guide put it boldly:

lifelong learning is a journey of lifelong becoming, which is nothing other than learning how to live and be on this tiny planet". Unfortunately, as a species, we are not doing very well in achieving this goal and this Initiative is for those who want to try to do better![3]

We acknowledged the difficulties of tackling such a daunting task, but proposed that

we can all do more to live on this tiny planet in ways that: a) are less harmful to the environment and the life it contains and b) make a positive contribution to the understanding, appreciation, and where possible, the sustainability and regeneration of the world we inhabit.

Underlying our proposition is another proposition – that by connecting to and 'helping' nature we are helping ourselves.[3]

Figure 1 The 17 SDGs[4]

Process

This inquiry was a more ambitious than the last, extended over a 6-month period from April to September 2023. An open invitation to take part was circulated on LinkedIn and by email. Community and collaboration were essential to sustaining motivation, so monthly Zoom meetings were held at a time conducive to participants in different time zones. Prior to embarking on projects, the community came together to meet, discuss the expectations of their projects and view sample material produced by the facilitation team (Norman Jackson, Melissa Shaw, Jenny Willis).

The expectations of participants were to:

- Reflect on their lives with reference to the SDGs and identify where they might act on behalf of nature, the environment and sustainability.
- Select one of more of the SDGs that would form the focus for new ways of living e.g. build on something they were already trying to do, identify ways they might change their current life or challenge themself by creating entirely new activities.

- Keep a diary (e.g. word, blog, notebook, scrapbook or any other format) and make a weekly entry describing their activities and experiences, and what they have learnt.
- Share what they have learnt by making a post at the end of each month on the LinkedIn Pathways site.
- Participate in a monthly Zoom meeting, to connect to and share with other participants.
- At the end of the experience, create a digital story to share with the community, that synthesises the essence of their experience and what they have gained from it.

Projects

A total of 13 projects were undertaken. These form the substance of articles in this edition of LWE but are summarised for convenience in Table 1. The numbers represent no more than the order in which projects were received.

As the table shows, some projects were given a title whilst others (3, 6) described their objectives and/or methodologies.

Some of these projects built on pre-existing frameworks e.g., 5, Create a Metre of Meadow in your School, some on previous work e.g. 9, Sustainable Marymount and others were entirely new ventures e.g. 7, Sustainable Home Gardening

Column 2 of Table 1 indicates whom the project leaders were proposing to involve in their work. This developed as their projects advanced, and there was considerable merging of boundaries, but at this stage, the projects were primarily collaborations with:
- Educational colleagues/students – 6
- The natural environment – 2
- Local community – 2
- Family members – 1
- Other – 2 (personal health; political engagement)

Members of the community were located in Canada, Caribbean, Chile, Colombia, Czech Republic, Norway, S Ireland and the UK, offering a diverse range of social contexts for our experiments (column 3).

The final column of Table 1 records the SDGs explicitly addressed by each project. Clearly, collaboration (SDG#17) was integral to the inquiry process, yet only one person listed this overtly; some project outlines did not identify their SDGs at this stage, hence the question marks where I have had to make assumptions, and it should be noted that as projects developed, the perception of SDGs involved in some projects became more obvious or changed as the scale of a project was revised. At this point, the number of projects focused on each SDG were:

#15, Life on Land – 8
#3, Good Health and Wellbeing – 4
#12, Responsible Consumption and Production – 3
#11, Sustainable Cities and Communities – 2
#4, Quality Education – 1
#5, Gender Equality – 1
#10, Reducing Inequality – 1
#16, Peace, Justice & Strong Institutions – 1
#17, Partnerships for the Goals – 1

This is a simplistic reading of the data since themes overlapped and were not always explicitly recognised. Nevertheless, SDG#15 has greatest priority and involves micro-level projects on participants' own land, extending to community projects such as number 10 (Betchworth village).

Column 2 showed the importance of educational settings, yet SDG#4, Quality Education, emerges only once as an objective. It is, of course, embedded in others such as #12, Responsible consumption. Similarly, it might be argued that #10, Reducing Inequality, is a potential outcome of many of the projects.

And what about SDGs #1 (Reducing Poverty), #2 (Reducing Hunger), #6 (Clean Water), #7 (Clean Energy), #8 (Decent Work), #9 (industry), #13 (Climate) and #14 (Life below Water), does their absence mean that they are relatively unimportant? Or is it, rather, that they are subsumed within other SDGs or are likely outcomes of proposed action

Table 1 Overview of Projects

| Title / description	Partners	Location	SDG
1 Tending the planet in one garden – a multi-generational approach	Family	Surrey, UK	3 Good health & wellbeing 11 Sustainable cities & communities 15 Life on land
2 Motivating others to protect and make changes regarding what's considered for granted	School pupils and their families	Chile	11 Sustainable cities & communities 15 Life on land ?
3 How to limit data How to reduce energy in online use How to switch/ adapt from paper based resources such as flipchart, post its, handouts How to monitor and promote an environmentally friendly classroom in the context of a staff workshop (with its associated catering: hot drinks, biscuits)	Colleagues – teaching staff	Loughborough, UK	12 Responsible consumption & production
4 The spiral of human and environmental wellbeing	The environment	Surrey, UK	3 Good health & wellbeing 15 Life on land
5 2023 Challenge Create a metre of meadow in your school	School children and staff	Dublin, Ireland	15 Life on land
6 Researched National Park Cities, aim to scale to a back garden and evaluate	The environment	Scotland	3 Good health & wellbeing 5 Gender equality 13 Climate action 15 Life on land
7 Sustainable home gardening	Garden	Ontario, Canada	15 Life on land?
8 Changing Mindset – One at a Time Youth Cleaning up the Environment	Jeramie Ramasir Youth	Canada, Trinidad	15 Life on land?
9 Sustainable Marymount Challenge - the management of garbage	School children and staff	Medellin, Colombia	13 Climate action
10 Norman's mini-B line	Betchworth village	Surrey, UK	3 Good health & wellbeing 15 Life on land 17 Partnerships for the goals
11 A question of scale	Political groups	UK	11 Sustainable cities & communities 12 Responsible consumption & production 15 Life on land 16 Peace, justice, strong institutions ?
12 Fast or S-L-O-W	Self and charity	Czech Republic	3 Good health & wellbeing 12 Responsible consumption & production
13 How to bring sustainability into our flexible studies	HE curriculum	Norway	4 Quality education 10 Reducing inequality

but not explicit aims? The following accounts of individual projects will answer these questions as they give a fascinating insight into true action research, with its ups and downs.

Motivation emerged early in the process as a key issue, and is discussed in two articles. The outcomes of these 13, widely different, projects confirm the potential for micro-level action to make real, albeit small, steps towards addressing the SDGs in our everyday lives. They are inspirational – may you be inspired!

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3 PATHWAYS TO A MORE SUSTAINABLE FUTURE Action for Nature, the Environment & Sustainability Lifewide Magazine #27
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Digital Stories
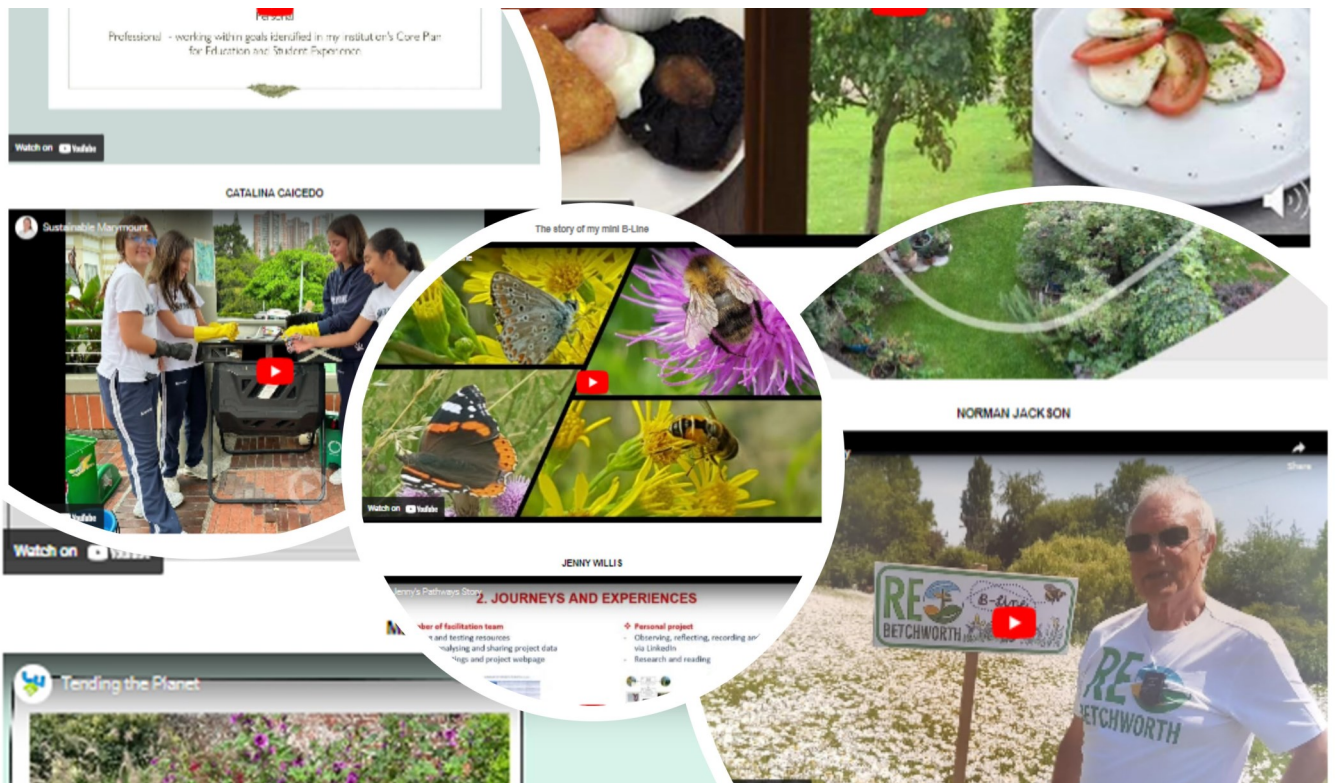
To conclude our Pathways Inquiry we invited participants to create a short (5 minute) digital story— a spoken narrative illustrated with a few images. You can see and hear the stories at:

https://www.lifewideeducation.uk/pathways-stories.html

The following pages provide a summary of each story.

Pathways for Sustainable Happier Lives
cast our seeds far and wide, we never know where they will take root and grow
Josefina Ramirez

Long and winding road

I want to share with you my pathways for sustainable happier lives in the past and recently finished inquiry we made with the lifewide learning collective. The pathways I have experienced have been a long haul. They have been inviting and frustrating. They have produced results, but they have also been resultless. They have started of being inviting, then developed into been mysterious, surprising and energizing and then again inviting, in a cycle of moments and emotions.
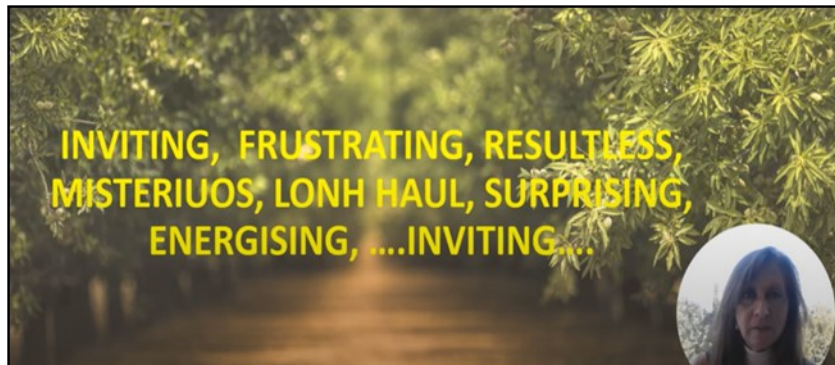
It has been a cycle that I'm hoping to repeat, probably with more results, but I now understand that this is a cycle in which results are slower than what we anticipate.

When working on human processes, timings are longer, and learning is unpredictable, larger and broader than expected. To achieve happier lives, we must be aware that happiness requires sustainability, and it involves long processes. It also requires work. We cannot take for granted that we can just be happy without doing anything: to create this happiness – effort is needed. Work requires planning and it requires perseverance. And of course, planning and perseverance are easier when shared with others, which we have been doing in this inquiry the past years. The small actions that each one attempts, are ripples that motivate bigger tides.

Regarding my contribution to this tide: my pathways have developed over three years in different ways, in different areas and different contexts. My huge interest in human relationships and also my love for nature have taken different forms and different paths including: .

- all the work with children in early years education,

- all the work with our student teachers that are learning different curricular possibilities such as Forest School principles where trainee teachers are learning how to involve nature in education to have a more holistic and harmonious development for children.

- Also the context of leadership in educational context such as with the faculty of education as well as being head of a preschool and the leader of a team of teachers where we are working towards having a more sustainable and happier life.

- Also connecting myself with nature and how I've involved my family. We have all developed a style of life regarding nature as a very central part of it.

- And finally joining groups that are, like me, interested in the same things from different parts of the world, such as the lifewide learning collective.

In all these areas my inquiries have helped my development, but my pathways have had unexpected results. I've recently found that I have not been looking at the results of my work for the SDGs in the right way.

My Journeys

My journeys started years ago with our first collaborative inquiry, when I tried to involve student teachers in the Early Year Teaching Programme as well as colleagues in the Faculty of Education and families in the Early Year Centre, to develop certain aspects of the SGDs.

The first step was to recognize one or more of the SDGs and what kind of activity we could undertake to make a difference. This evolved into the idea of involving families directly in the Early Years Centre, through things that would be engaging, as well as working with the children in one or more of the SDGs. Finally, it ended up this year involving families in choosing one or two SDGs, in particular when it was Earth Day and Water Day, to encourage them in an optimistic way to help them discover what they were already doing something so that they will feel competent about it. One of my reflections regarding sustainable happiness,

2 My journey(s) [experiences, significant moments/events, surprises & challenges,

is that sense of guilt and incompetence tends to paralyze people. So I have tried to show a positive, optimistic view and path.
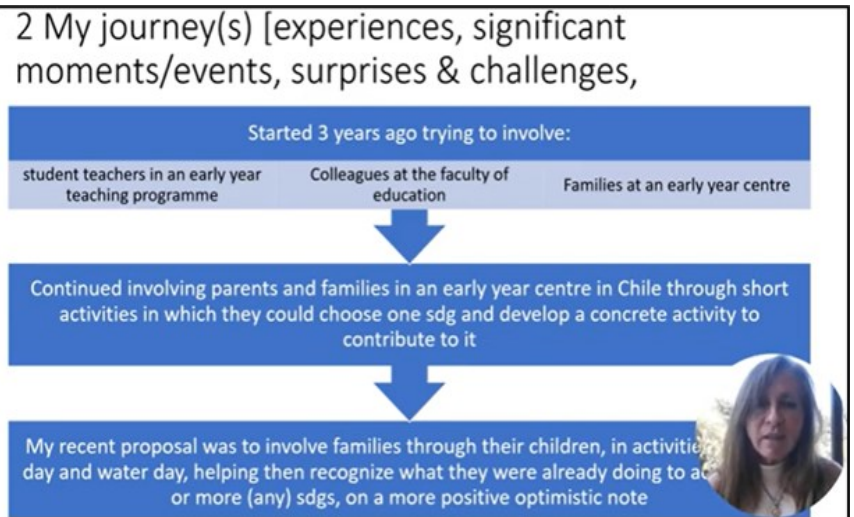
In these three years, the results emerging from my efforts appeared to be really small and at it showed to be smaller scale than what I would have expected. So, in that sense, it has been frustrating. In some respects, I judged my efforts as resultless.

Despite that, recently I have discovered that some of my efforts have had an invisible, although positive effect.

For example, I was recently developing a podcast for alumnae from our early year programme, and as we were recording the podcast I discovered that one of my old students had started a Forest School as a result of one of our initial conversations regarding the SDGs and the need to develop a wider and broader conscious regarding Earth.

I have now discovered that a couple of Forest Schools have been developed from our early promotion of these ideas and it has made me realise that the effects of our efforts are not always immediate, and they might be indirect, rather than a direct consequence of my actions, and unexpected and invisible to me. So in a sense, the results are deeper than what I was expecting. On other aspect of my pathways, I see my colleagues are already using this subject with their own students, as a result of being motivated through our previous conversations, three years ago.

Growth is Organic

So finally, what have I learnt from all this?

Sometimes we "plant", an idea, and we think we've sown the seed in the right place, controlling variables, where we think it will develop and grow.

It comes as a surprise when we discover the idea does not grow in the way we imagined it would grow even though we felt the conditions were perfect.

But, when we cast our seeds far and wide, we never know where they will land, and when they wil take root and grow, and have effects far beyond what we can imagine.

That is my nugget of learning grown from my pathways experience of trying to encourage happier and sustainable lives.

And because each drop or each seed planted by each person, may become a forest, one of my proposals or aspirations after all this, is to develop a monthly podcast on the theme of lifewide learning for happier and healthier and sustainable lives, where we could discuss in about 20 minutes, the ideas and small (or big) actions we have been doing, and in this way extend our reach and influence. We might be surprised at the effects we have.
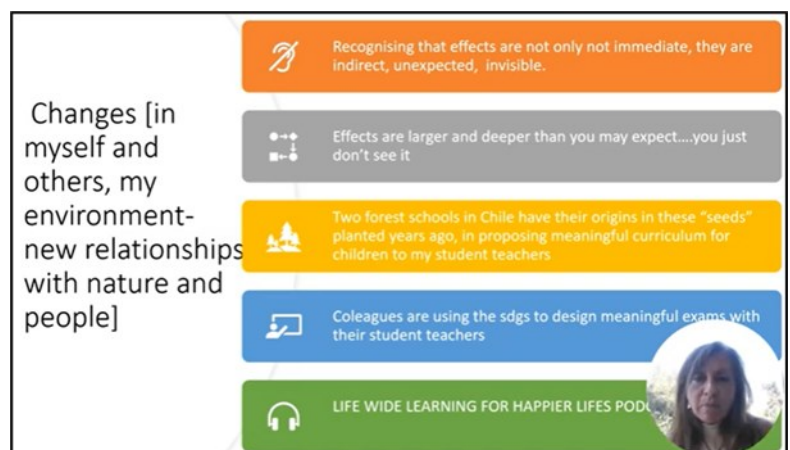
Educating for a More Sustainable Future SDG#13:
Developing Environmental Leaders for a Sustainable Future
Catalina Caicedo

Sustainable Marymount

I am High School Principal at the Marymount School Medellín, and sustainability has caught my attention in recent years. We have incorporated sustainability into the School through many different actions, that I have shared and described in past inquiries. Initially we drafted a sustainability project called Sustainable Marymount, which brings together the different actions from the social, environmental and economic pillars that contribute to the sustainability of the School. The education we provide and our environment, aims to develop social and environmental awareness in all students and staff so that they play their part in helping to create a more sustainable future.

Our challenge

For this inquiry, the Environmental Sustainable Marymount Committee identified a challenge at Marymount, relating to the need for better management of garbage at the School, since students and staff are not separating the garbage in ways that enable effective recycling. This is challenge aligns with SDG #13 Take urgent measures to combat climate change and its effects.

The InnovaT team, that promotes innovation at the School, convened a group of student representatives from the Elementary, Middle and High School. Three meetings were scheduled to tackle and solve this challenge using the Design Thinking methodology adapted to Marymount. It has three phases 1. Let's start. 2. Let's continue. 3. Let's finish.

First Meeting: think, ask & observe

In the first meeting, the question or challenge to be resolved was defined: How to motivate
the Marymount community to use the bins correctly? It was agreed that the audiences that is going to provide information to help with the solution to this question is includes students and teaching and non-teaching staff. As the first step of the challenge it was agreed that the audiences will be surveyed to understand the problem based in evidence. Here is the questions posed by the members of InnovaT.

How to motivate the Marymount community to use the bins correctly?

The teachers:
1. Is it difficult for you to use the garbage cans at school?
2. What do you think could help to identify the bins?
3. What motivates you to use the bins correctly?
4. How do you quickly recognize the use of the bins?

The general service workers:
1. How do you classify garbage?
2. How can we improve garbage classification at school?
3. Why is it important that we correctly classify garbage?
4. What happens to the garbage after it leaves the school?

The students:
1. Is it easy for you to classify garbage? Because?
2. How do you recognize the place where we can put the waste?
3. What strategies do you use to classify your waste at school?
4. How do you recognize the place where we can put the waste?
5. What characteristics could the place where you put the garbage have to make it easier to classify it?

Second Meeting: think & observe

The teams are followed up, they are given time to go and collect information on the questions to each actor in the community. A brainstorm of solutions to the problem begins.

Absurd ideas
 Pedal bins instead of putting your hand in the bin
 Electronic device that helps you identify trash
 Thermometer indicating what happened to what you recycled (what is the concrete effect of what you are doing?)
 A self-separation system for garbage. You put it in the same space and it separates it automatically.
 That the colour of the bag matches the colour of the bin
 Encourage correct use with prizes

Homework: What other absurd solutions can we think of? Collect new answers and summarise common points.

Third Meeting: let's think

The meeting with the students began with a review of the tasks that were left to them from the previous session. They had a particular task for garbage management. The 9th grade students said that the color pattern of the bins is confusing, that there was no clarity about it. Therefore, it is important that the color pattern is the same across the whole school. The information is not arriving clearly, they consider that the number of bins is not enough and the location of the bins is not strategic.

Finally, the environmental sustainability committee, capitalizing on the information collected by the innovation group, decided to choose environmental leaders from each grade of the School, so that they would be the ones to empower and teach their classmates about environmental awareness and waste separation. With the following profile and functions:

Environmental Leader Profile
She is a student who expresses a genuine interest in caring for the environment and her surroundings, with an environmental awareness that allows her to learn about these current problems. She is committed and consistent with her ideas and actions, this allows her to impact the environmental care behaviours of the community.

Functions of Environmental Leaders
- Raise awareness in your group about the relevance of caring for the environment.
- Propose and carry out ideas that promote environmental awareness in your group.
- Ensure good environmental practices:

Adequate waste separation
1. Organic waste, take it to the compost bin.
2. Take batteries to the battery container in the art corridor.
3. usable material in the white bag bin.
4. unusable material in the black bag bin.
5. little bottles of love.

Good use of resources:
1. energy: turn off lights, fans, screens, video beams, speakers and computers...
2. Water: use only what is necessary for washing hands, do not leave the taps dripping.
3. various materials: make rational use of hand towels, toilet paper, sheets of paper...
 Be spokespersons for the Marymount Environmental Committee projects in their groups.
 Monitor the impact of your work.

The environmental committee will provide education for the school staff in waste separation so that adults are trained on the subject to be an example for the students, who will also be trained by the environmental leaders. It is a matter of culture, and it will take time, it must be a continuous effort and a lot of repetition so that the habit of separation is generated.

Another action taken by the environmental committee was the purchase of new waste separation stations (bins), which comply with Colombian legislation and will have signs explaining what is deposited in each bin, with examples from the daily lives of our students. In this way we are demonstrating our awareness and commitment to environmental issues and sustainability in the Marymount Community. More than this we are educating our students to become responsible, environmentally aware, citizens who are willing to contribute to a more sustainable future and habitable earth for all.

Tending the Planet and My Family
Melissa Shaw

I formed my pathway around the idea of tending the planet in ways that I can connect with Sustainable Development Goals #3,#11 and #15. In the early and rose-tinted glasses stage of my project, I hoped to give practical substance to the idea of tending the planet through the act of tending a garden: specifically, my daughter's garden. I hoped that through helping her with gardening, I might also help my two young grandchildren to learn and care about the natural world. I imagined that I might encourage this very busy family to invest some of their time in their garden: planting, weeding etc. and noticing the lifecycles of the trees, plants and animals living in and around the garden.

My first hurdle to progress with my plan was to confront the reality that the time I could spare to spend in the garden with my daughter and family was quite limited. When I visited them, I focused on being with my family, and helping with childcare and more generally, at the expense of gardening with my grandchildren, and encouraging them to enjoy their garden, beyond their outdoor toys. I re-visited the delight, but also was reminded of how tiring and demanding small children can be.

Some weeks into my project, I visited Down House in Surrey (left). This is the house where Charles Darwin lived with his family, and where he wrote "The Origin of the Species". In fact, there is a dusty cupboard in the house where it is said that Darwin stored his manuscript for some years, while he summoned the courage to get it published. I visited with my mother and sister on a glorious, sunny mid-summer afternoon. We took a tour of the lovely and extensive gardens. We were shown the still living tree (on the right in the photo) his children had climbed up to and down from their bedrooms; as well as re-creations of some of the plant and insect experiments that Darwin engaged his large family of children in, such as counting plants and observing worms. I was struck by his approach of including his children in his painstaking, groundbreaking work.

I was boosted by this affirmation of the potential role of a family working together on small and domestic activities but also contributing to something grander. I persisted with my efforts to encourage my 3-year-old granddaughter to note and be interested in the plants and animals in her garden, and beyond. I was unexpectedly and thrillingly rewarded when my daughter told me that my granddaughter had found, discarded in the flower bed, the old dessert spoon I had encouraged her to dig with when we planted bulbs together the previous Autumn. When she found the spoon, my granddaughter explained what we had done together. In truth, it had been a pretty frantic 10 minutes of digging, scattering and hoping for the best, but my granddaughter remembered this and explained that the bulbs had become flowers. I was impressed by the impact of these few minutes of activity. I felt re-charged to continue with various, small activities with my grandchildren, designed to progress my project, including stopping to look at flowers and fruit trees on neighbourhood walks, picking strawberries on my patio, watching butterflies in their garden, and closely examining plants and insects when we had the chance.

In mid-August I went with my daughter and grandchildren to visit an estate and formal garden. My daughter packed a picnic and a bug box and magnifying glass in her rucksack of essentials for a daytrip with small children. After our picnic and time in the children's play area, we walked past the long, herbaceous border full of colourful plants and bushes in full bloom. I stood with my youngest granddaughter, who watched from the pushchair while her sister eagerly examined blooms with her magnifying glass and attempted to trap a passing fly in the bug box, but without success. I watched and photographed my daughter engaging with her daughter in this exploration (I have permission to use this photo). I was enchanted to be in this 3 generations collaboration of family enjoying being together, and being in and learning about the natural world. I reflected that tending the family and tending the planet can be complementary.

Tending the garden:

✓ planting bulbs
✓ stopping to look at colourful flowers in other gardens and apples ripening on a tree
✓ picking and eating strawberries on the patio
✓ chasing butterflies
✓ examining the herbaceous border with a magnifying glass

So what have I achieved and learned? I have realised that seemingly small actions I have taken might have more impact, on others and on myself, than I expected. I have been reminded that most change evolves and unfolds. Even if we need to make rapid progress to address the SDGs, we must build momentum in ourselves and in others. I have become aware that there are many actual and potential allies for this project (not least in the community of colleagues within the Pathfinder Inquiry) and that engaging with them offers inspiration, solidarity and encouragement.

Tending the family & tending the planet are complimentary

I have learned something profound about the act of tending and its possibilities for me, in my roles as mother, grandmother, employee, volunteer, friend, family member and world citizen. I see this thread echoed in the 17 SDGs which address numerous and interwoven issues, causes and areas of life.

I'm not certain that I have achieved a great deal in practical terms over these past months, but I feel a shift in perspective and a direction, motivation and way of being for my future. I hope that I have started to plant seeds of awareness, ideas and hope in my family, and which my granddaughters will take forward into their lives for the future challenges they must face.

Thank you to my family for their engagement and support, and to colleagues in the Lifewide community for their help and positivity.

Synonyms for tending (according to Microsoft): **look after, take care of, see to, wait on, cater to, keep an eye on, mind,** p**rotect, watch, guard, nurse, nurture, cherish, maintain, cultivate, keep, manage, care for, minister to, attend to, watch over**

Pathways and Meanings of Learning to Live for a Sustainable Future in a Built-up Environment
Russ Law

I was excited by Norman's pathway or bee-line when I visited him, and I wondered how to do something with the same principles, values and practical impact. However, my garden is tiny and   enclosed by three neighbours' fences.

We moved in about 18 years ago, when there was only one other house occupied. A few little saplings had been planted on the street side, and the back gardens were almost devoid of life as we know it!

Right—*Our garden soon after we moved in almost devoid of plants.*
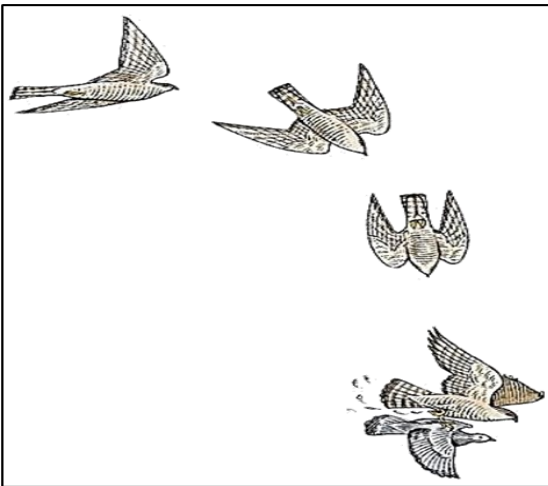
The final photograph gives an idea of how nature has taken its course – this once included a sparrowhawk swooping into the back garden, seizing an immature starling and then flying into the house with the aim of escaping through our front door, which was shut. It's a long story, involving an upstairs window, but essentially everyone survived, the starling included.

The start of my journey and my significant moment were combined when I realised that I had already begun by planting a small range of shrubs, plants and grass. I can't claim divine inspiration, but I felt an energy and an urge to proceed to develop nature in my immediate   environment.

Gradually, plants and more animals began making themselves at home. For a while, solitary bees came and went, while rogue rats did the same (they're all gone now...). Then, with the growth of branches and foliage, more species of birds called in.

Nesting boxes became occupied by bluetits and great tits in successive years. Robins, wood pigeons, the occasional nuthatch and greenfinch visited, while ubiquitous house sparrows developed a noisy housing estate in our rapidly-growing Elaeagnus bush.

I continued to potter and rearrange a bit in the garden, even though there was not much scope to develop more.
Our garden now showing the plants we have grown that provide shelter and food for much wildlife

I've made some deeper meanings and realisations in the course of our conversations and reflections:
- Sharing with neighbours, eg ideas, expertise, plans, tools and an appreciation of growing things on both sides of the fences
- Noting the effects of the wider environments of a more built-up if still green village – no more itinerant hedgehogs, no more frogs or toads
- The resilience of plant life during extremes of heat and sometimes cold; and the ways in which strategic watering can sustain the greenery
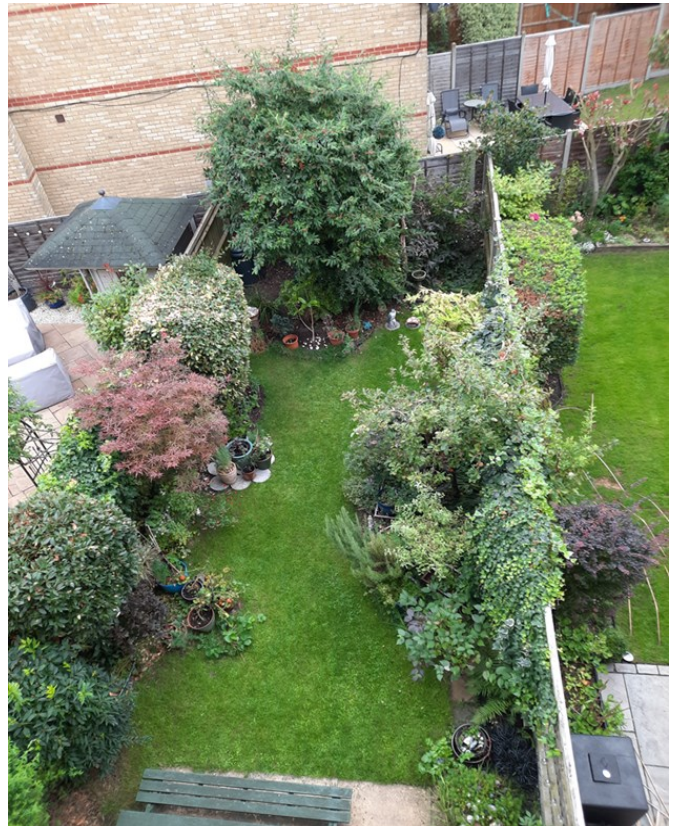
On a grander scale, I've revived my activity as a member of Greenpeace, and I'm not the only person who's noticed that it's been extremely hot lately…

Helping Nature the Environment & Sustainability:
## Helping a Community Learn
Jenny Willis

The conception of my project was difficult. First, I had to weigh my lack of emotional connection to the SDGs against my loyalty to Norman, and desire to support him in this latest activity. It was no real contest so my next hurdle was to choose a topic. My first personal insight came when I realised that I felt a need to challenge myself and do something outside my usual comfort zone of education, but what? I flailed around until I read an article sent to me by Norman, which reported on research into the connection between nature and personal wellbeing. It was obvious that this was my theme – after all, I had been researching wellbeing for 8 years! So was born my project: I would investigate what I hypothesised would be a spiral between personal and environmental wellbeing.

My experiences over these 6 months have fallen into two complementary groups:

- As a member of the facilitation team, I have been involved in planning, designing and testing the resources and exercises for participants. I was aware that this role allowed me to compensate for the low-key nature of my own project, so I took every opportunity I could to collate, analyse and share the findings of each of our tasks and surveys

- My personal experiences required me to observe, record in words or on camera, my interactions with nature, then reflect on the relationship of each experience with nature to the wellbeing of myself and the environment. This had no tangible outcomes, so I sought to enhance my conceptual understanding through reading the article Nature and mental health: An ecosystem service perspective [1](Bratman et al., Sci. Adv. 2019; 5 : eaax0903 24 July 2019) and revisiting the work of Joseph Campbell, The Hero's Journey.

3. WHAT HAS CHANGED?
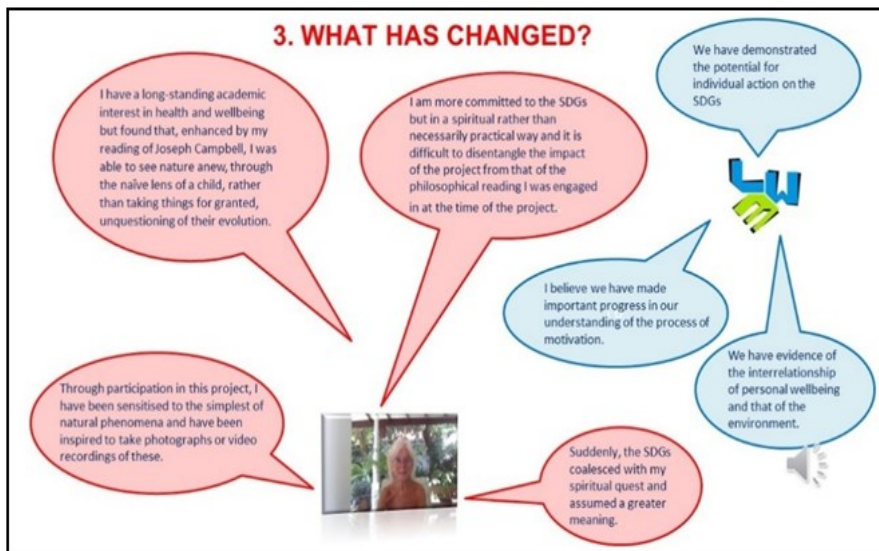
These two roles were to have an unexpected and profound impact on me spiritually. Through my revisiting the work of Jospeh Campbell, I found reassurance in the fundamental indivisibility of humans and nature as I recorded in my monthly reports. This has brought me an inner peace and a greater empathy with the SDGs.

But I believe our collective experiences have contributed to knowledge. Through LWE and our publications we can share these insights into the potential we have to make a positive impact on the environment and the links between   personal wellbeing and nature. Our research on motivation and what we have drawn from our projects enhances existing theory.

In short, the 6-month experience has brought about an unexpected, unplanned change in me spiritually which has implications for my future relationship with the environment.

At the academic level, we now have a substantial set of data and analyses to add to the knowledge base regarding the SDGs. Projects have shown the considerable impact we as individuals and small groups can have on our environment and we are able to derive mutual benefits from such activities. We have furthered our understanding of the complex process of motivation and confirmed that change takes time, requiring patience and resilience.
Thank you all for contributing to this awakening.

4. IMPORTANT LEARNING

Sources
Gregory N. Bratman et al., (2019) Nature and mental health: An ecosystem service perspective. Sci. Adv.5, eaax0903 .DOI:10.1126/sciadv.aax0903
Campbell, J. (2014). The hero's journey. New World Library.

Pathways to a Sustainable Future:
Aligning my Habits to SDG 12
Victoria Wright

I chose to create my pathway to change my habits so that I am more aligned with SDG Goal 12- Ensure sustainable consumption and production. I thought about how to achieve this goal through two lenses- in my home life and in my professional life. On my journey therefore the personal and the professional were integrated.

The vocabulary that guides my action is reduce, re-use and recycle. For me this personal inquiry has been about developing more critical awareness of what I consume and what is required in the production of those products and taking more mindful steps to moderate my consumption. For example - being aware of waste bins around the organisation I work in and also my own ways of reducing, re-using, recycling at home.

> **Goal 12 Ensure sustainable consumption & production**
>
> **My Pathway**
> **Reduce, reuse, recycle**
> *Critical awareness and mindful steps*
>
> **My Journey**
> **Personal & Professional**
>
> **Changes**
> **Shifting gaze, new learning, positive mindset**
>
> **Important Learning**
> **Living with uncertainty and living ethically**

In relation to the professional I've been working in a number of ways attached to a goal and policy identified in my institution's core plan for education and student experience about developing the awareness in staff (and therefore in students) and developing tools. For myself, returning to my personal life it has meant that I've made a number of changes.

Some of those changes have been shifting my gaze to the way I use technology as one example so the sharing of files as much as possible rather than loading as attachments on an email. It's required a lot of new learning. There were things I wasn't sure of in terms of my carbon footprint so I've been exploring and finding out in order to make more sense of what I consume and the production that is involved. And overall I've been developing a positive mindset which supports me in recognising that while I'm acting as an individual, actually that is important for us all.

Important learning includes a deeper recognition that we live in a period of deep uncertainty. That is coming through reading that I've been engaging in. One particular text that a colleague recommended to me is called *The Future We Choose: The Stubborn Optimist's Guide to the Climate Crisis*. I have found the ideas in this book very useful as a lens through which to think through how I am living my life. The book presents a number of scenarios. What it reinforces is what I've seen reinforced elsewhere that we can and must act as ethical individuals. Connecting our lives to the Sustainable Development Goals supports us in becoming ethically adaptable, flexible, skilful, as in actually working to act on the things we think we value and hold dear. If we work as ethical individuals, that will benefit us all.

My experience of working on this personal inquiry has given me more insight into the kinds of actions that I want to take in the future and the reasons why I would want to put those in place. There are some obvious limitations to living the sort of life I aspire to live. For instance, if I think about my travel, I have to travel by car and I can't yet afford an electric car but I'm going to work towards achieving or finding an achievable way to do that. That might happen over time. What I'm concentrating on now, in my present situation, is taking the small meaningful steps that advance me towards Goal 12 on an ongoing basis and working to see how I can achieve that goal even more over the next few years.

My Pathways to a Sustainable Future: Changing how I see things
Dory Reeves

I am from Northern Ireland but live in Scotland. I have been involved in Lifewide Learning since 2015 and followed the Sustainable Development Goals (SDGs) since before 2016. I have been involved in a few of the lifewide learning inquiries. Lifewide learning is relevant at any age and stage of life. We learn through every aspect of our lives, as individuals, as neighbours, and community members as well as family members, employees, volunteers and so on. The list is endless.

Projects evolve, the great thing about this project was that there was an overarching goal – to see what we could do in the way we live to connect more with nature, the environment and sustainability and SDGs and enact the changes i.e. do something rather than simply write about it. And that was it. We could choose what we wanted.

3 pathways
I have identified a:

Physical pathway – readjusting to a once familiar location following relocation. Reacquainting with town, community, neighbours. Moved to a town house with a back yard garden returned to a small woodland garden
Emotional pathway – from the sadness of leaving Aotearoa, and friends there to the excitement and anticipation of the move.
Intellectual pathway – new place, different seasons, different nature, and ecology

Significant moments on my journey
Here I identify with 3 moments or series of moments.
- Being commissioned to do a short briefing note on National Park Cities which got me wondering whether and how this idea would translate to a garden.
- That moment early on when I wondered whether I could commit to a 6 month inquiry was simply to go for it; treat it as fun, a chance to engage withe people world-wide and devote what time I felt I could
- The online sessions where every time I came away with a gem I could apply; whether it was a reminder to engage all the senses to enjoy nature from different angles and perspectives

Learning occurs at different levels.

From March to October, we have gone from Spring to Autumn in the northern hemisphere, I have moved from NZ to Scotland and feel like I have been relearning how to live in the UK. As far as this project is concerned though - at a very basic level: 6 months ago, I didn't know what a nurdle was, what impact they have on nature and how to identify them on a beach clean. 6 months ago, I didn't know what a national park city is and how they can contribute to greening our cities; 6 months ago, I didn't know how to create a pond

from a sink or a raised bed from an old bath. 6 months ago, I didn't know how much plastic free Helensburgh was doing; I didn't know what a beeline is and how to create one; and I didn't know how the Take 1 Programme is raising awareness of the SDGs in schools through projects like creating a meter of meadow.

At a deeper level say mid-level - the project and everything connected to it in the lifewide learning web has helped to change how I see things. I am more relaxed, fitter, healthier, connected and settled. Transformed is probably too strong a word.

My pathway to a more sustainable future is modest - to continue to become more aware and to apply what I am learning and to share this with others.

I am Nature
Norman Jackson

I have a long standing interest and love of nature so the idea of helping nature is easy to relate to. During the inquiry I decided to connect and interweave three different pathways through my life, my circumstances and my environment.
My first pathway relates to my role as lead facilitator of the lifewide education inquiry and my commitment to the idea and practice of lifewide learning and education and to exploring the question of how our everyday actions might contribute to a more sustainable future. The action-based inquiry I helped conceive, initiate, facilitate and contribute to, provides the foundation for my project to help nature and the environment and contribute to sustainability.
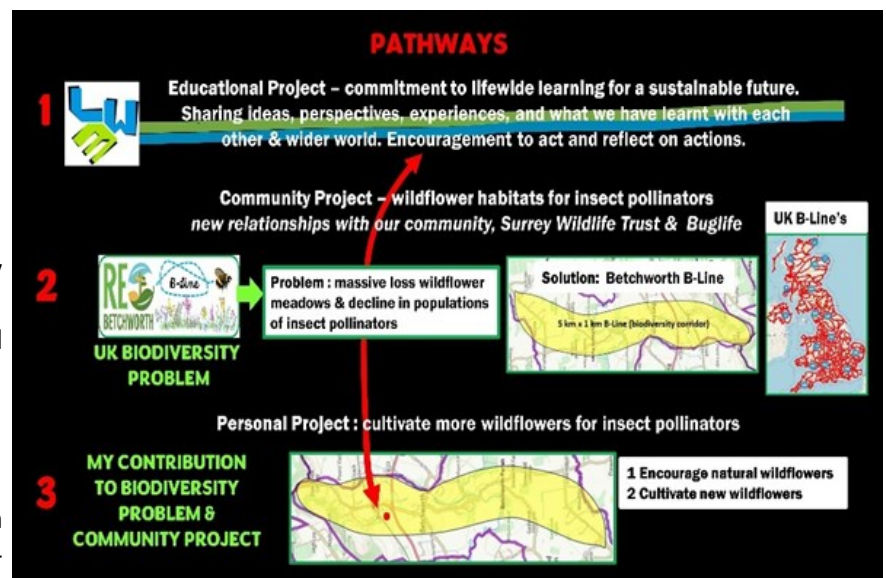
My second pathway relates to my role as Trustee and activist of a nature focused charity in my village, called Re-Betchworth. 9 months ago we launched a community-engagement project to encourage residents of Betchworth to cultivate wildflowers for insect pollinators and I have led a small team to make this happen.
My third pathway relates to my own environment to create a wildflower meadow as a contribution to both the community project and the lifewide education inquiry.

While each pathway involved its own journey together they combined create to create my overall journey.

JOURNEYS & EXPERIENCES

1 I helped facilitate & contribute to our collaborative inquiry, conceiving, designing & facilitating the process, supporting participants, organising/recording meetings, identifying research themes, reflection & scholarship

2 **CREATING a B-LINE**
I coordinated a small team of volunteers, created information leaflets, acquired and delivered seed, knocked on doors, sought feedback, mapped the area, made movies of plants & insects, curated results in our magazine & organised a wildflower wander for residents

3 **MY CONTRIBUTION TO OUR COMMUNITY B-LINE PROJECT**
I encouraged 1500 sq m of natural wildflower meadow to grow & dug by hand and sowed 300 sq m wildflowers. I observed, identified and photographed insect pollinators and plants. I recorded activities on a blog. I opened my garden to local residents on our Wildflower Wander.

The lifewide education inquiry provides me with a community of friends, who care about learning and education for a sustainable future, with whom I can share and discuss what I am doing and what I have learnt. The prompts and questions for inquiry and reflection and the encouragement to record my experiences in the 20 posts I made on my blog during the inquiry, enriched the value of my personal project as an educational/learning experience and provided new insights into how this form of collaborative inquiry could be used as a vehicle for adult self-education.

My project to cultivate wildflowers grounded me in nature. It taught me the practicalities of trying to turn an idea, to increase the biodiversity in my immediate environment, into a reality. The experience helped me gain the confidence and knowledge to promote our community project. The surprise was just how much effort it took to prepare a significant area of ground for sowing and the time it took for seeds to germinate and flower – it required me to adjust my expectations on the likely outcome from my experiment. My patience was eventually rewarded and the late flowering filled me with deep appreciation and satisfaction. During our community engagement project we worked as a team to knock on doors and engage over 40 residents and businesses.

IMPORTANT LEARNING

Seeing & appreciating the multitude of pathways that can be created to move us towards a more sustainable future and appreciating the complexity of motivational forces that initiate and sustain involvement. Understanding better the infrastructure and process required to encourage and support lifelong-lifewide learning for a sustainable future.

Learning how to develop and share relevant knowledge for engaging with biodiversity problems at the micro level - soils, seeds, cultivation, wildflowers, grass management, insects and more. How to recruit expertise to help this knowledge development process.

Seeing & appreciating nature at different scales. and learning to be patient. Reaffirming the idea that we are deeply connected to the natural world.

NATURE IS NOT SOMETHING DIFFERENT – WE ARE NATURE.

Appreciating the different ways in which a village community can be engaged to achieve the goal of helping nature, the environment & sustainability. Working as a team to achieve the goal and engaging organisations to support the project.

Through this action I got to know some of my neighbours and the feedback we have received has been positive. Important moments included securing the support of Buglife (the architects of the UK wide B-Lines) and recruiting a young ecologist to work with us to help us undertake a baseline survey of insects in our B-Line. 3

So what has changed as a result of my efforts. I have undoubtedly created new knowledge that is relevant to the idea of helping nature, the environment and sustainability. The LE pathway has resulted in new understanding

CHANGES

1 New knowledge through sharing ideas, perspectives, experiences, and sharing what we have learnt with each other & wider world. Eventually, new resources to engage educators & policy makers through our magazine & digital stories.

2 Awareness of a biodiversity problem and B-Line established in a community. New knowledge for wildflower habitats & insect pollinators. New relationships with our community and 2 organisations – Surrey Wildlife Trust & Buglife. Greater commitment to the work of Re-Betchworth Charity.

CONTRIBUTION TO UK BIODIVERSITY PROBLEM

5 km x 1 km B-Line (biodiversity corridor)

40 residents involved 1400 sq m wildflowers Maps wildflower meadows Survey of Insect Pollinators Photos - exhibitions YouTube Movies Articles RE-B Magazine Emerging Talent Award

3 New knowledge, new wildflower habitats for insect pollinators. Opportunities for creativity and new creative artefacts. Positive impacts on my fitness and psychological benefits to wellbeing. Enhanced confidence and commitment to do more.

MY CONTRIBUTION TO COMMUNITY B-LINE PROJECT

about my motivations, the nature of feedback and impacts of my projects on my health and wellbeing. The community project has resulted in greater awareness of a national biodiversity problem and involvement of 40 residents and businesses in action to help solve the problem. I have got to know many new people in my village and the work of our Re-Betchworth Charity is more prominent in the village and in the wider region thanks to recognition by Surrey Wildlife Trust. We have increased biodiversity through the sowing of over 1400 sq m of wildflower seed (over 30 species included in our mix) and I have increased biodiversity in my own environment by sowing over 300 sq m of wildflower seed. There are significant changes to my immediate and local environment. Increased awareness amongst our community of a biodiversity problem and how we can mitigate it. I feel I have made a positive difference to my environment and the plant and animal life in it and I have the knowledge, confidence and motivation to do more. The words of John Dewey come to mind – we do something to it and it does something to us – we undergo as a result of our doing. At the same time as helping the environment I have been able to create some wildflower/wildlife movies and some magazines for my local community that have given me opportunity for creativity and real pleasure. Perhaps more than anything else I have affirmed that nature is not something different to me – in helping nature, I can now see that, I am nature.

Fast & Slow: Nature is Nurture
Glynn Kirkham

One meal a day is hard to play,
But planned well is less to pay,
And more to give.

"Bread and dripping.
Is that all we have!"

You are hungry.
It is food.

Q. "Why do you keep
More than you need for a week?
And store canned beans and tomatoes,
By the truckload?"

A. "You say you are hungry
But only want
What you want
To eat!

You have never been hungry
When there is no food in the house –
Not even enough
For a tiny church mouse –
No sausage!
Not a bean!
Nothing until for my pension
I've been."

There's a book I have read
(I précis what it said):
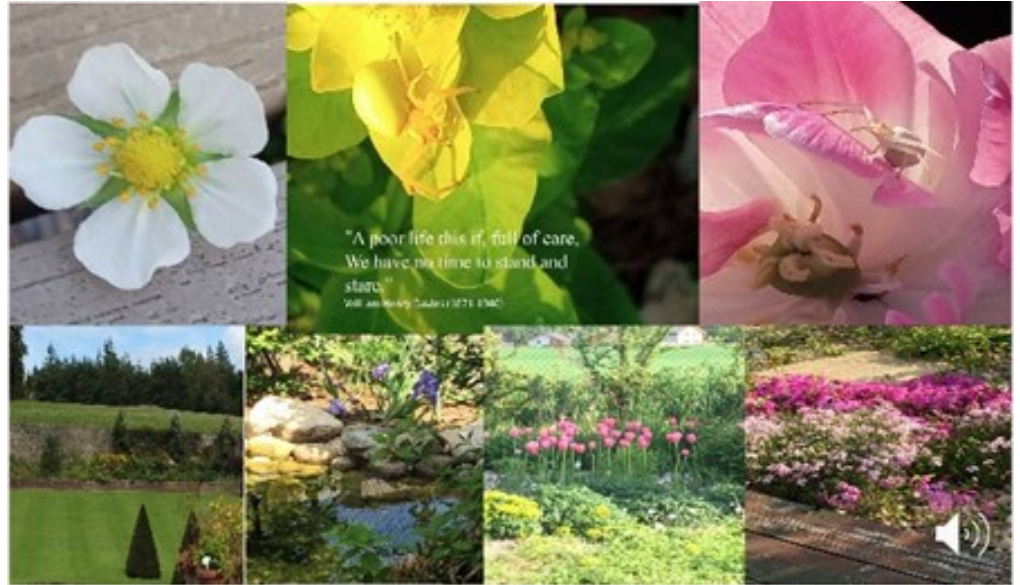'At least you will not become fat

Through never not feeding
Yourself to the top.
It's not really necessary
To think about food.
Just stop!

Fast,
But be slow
To savour
The flavour
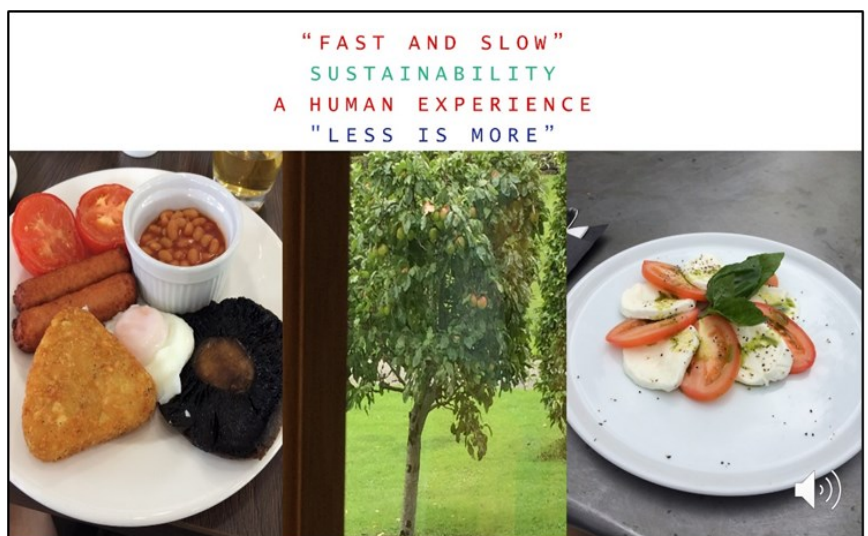
Of our nutrition
(What we devour)
Both sweet and sour
That give us power
To carry out
All that we do).
So, nutrition
Without contrition

Take time to view
The size and the hue

I listen to the wind
Wind its way.
There is no human power
Which can lead it astray
From its chosen path.

It pushes huge clouds
Across distances far
Obscuring both sun
And twinkling star.

From where has it come
And where has it been?
I'm told it's the pressure.
(You know what I mean!)
Both high and low
Create such a scene.

Pressures within us
And pressures without
Make us bluster and billow
And stumble and spout
Words of great power
To help (or to harm)
Regretted (after moments of calm,
When the pushing and pulling
Of forces external
Cease being infernal.)

We find like the winds
We too have an impact eternal.
Be calm and be still
Or move heaven and earth.
Such power we have,
Even from birth.

The beach on the last sunny day of summer

Smiling young girl
Running a hundred metres
Without a pause,
Splashing legs
Where the sea meets the shore.

A sudden, shrill cry

(But not from a gull)
From an excited, sandcastle-making girl
To a sunbathing mother.

"Look, mummy!
A rainbow!
Look! Look!
Mummy! Mummy!
It's a rainbow!"
But then there's another
Who shares her joy
It's a boy.

A boy on his bicycle
Sitting astride
On the long promenade
Calls to his friend
To look at the arc
Touching the hill.
There's the thrill.

Their wonder and awe
Cause me, an old man,
to turn my attention
From the beach and its people
And to their concern.

The vision transcends
My arcane knowledge
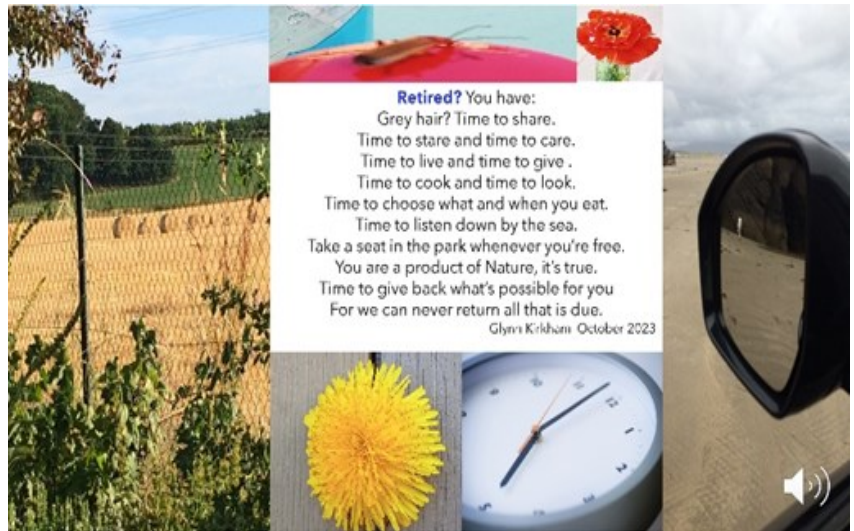Of the science behind
Such phenomena.

I join their delight of what
Shimmers above.
They may or may not
Know
that the rainbow
May be seen as

A sign of God's love.

And it is to the East
That a lady down there
On the beach
Laid her towel
On the sand
As she planned
Fully enrobed from head to ankle
Her faith to display without rankle
While her bearded, be-shorted husband
and so-clad offspring
Continued to play in the sand and the sea.

Her duty completed
She returned shoeless to the shore
Where she and the family
Could further explore
The lap-splooshing waves
On their ankles and toes.

Two girls dig a channel
From be-chaired mum to the sea.
While wet-suited lady, after time in the sea,
Returns to her towel on the shore.

Interacting with Nature is easy and fun
Eating less gives one time to sit in the sun.
But even while rain may put one indoors
Interaction with flora and fauna
Means one never is bored.

Retired? You have:
Grey hair? Time to share.
Time to stare and time to care.
Time to live and time to give .
Time to cook and time to look.
Time to choose what and when you eat.
Time to listen down by the sea.
Take a seat in the park whenever you're free.
You are a product of Nature, it's true.
Time to give back what's possible for you
For we can never return all that is due.
Glynn Kirkham October 2023

"A poor life this if, full of care,
We have no time to stand and stare."
from 'Leisure' by William Henry Davies

"To see a world in a grain of sand
And a heaven in a wild flower,
Hold infinity in the palm of your hand
And eternity in an hour."
*from 'Auguries of Innocence' by William Blake.*

A Metre of Meadow: A 'doable' 'accessible' challenge
Valerie Lewis

The pathway which influences my engagement with sustainability is that of 'inclusion', exploring ways to support individuals and groups to engage in what might sometimes seem complex and overwhelming. SDG 17 underpins a lot of my personal philosophy with the notion of 'partnership' in its many formats, presenting opportunities not only for engagement with others but also with the environment itself. Through the sessions of this lifewide collaboration I have been concentrating on SDG 15 (Life on Land) as a conduit for exploring our connection with nature and its impact not only on our surrounding environment, but also on personal development and wellbeing.

My journey aligned with sustainability has followed an almost accidental path. Through my education career I was presented with an opportunity to expand my understanding of 'development' which led me to engage with the sustainable development goals in practice. Similarly, encountering Lifewide Education's pathways community also occurred accidently.
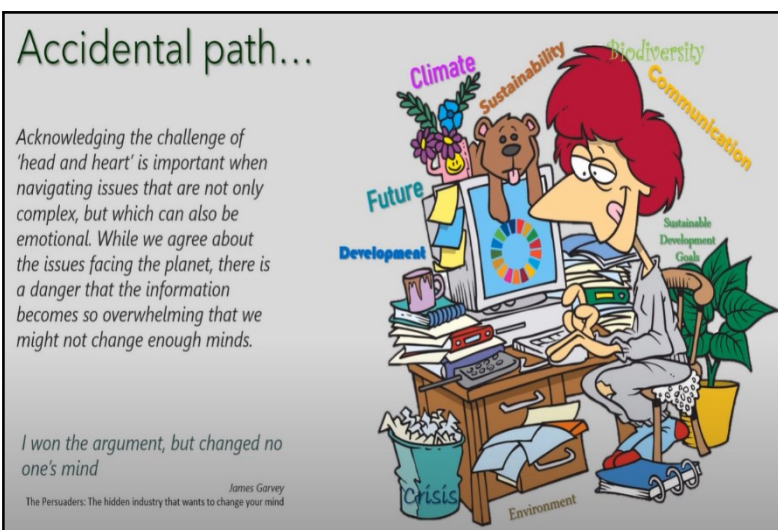
I am always conscious of this accidental approach when exploring and developing opportunities for engagement with sustainability, particularly when trying to find ways to support others to participate and learn. I am mindful of the complexity of information that can surround sustainability issues and often refer to the work of James Garvey who writes about influences on the unconscious and has noted "I won the argument, but changed no one's mind".

Acknowledging the challenge of 'head and heart' is important when navigating issues that are not only complex, but which can also be emotional. While we are in agreement about the issues facing the planet, there is a danger that the information becomes so overwhelming that we might not change enough minds.

This influence has caused me to really consider the power of communication when learning about sustainability, the environment, and my own work in the formal education sector. Presenting concepts through creativity and play can mean that the emphasis is on sharing and inviting participants to an experience, which can then be underpinned by elements of the more complex aspects of the SDGs.

An example of this engagement is my challenge to schools to create a 'Metre of Meadow' as part of their learning about SDG 15. The idea is presented as something small and manageable, with supporting resources. The 'metre' acknowledges urban environments where outdoor space may be at a premium, but also presents engagement with sustainability through a 'doable' and accessible lens. Participants not only create a green space, but also learn about (and see) biodiversity in action.
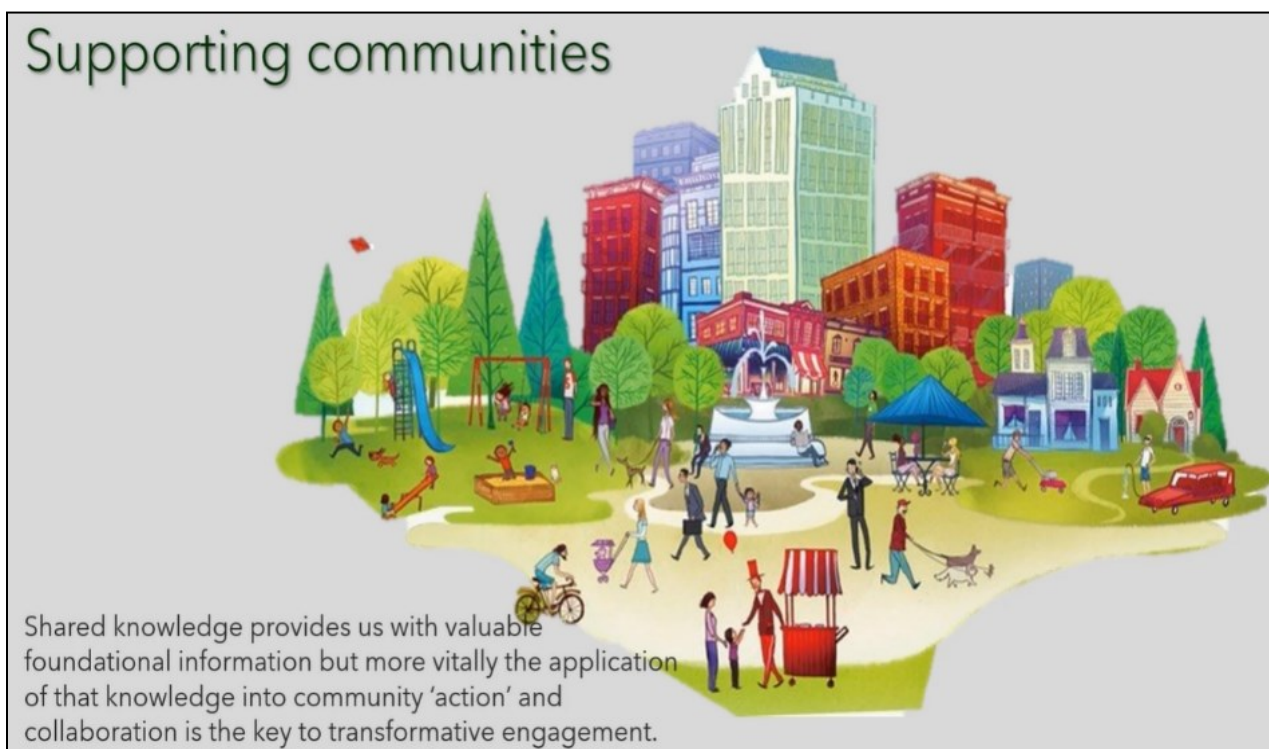
The overwhelming feedback on this work has been the sense of accessibility and visible achievement. Environmental issues can sometimes seem abstract, particularly when we look only at the bigger picture and reference impacts that may not be tangibly understood at local level.

Additionally sharing the project with participants in the Lifewide community has provided me with valuable insights in relation to how we share our work and how I present and collaborate with new audiences outside of my usual jurisdiction. In sharing and explaining local contexts and influences, I had a chance to bring a fresh perspective and view engagement through an outsiders lens. It was also heartening to listen to and share inputs and perspectives with others who were engaged in their own process of learning.

While much of my experience with the SDGs has been in the formal sector, I have had an opportunity to think about sustainability in many different ways. The shared knowledge encountered through the lifewide process has provided me with the prospect of exploring the application of that knowledge into community action in a way that has helped develop transformative engagement.

Supporting communities, whether at school, local or regional level to experience a sense of achievement aligned to sustainability and the SDGs is really important. To be able to do that in a way that acknowledges the significance and relevance of culture and context has been equally valuable.

Supporting communities

Shared knowledge provides us with valuable foundational information but more vitally the application of that knowledge into community 'action' and collaboration is the key to transformative engagement.

Helping Nature Brings Joy & Inspires Creativity
Janet Wolstenholme

Intention

In my "Pathways" project I used the UNESCO Stainable Development Goals #3- Health & Wellbeing and #12 Responsible Consumption and Production to guide my enquiry. For SDG #3- Health and Wellbeing, I envisioned that I would "enjoy nature" by sitting outside in my garden or amongst other flora and fauna for the benefits to my mental health and wellbeing. I was more ambitious with my plans for SDG #12 as I wanted to encourage myself and my family to be more responsible in our consumption and production by becoming more self-sufficient by planting vegetables and fruit to allow me to help feed my family with home grown produce and therefore buy less at the market. By undertaking this activity I hoped to find out what grows well in my garden and learn more about gardening in general, both for food and aesthetic enjoyment.

Nature responded to my help by rewarding me with a wonderful profusion of flowers and edible plants that brought me great joy – feelings of pleasure and happiness and inspired me to be creative.

Effects

I have been quite surprised at how much I have learned on my journey of helping plants to grow and creating a garden. My thoughts at the beginning of the growing season changed dramatically, in ways I could not have envisioned at the start. Perhaps somewhat romantic expectations in my ideas at the outset made for mixed results in practice and outcome. But overall, the experience has been positive, and I have learned a great deal.

For SDG #3 Health and Wellbeing, I planned to "enjoy nature" sitting amongst the plants and animals in my garden. But I also discovered that joy emerged through 'tending and nurturing' the plants, something I had not even thought about at the start. Watching the plants grow and grow into each other as they flourished and matured was also a source of joy. Unbeknownst to me at the outset I discovered the aspect of 'possibility' very cathartic to my mental health and wellbeing; meaning, by creating my garden I opened up new possibilities to imagine. My imagination ran wild with what I could plant Janet how I might be able to use or create with the plants once they had grown. The garden and the process of gardening became a catalyst for my creativity.

The spring weather was poor this year in south-western Ontario, and it seemed that the wild animals needed the food I was growing more than me. I also found that my thinking of sustaining my family with the crops I was growing was a bit overambitious on my part. The yields I was   producing in my small, raised garden beds were not enough for us to live on for even a week, let alone a season! In this way we live and learn.

Something I did not anticipate was how nature inspired the development of my art practice. A happy discovery, I am now creating jewelry and

art pieces with the flowers I am growing. I dry blooms and press then set them in resin. Discovering resin jewelry has been very therapeutic for me and boosted my creativity. I love seeing how the stems and blooms look suspended in resin.

What next?

I plan to continue my home gardening adventures and learning more about gardening in small spaces with "companion planting." This project has been of tremendous boost to my mental health and wellbeing and well worth the effort I have put in. Even now, after the summer has passed, just sitting in the garden is a joy and uplifts my spirit.

After Thought

Since concluding my Pathways Project, I have been pondering the question of the mind-body connection as since re-reading my article, I feel that my mind and body are somewhat disconnected. I am keenly aware that the experience of my project was dominated by my "visual" sense whereas, sitting in nature and home gardening should also invoke most of my other senses too. I fear I may have fallen into the trap that Sir Ken Robinson speaks of in his 2006 TED Talk:

> there's something curious about professors. In my experience, not all of them, but typically, they live in their heads. They live up there and slightly to one side. They're disembodied in a kind of literal way. They look upon their body as a kind of transport for their heads, don't they? It's a way of getting their head to meetings.

I have never really thought of myself as an academic living completely in my head, however as I grow older, I seem to be ignoring my body and robbing myself of experiences that involve all my senses. I need to learn to integrate my whole body and all my senses into daily living in order to live a complete life.

Source
Sir Ken Robinson. (February 2006). "Do Schools Kill Creativity?" TED Talk
https://www.ted.com/talks/sir_ken_robinson_do_schools_kill_creativity?language=en

How Do Pathways Contribute to Needs & Needs Contribute to Motivations?
Jenny Willis

Introduction

Motivation was identified as an important theme to explore, in a previous inquiry[1] The Pathways inquiry, extending over 6 months, provided an opportunity to consider the factors that underlie commitment that reaches beyond the initial enthusiasm when a project is started, to sustain involvement over a significant period of time.

This article presents the results of 2 surveys on motivation and personal values, conducted during the Pathways Inquiry, and considers the implications of the findings for the SDGs. PowerPoint presentations of the data can be viewed at https://www.lifewideeducation.uk/pathways.html.

In the first instance we decided to focus on needs, since they are an important motivational force for human activity. Using three needs-based motivational frameworks summarised in Figure 1[2], we developed a questionnaire (Table 1) that drew on Maslow's Hierarchy of Needs[3], Alderfer's Existence, Relatedness, Growth model[4] and Robbins' Six Human Needs[5]. In addition we included, the need to act for others or other things, which is considered to be important in the context of trying to achieve a sustainable future.[1]

Figure 1 Synthesis of needs by Jackson[2]

As the image shows, the forces that cause us to act in particular ways originate in all parts of our life—in our home, work and other social and non-social situations.
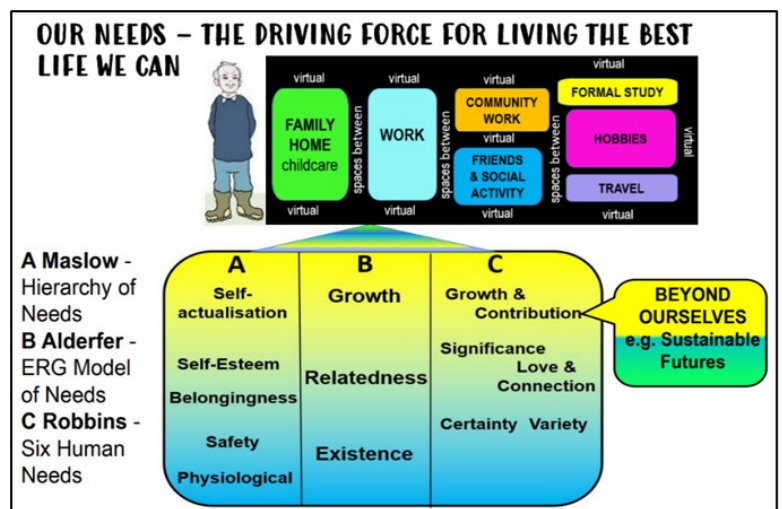

Table 1 Survey questionnaire

Different types of need were colour-coded as:
- basic needs (a) personal (b) of others (yellow)
- relatedness (green)
- purpose (lilac)
- pleasure (blue)
- growth (pale yellow)
- contribution to society (turquoise)
- freedom (bright green)
- fulfilment (sage)

All participants were invited to complete the survey by indicating the significance to them in their pathways project, of 27 potential contributors to their needs. Each contributor was rated on a scale (1) no importance to (5) very important. There was space to add additional contributors, but in the event, no-one did.

Analysis and findings

12 returns were received but one was incomplete so not included in the analysis. These were from participants based in the UK, North and South America. The SDGs explicitly targeted in their projects were:

#15, Life on land: 8

#3, Health and wellbeing: 4

#11, Sustainable cities: 2
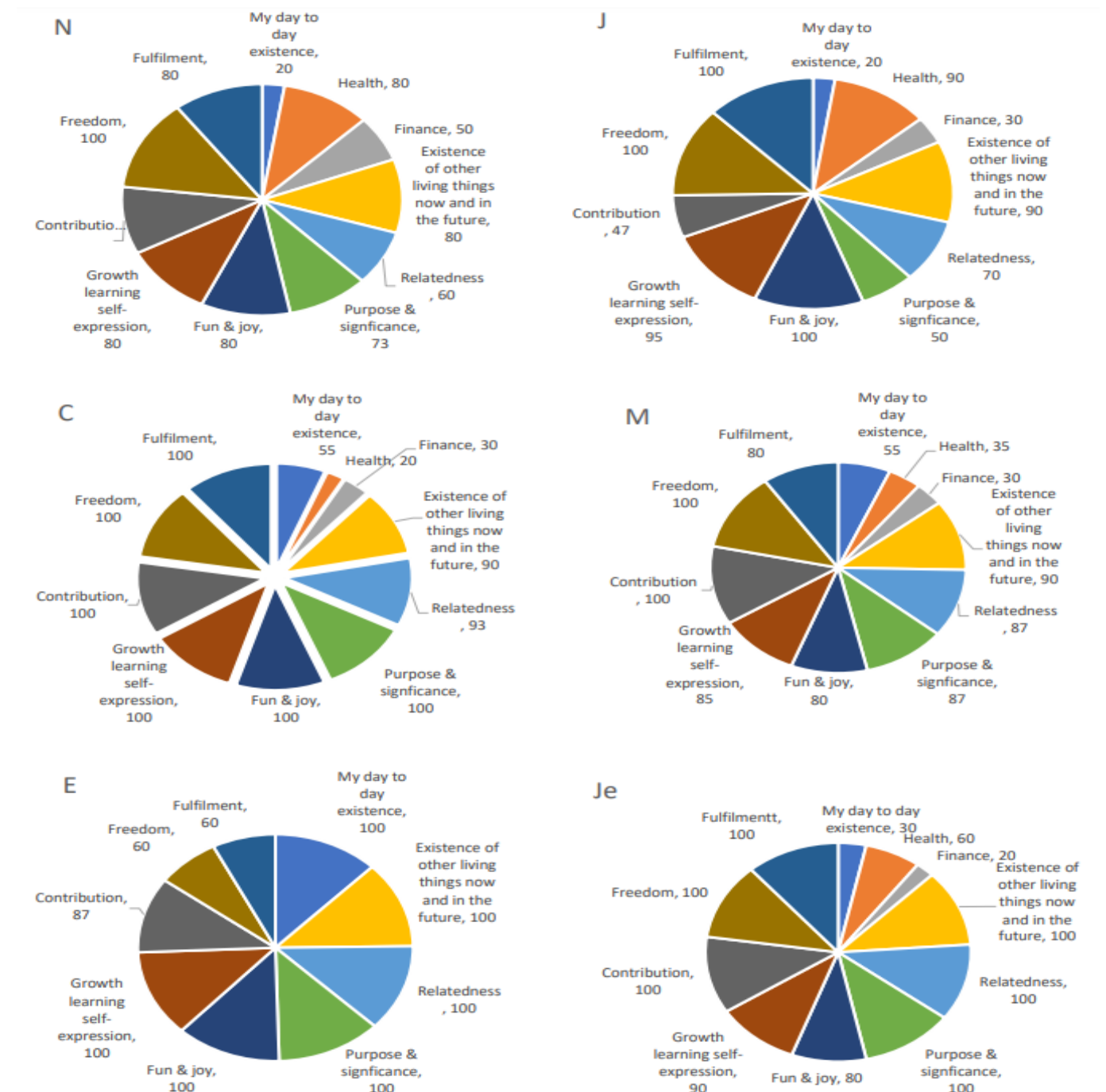
#13, Climate: 2

#5, Gender equality: 1

#12, Responsible consumption: 1

17, Partnerships: 1

The total in the list exceeds 12 since some projects were concerned with more than one SDG.

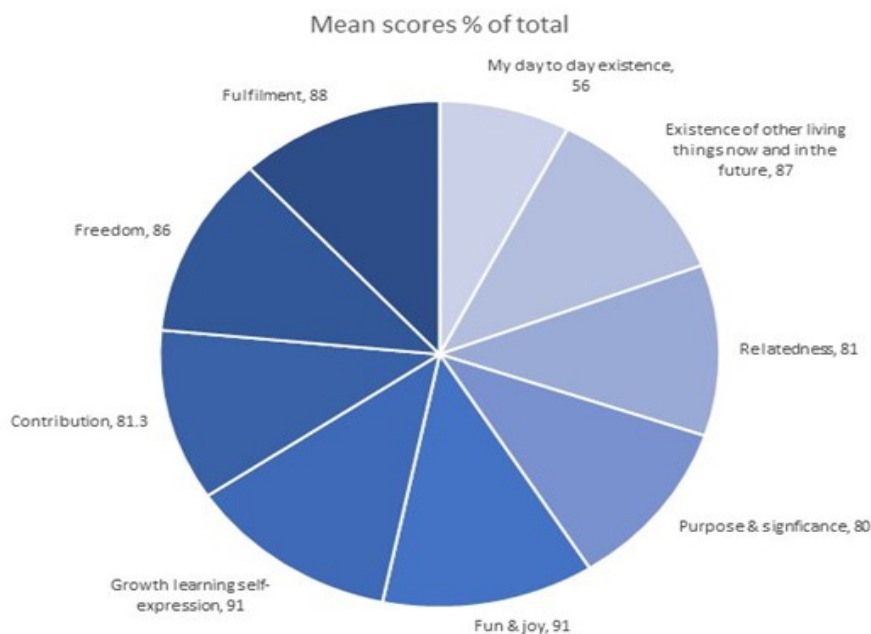**Figure 2** Individual profiles, personal needs

In order to compare the scores for each of the 27 factors, firstly every individual's responses to each question were converted to percentages. But this approach produced too complex a picture to visualise this by every factor. Instead, scores were calculated for each of the 8 colour-coded sets of questions e.g the lilac section comprised 3 questions, representing a possible 15 points. If there was a score of 10 for the three questions, this equated to 67% (rounded up). The yellow section was separated into two: personal existence and existence of other things, making 9 sections. This process enabled the priorities of each person to be compared with those of other participants. Colour coding was again used to facilitate comparison and thereby highlight any discrepancies. Figure 2 shows the results for the 11 valid returns.

Outliers for specific factors can be identified, illustrating their different motivators and personal needs e.g. freedom (brown segment) scored only 20% for Janet whereas 7 other respondents scored it 100%, reminding us of the diversity of individual values.

The next stage of analysis was to calculate the importance of each of the 9 sets of factors to the group as a whole. The meant scores for each set were calculated, producing the results shown
Figure 3.

Figure 3 Overview of needs for all respondents

Mean scores % of total

- My day to day existence, 56
- Existence of other living things now and in the future, 87
- Relatedness, 81
- Purpose & signficance, 80
- Fun & joy, 91
- Growth learning self-expression, 91
- Contribution, 81.3
- Freedom, 86
- Fulfilment, 88

The first observation is that, with the exception of personal existence, which scored a mean of 56%, all the remaining sets were deemed highly important. The most significant factors were growth/learning and fun/joy, both at 91%. They were followed closely by fulfilment (88%), existence of others (87%), and freedom (86%). Then came contribution (81.3%), relatedness (81%) and purpose/significance (80%).

These results suggest that, despite earlier fears of uncertainty and inadequacy, participants were deriving many different benefits through their projects including growth, enjoyment and positive relationships with others.

A final step was to map these findings on to our hierarchy of needs based on Maslow, Alderfer and our own research (Figure 4). We can now see clearly that, for this group, the projects were meeting their needs for self-actualisation. Their existential needs were high, but by definition of the project brief, they were predominantly related to environmental survival. A sense of belonging is also vital to these individuals, but their physiological needs do not feature. This can be explained by the nature of participants: all were highly educated, committed to lifewide learning, mostly in older age groups and financially secure. For these reasons, findings cannot be assumed to be comparable with those of a random sample.

The aim of the Pathways project was, however, not to seek norms but rather to demonstrate whether the SDGs could be addressed at the micro, individual level, and we were now investigating the factors conducive to success

and what impact the projects had on those involved. To that end, a second survey was conducted, this time qualitative.

Figure 4 Respondents' needs applied to our combined model
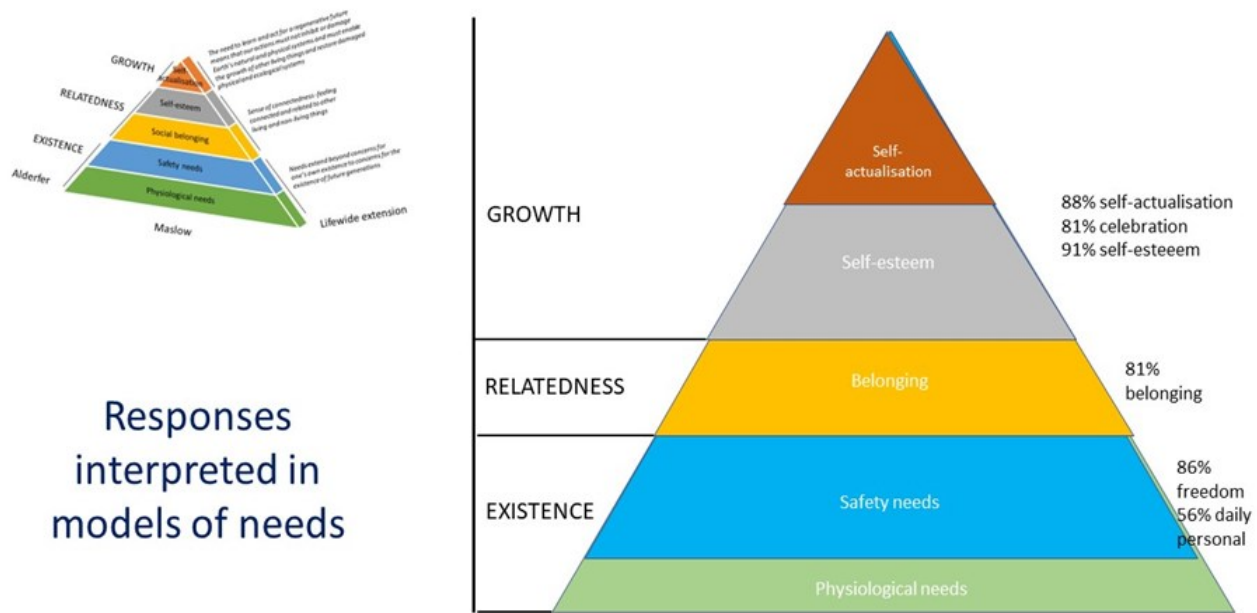
Qualitative Survey

Discussion at the June Zoom meeting indicated that the nature of motivation and commitment merited further exploration, therefore participants were invited to provide narrative responses to 4 questions which developed the themes of the questionnaire. They were:

1. Why are you doing what you are doing? What is causing you to do it?
2. What have been the motivational challenges? What, if anything, has demotivated you?
3. In the context of the challenge of acting for a more sustainable future as defined by the SDGs, how does commitment to what you are trying to accomplish form?
4. How do you deal with the gap between the enormity of the challenge of trying to help the planet and what you can do as an individual? How does the scale of the challenge affect your motivation to act?

9 returns were received producing a 10-page narrative. Responses were analysed and the following key themes were found. Verbatim comments illustrate each point.

Question 1, Why are you doing what you are doing? What is causing you to do it?

Responses to this question were divided into two distinct parts.

(a) Why are you doing what you are doing?
Some common broad categories emerged, which are acknowledged to be partially iterative, but it is clear that these themes are consistent with the views expressed in the first survey.

- A perceived need/gap/change required: *I saw and felt that there was a gap in relation to the staff development workshops; I saw a need for change; recognition that need should overcome habit or tradition; much of the language and action around sustainability can be negative (crisis/panic/emergency) and while it might be true, it often paralyses and overwhelms.*

- Values, beliefs & ethical issues: *a sense of guilt and responsibility; we care about the world we live in; I believe that dreams come true; education is my mission; I link this to a bigger cause*

- Self-actualisation: *I do it for myself; my relatively new role as a grandmother which seems to have prompted me to think of the legacy*

- *Socialisation/relational: I am also doing it with and for others so there is a social element*

(b) What is causing you to do it?

The second part of question 1 invited explanations of how participants were seeking to achieve their aims. Responses include both methodological processes and personal characteristics.

- Drawing on/developing existing frameworks or skills: *the momentum of my involvement in previous Lifewide Inquiries; I am part of a local charity that is trying to encourage people; thanks to the UN for giving us this forum and a structure; using the skills set I have*

- Determination/resilience: *sticking to my guns*

- Setting realistic goals: *something I have the realistic possibility of doing; I have always been a practical dreamer*

Question 2, What have been the motivational challenges? What, if anything, has demotivated you?

This was also a dual question so responses are again split into two:

(a) What have been the motivational challenges?

The emergent themes are a mixture of practical obstacles, unreliability of others, gaps in personal skills and ethical issues, including a sense of guilt.

- Practical issues: *making the necessary time; finding the energy to weave in what I am trying to do into other demands; to do something that was not enjoyable; sometimes is difficult to get together with the group of students and staff to create solutions; more face-to-face teaching; the enormity of the challenge; changes need to happen at the grass roots level*

- Relationships: *one little child changed my mindset; the interest of family members to assist; trying to engage others in my community*

- Personal qualities: *self-discipline and interest; I do not have a fundamental interest in many of the SDGs*

- Ethical issues: *the greater needs of others; I feel a sense of pride to include the younger generation into a large project that they can now feel part of; I felt I should not be going for the easy option*

- Inspired by example: *there are teachers in the younger generation that are making the inroads in their schools*

(b) What, if anything, has demotivated you?

Demotivating factors expand on the issues cited in part (a) of this question.

- Practical issues: *digging during a very wet period; working alone, the amount of time involved*

- Systemic issues: *navigating through the labyrinth of educational hierarchy; getting a commitment from school principals; bureaucratic junk; we tend to look at what we are not doing, as if we are afraid to talk about achievement*

- Commitment of others: *I am trying to work with and through others, who may not be committed or interested; only a few people participated; neither delivered what they promised; manage my own expectations*

- Scale and time: *the length of this project; the sheer scale that is so daunting*

- Lack of feedback: *not knowing what the outcomes of these efforts might be but being hopeful; questioning whether what I am doing is having any impact*

Question 3, In the context of the challenge of acting for a more sustainable future as defined by the SDGs, how does commitment to what you are trying to accomplish form?

This question investigates the nature of commitment. Responses focus on practical approaches, the belief in the value of what is being done, the supportive nature of partnerships and a desire not to fall short of expectations.

- Practical/methodological issues: *one step at a time approach; based on what is directly happening day to day or week to week; mindfulness; meditating; joining hands with many will certainly make light work; I had had a few people step up and share their resources; sharing stories with other like-minded individuals*

- Belief and determination: *sticking to my guns; knowing that I have tried hard even if objectives haven't been achieved; relying on a belief*

- Ethical issues: *fear of letting people down*

- Relationships: *having a family member on my team; formed and reinforced by how I am starting to see myself/ my role as a grandmother; having a group of people interested in the same ideas and with the same passion*

- Modelling: *fuelled by everything I read, see and hear about climate change and what others are doing*

- Recognition: *intrinsic commitment is boosted by evidence of success; recognition and encouragement from other participants; feedback is essential. It doesn't all have to be positive; obtained funding*

Question 4, How do you deal with the gap between the enormity of the challenge of trying to help the planet and what you can do as an individual? How does the scale of the challenge affect your motivation to act?

Throughout this and previous investigations, the scale of the SDGs and their apparent inaccessibility at the micro level have been raised. Question 4 focuses on strategies for overcoming this sense. Responses identify the importance of belief and maintaining a positive attitude and some give practical examples.

- Positive attitude: *by remembering that ideas and actions can be contagious; each have an impact; I actually don't think about it; news is also manipulated and may help extremes get extreme, not allowing us to see the good and positive (these don't seem to "sell" or be popular to advertise); I keep thinking that we are too exposed to all the negative aspects that happen…this leads us to judge whatever we see, with our dark lenses on this new "dark ages"; concentrate on the small steps forward… the scale might be more off putting than the potential to overcome it...*

- Belief in cause: *this venture is a worthwhile cause; the legacy potential of things we do or say; leaving seeds in the youth mindset can really bring the change.*

- Practice: *when I connect what I am doing to my everyday life I reduce something that is enormous to something I can realistically attempt; we are working on a smaller scale in personal one to one (sometimes bigger) projects that will have an impact, without the need to act aggressively or crazy; we also expect immediate results*

Above all there is a general sense that doing something is better than doing nothing.

One respondent captured the essence of these comments:

The role of modeling, the impact of an attitude, the power of our actions, over our words, reminds me of why we are doing what we are doing….why I keep trying despite the overwhelming size of the problem….why I am motivated to do my bit…hoping to achieve a planet, through little personal bits, which are contagious for others to join….

Summary of findings

What have we learnt from this second survey? Jackson had proposed at the second Zoom meeting a motivational model ranged along a spectrum from rejection or ambivalence, to action and, in excess, to extremism. Figure 5 reproduces his spectrum and adds in the positive and negative factors that have emerged in response to the 4 survey questions.

Figure 5 Mapping the findings on to Jackson's continuum of motivation
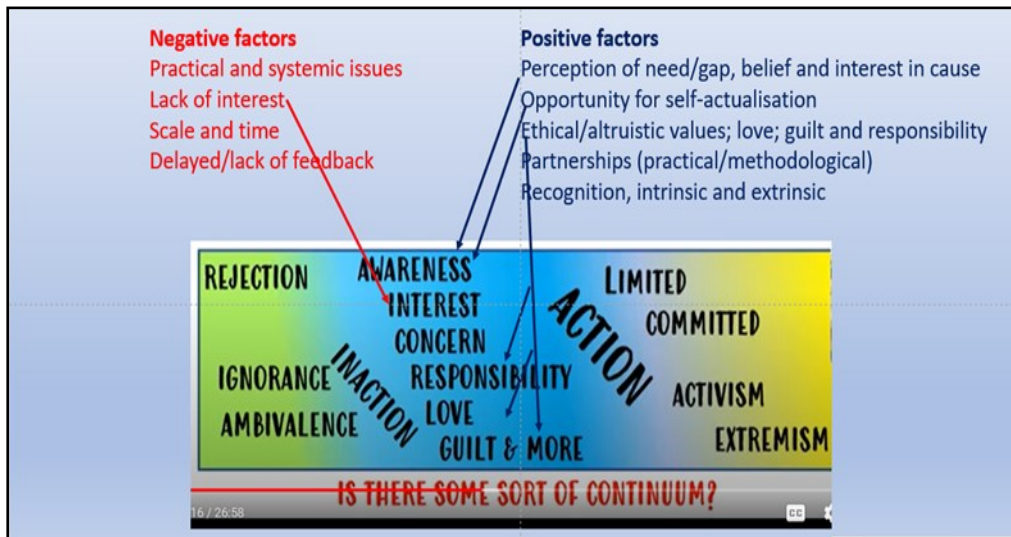
Do they support this model? The positive factors are shown in blue and clearly correspond with several of the dimensions listed in the blue stage between inaction and action. The model focuses on the individual, hence the value of partnerships and extrinsic recognition found in our respondents' comments would not be captured in such a conceptualisation.

The negative factors, shown in red, correspond with the need for interest and commitment. The other three factors raised by respondents are again external to the individual, so not included in this model.

In order to recognise the external as well as personal contributors to/detractors from commitment, I proposed an expansion to Jackson's model, as shown in Figure 6.

Figure 6 An expanded model of commitment
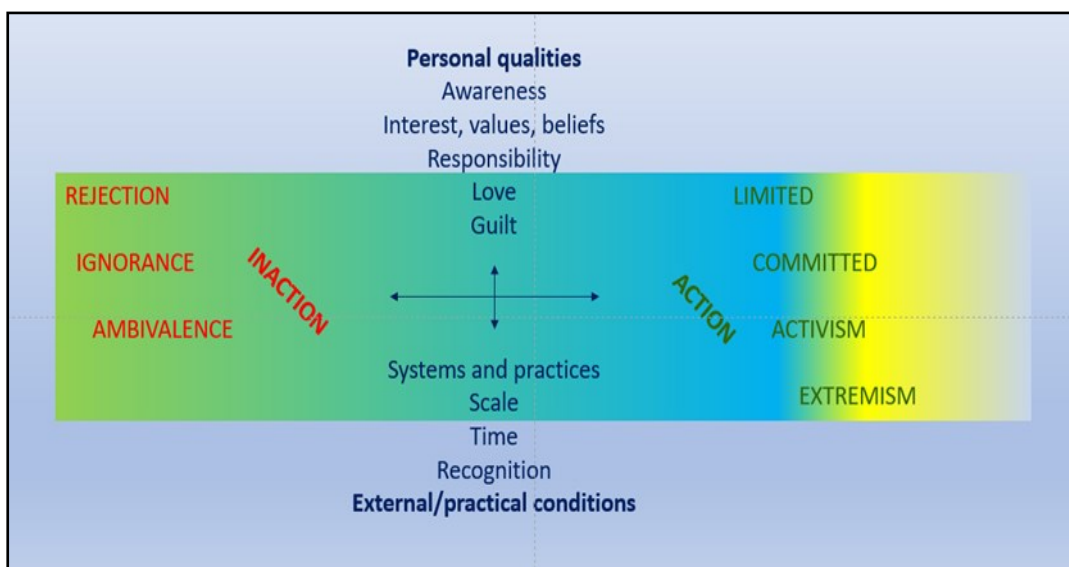
This retains the spectrum from rejection to extremism, but includes personal and external factors. By placing these at the centre of the spectrum, I indicate that any one factor can be loaded either positively or negatively. The vertical line between individual and external conditions recognises their mutual impact.

Conclusions

The two surveys were designed to explore personal values and the nature of motivation required to sustain commitment to a 6-month project. The findings of both the qualitative and quantitative investigations are consistent and demonstrate the importance of having a strong sense of belief and purpose, supported by personal characteristics such as resilience, but individuals are also highly affected – either negatively or positively – by practical conditions and social relationships.

The findings have enabled us to further our understanding of the complexity of human motivation in respect of engaging with selected SDGs and to develop a model for conceptualising it which will form the basis of further inquiry.

The significance of this research to the SDGs is that it confirms that, personal beliefs with social or community support, can help initiate and sustain individuals micro level projects which make a positive contribution to the environmental challenges we face globally and to the development and wellbeing of individuals. We should not be overwhelmed by the scale of the SDGs. Doing something, however small is always better than doing nothing. If small, steps are all we can achieve as an individual towards improving the environment, that is good enough.

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Conceptual Exploration of Motivations for Living For a More Sustainable Future
Norman Jackson

Introduction

This essay complements the survey of needs and motivations undertaken within the Pathways to a Sustainable Future Inquiry[1] It provides a number of conceptualisations and frameworks to help visualise how our motivations emerge and affect our actions as we live our life. There are two underlying propositions : 1) if we want to contribute to a more sustainable future we must act for that future in the everyday environments we inhabit in our present life and 2) doing something rather than nothing makes us feel that we are at least trying to do what is right.

Competence to Live for a More Sustainable Future

For many of us the question of WHY? we are participating in Lifewide Education's collaborative inquiry is fundamentally about developing *ourselves* our own *understanding/awareness* and *competence* to live in ways that are more likely to create a future that is more sustainable. Part of this 'why?' is beyond ourselves and our immediate everyday concerns, it reflects the frequent mentions in group conversations that we are not doing this for future generations and for the long term health and vitality of our planet and the life it sustains. 'Why?' is very much part of who we are and who we want to be and it is deeply attached to our core beliefs, values and concens.

Our collaborative inquiry encouraged us to try to accomplish something to help nature, the environment and sustainability to gain experiences through which we might learn and develop. The underlying belief is that the process of action-based inquiry enables us to become more aware of what we are trying to do, and through our experience of trying we learn how to become more competent. I am using competency as it was originally defined by Robert White [2 p. 297] as '... *an organism's capacity to interact effectively with its environment.*' In other words, competence is an agency that organisms must posses in order to flourish in their environment. This definition places competence in the present which is all we can do but the things we are doing in the present are to help achieve a more sustainable future. White's definition emphasises the ecological nature of competence : it's the means by which people are connected through purposeful actions to their environment in a profound, organic and useful way.

Vitello et al[3] provide a human centred definition of competence. *"Competence is the ability to integrate and apply contextually-appropriate knowledge, skills and psychosocial factors (e.g., beliefs, attitudes, values and motivations) to consistently perform successfully* [and ethically – my addition] *within a specified domain"* Implicit within this definition is the idea that we must develop the necessary understanding and awareness to be able to apply appropriate knowledge and skill for a particular situation. Our competence to perform is linked to our competence to develop the contextual knowledge to understand situations.

This way of viewing competence highlights the importance of qualities, values and attitudes, including *motivations*, that are needed to apply knowledge and skills in appropriate ways. I would like to amend this definition in a way that frames competence as a concept of growth by recognising that competence involves a commitment to learn and develop through our experiences of trying to perform and achieve. In other words our evolving competence becomes integral to our ongoing formation as a human being and we are more likely to be able adapt to new and novel situations and learn to perform in an expanding range of contexts. From the above we might derive a definition of generic competence that relates to helping nature, the environment and sustainability.

"Competence to help nature, the environment and sustainability, is the ability to integrate and apply contextually-appropriate knowledge, skills and psychosocial factors (e.g., beliefs, attitudes, values and motivations) to perform successfully and ethically, with the will, confidence, self-regulatory habits and resilience to learn, develop and achieve, even in conditions of uncertainty".

The definition is ecological in the sense it relates, connects and reveals the interdependency of a whole person and their agency, their thinking and actions in the contexts, situations and environments for which competency is required namely – helping nature, the environment and sustainability.

As environmental activist and artist Brenna Quinlan observes, developing competency - awareness, knowledge, skills, attitudes, values and more – to live for a more sustainable future, is a journey (Figure 1).

Figure 1 Learning to live for a sustainable future is a journey.
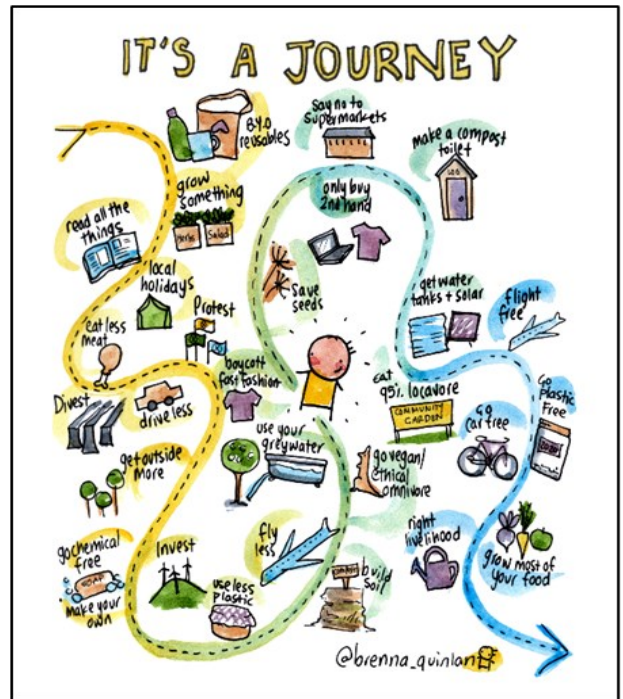
Lifewide Environments, Contexts & Experiences

Most people, no matter what their age or circumstances, simultaneously inhabit a number of different environments on a daily /weekly time scale - like work or education, being a member of a family, being involved in clubs or societies, travelling and taking holidays and looking after their own health and wellbeing[4]. So the significant timeframes of *lifelong learning* (months and years) and the multiple shorter timeframes (hours and days) of living and learning in different contexts of *lifewide learning* intermingle, and who we are and who we are becoming are the consequences of this intermingling (Figure 2). *Our interactions with other people and non-human things in these environments stimulate the emotions that ultimately motivate us to act and to act in particular ways*.

Living and learning in the present, in all its forms and manifestations, is the way we realise our potential as a human being while laying the foundations for living and learning in the future. If we want to change our behaviours and habits, add new competences and develop a skill or talent we have to find opportunities and put effort into the existing situations we inhabit or add new dimensions to our life. **If we want to contribute to a more sustainable future we must act for that future in the environments we inhabit in the lifewide dimension of our daily life**.

This is an important starting point for us to consider how we participate in and experience the world. John Dewey understood that experience was brought about through our intimate relationship and interaction with our environment. Figure 2 summarises his interactional model of experience and the changes (which he calls undergoing) in the person through their interactions[5,6].

Figure 2 Synthesis of Dewey's interactional model, Eraut's epistemology of practice and Jackson's summary of typical personal environments for everyday interaction (see text for explanations).
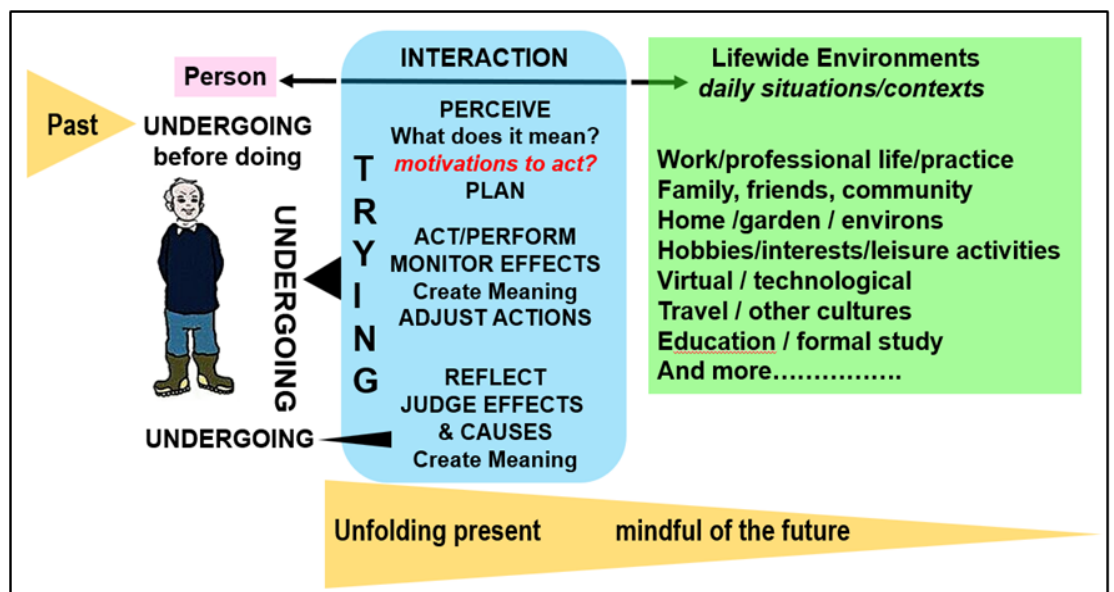
Dewey explains that experience is always a dynamic two-way process, "An experience is always what it is because of a transaction taking place between the individual and, what at the time, constitutes the environment"[6 p.43]. He argues that experience involves both 'trying' and 'undergoing'. 'Trying' refers to the outward expression of intention or action. It is the purposeful engagement of the individual with their environment or in Dewey's words, "doing becomes trying; an experiment with the world to find out what it is like". Through action an attempt is made to have an impact on the world. 'Undergoing', the other aspect of the 'transaction', refers to the consequences of experience on the individual. In turn, in attempting to have an impact, the experience also impacts on us.

Dewey's transactional view of experience involves people who embody their past, situated in an environment within an unfolding present, trying to accomplish something using resources that are accessible to them and modifying their environment and themselves in the process. In other words their actions influence their environment and their future.

We can add further detail to this model of interaction using Michael Eraut's[7.8] epistemology of practice heuristic (summarised in Figure 2). Eraut says, when we encounter a new situation we perceive it and create meaning – assess what we have to do and plan how we are going to act sometimes in real time at other times more deliberatively. We then act on our plan paying attention to the effects we are having and adjusting our actions where necessary. We may then reflect on and analyse the whole experience and try to judge our effectiveness in terms of what we were trying to achieve. This reflective process enables us to create deeper meanings and understandings about our whole experience. *Implicit in this simple process model is the idea of motivation – as we perceive a situation and create meaning* (based on meanings we have learnt in the past) *we form emotional responses that trigger our will to act* (in the present) and then enter into a process of reasoning and imagining to create options for how we might act in then near future and anticipate the consequences – slightly more distant future. In the context of practice for a distant sustainable future, we might extend this deliberation to anticipate whether one's actions are more likely to help
secure that future.

Self-regulation – integrating cognition, action and the making of meaning

This pattern of perceiving a situation, creating meaning in order to decide how to act, performing and monitoring effects to gain feedback which inform future actions, is consistent with the well researched pattern of thinking and action known as self-regulation. From a social cognitive psychological perspective, self-regulation has been defined as "self-generated thoughts, feelings and actions planned and cyclically adapted based on performance feedback to attain self-set goals" [9].

Figure 3 The cyclical model of self-regulation includes three general phases: forethought, performance and self-reflection[9]. Each phase has several subprocesses**.** The diagram is adapted from Zimmerman and Schunk[10].
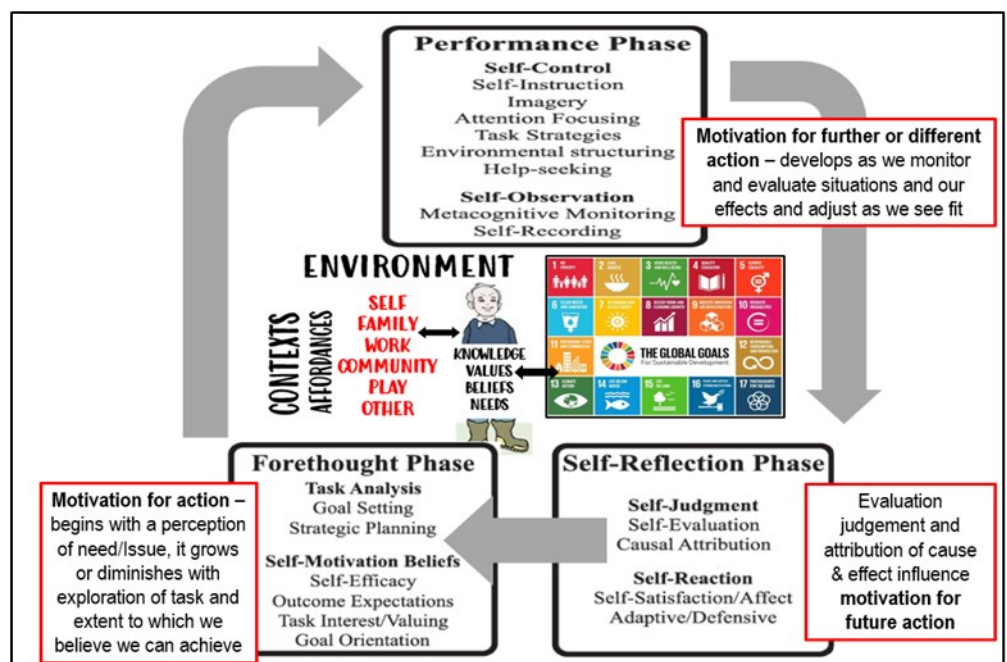
When people have self-regulatory skills and habits, they are able to modify their performance based on their personal characteristics and environmental conditions (ibid). Self regulated learning and practice can occur wherever learning - both formal and informal - takes place. The cyclical model of self-regulation includes three general phases (Figure 3): forethought, performance and self-reflection[9]. Each phase has a set of cognitive-psychological subprocesses within it which explain what is happening as the person perceives situations in their environment, thinks about them and decides what to do, acts on their decisions and plans, and monitors the effects of their actions, adjusting them where necessary.

The self-regulation model illustrated in Figure 3 has been contextualised for living for a more sustainable future. It attempts to show how motivation features in each of phase of the model.

The forethought phase involves perceiving the environment and the affordances (opportunities for action) it contains. The motivation to act, and perhaps achieve a specific goal or goals, emerges as our perceptions engage our emotions. When we are mindful of issues and problems relating to sustainability, what we perceive may trigger emotions that motivate us to want to act. Motivation for action – begins with a perception of need/issue, it grows or diminishes with our mental exploration of the opportunity and what we might do and the extent to which we believe we can achieve something of value with the resources we have. In this way motivation is an intricate weaving together of perception, imagination and reasoning with the knowledge we have about the subject for action and ourselves which ultimately generate the will to act in the belief that what we can do will make a difference.

During the *performance phase* we try to turn our ideas into action to in order to engage with a situation and accomplish our goals. As we interact with our environment we experience the effects of our actions and gain feedback (information) that enables us to evaluate and judge our effects. Things may happen in the way we anticipated and the environment may be different what we thought it would be. Consequently, we may need to adapt our actions and behaviours. As we experience we learn and new ideas and motivations emerge as we weave together perception, imagination and reasoning.

In the *self-reflection phase* we take stock and evaluate the whole experience and through the process of weaving together memory, reasoning and imagination we create new and sometimes deeper meanings and make judgements about the effects of our actions and what might have been if other courses of action had been taken. The process generates feelings of satisfaction or disatisfaction and these may affect our motivations to continue, to stop doing what we are doing, or perhaps influence our actions in future.

Turning Motivation into Action – an Ecological Perspective

I want to return to the idea that our competency to create a future that is sustainable is fundamentally concerned with '[our] capacity to interact effectively with [our] environment' [2 p. 297].

Anthropologist Tim Ingold tells us that we should not think of ourselves as being separate from our environment, rather we should see ourselves as indivisible from the environment of which we are a part [11,12]. As our awareness of how deeply connected we are to our environment grows, motivations for a sustainable future emerge when we appreciate that by changing what we are doing, or when we are doing something new, we can affect our environment in ways that are more likely to achieve a more sustainable future for our environment, ourselves and our successors.

Jackson proposed that any complex practice, such as trying to live for a more sustainable future, can be conceptualised as an ecology – an interconnected set of interactions, relationships and interdependencies[13,14]. Figure 4 provides a heuristic to comprehend the nature of such an ecology.

Figure 4 Representation of an ecology of practice within which motivation is embedded [13,14]
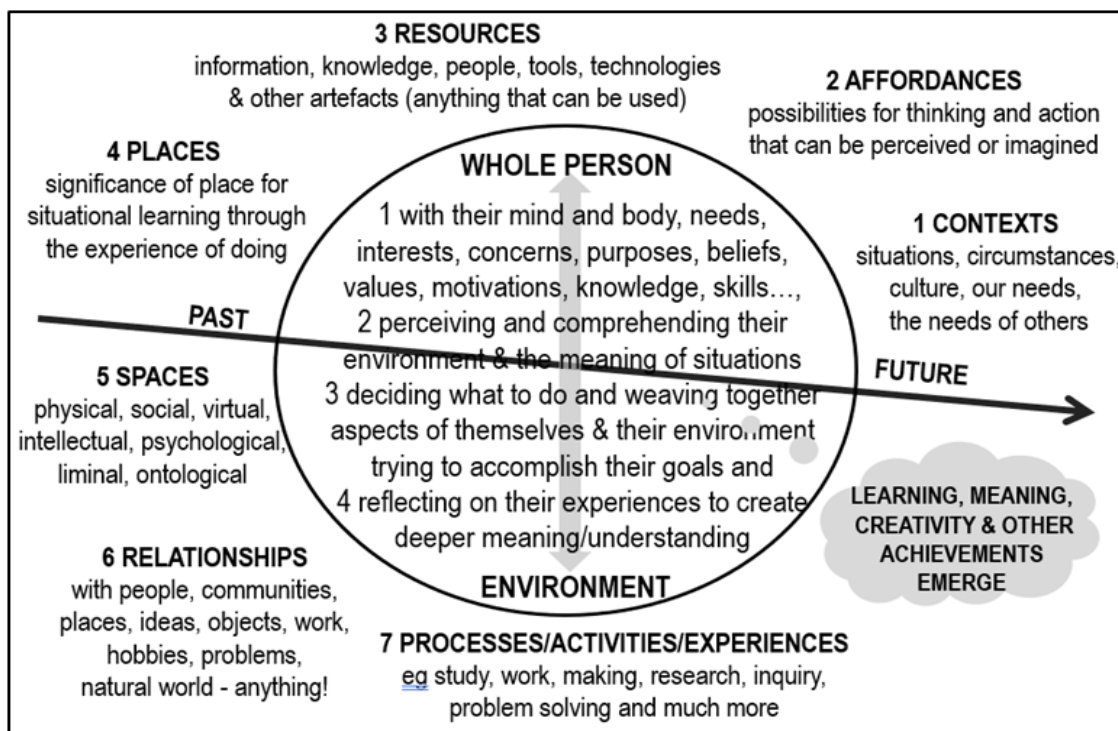
An ecology of practice is the means by which a person interacts with their environment in order to have the effects and achieve the results they intend, mindful that there will always be effects that they had not anticipated and being ready to respond to whatever emerges. The ecology enables a person to extend their mind and body into their environment, a process that is assisted by the tools and techniques they use. It is the means by which they become indivisible with their environment.

So how might motivation feature in this conceptual framework. The simple answer is everywhere. As we perceive our environment with awareness and understanding of the contexts and situations, our needs and the needs of others and other living and non living things, we develop emotional responses to what we are experiencing and sensing. These responses provide the stimulous to act and engage our reasoning and imagination to decide on whether we should act and how we should act. The process continues as our ecology of practice unfolds and we observe and evaluate the effects we are having in and on our environment. *Being able to see and appreciate the affordances in a situation is an important consideration where motivation is concerned* and the most creative and competent people see and act on affordances which others cannot see or chose not to. Seen from this perspective every element of the model contains potential and inspiration for action. The availability of resources, use and making of tools, the significant places and spaces we inhabit, the relationships we have with people and things, the processes and practices we engage in and the experiences we have, have potential to affect us in ways that will motivate us to act, or demotivate us.

Motivational Needs

The forces that drive us to create a life with meaning are embedded in our DNA and woven into us through our lived experiences: they are the heart of what it means to be human and relate to our needs and ambitions and perhaps the deep spiritual need, that gives meaning to the question of *why are we here?,* namely to live the best life we can for ourselves and others.

Through our participation in the lifewide dimension of our life i.e all the different environments that make up a life - like family and home, work and education, friendships, community activities, hobbies and interests, travel, sport, religion and much more, we try to satisfy our needs. Maslow[15] mapped these needs (Figure 5 column A) providing a

foundation for subsequent theorists. Alderfer[16] developed Maslow's Hierarchy of Needs into a three factor model of motivation known as the ERG model (column B in Figure 5). In this model the letters E, R, & G each stand for a different human need: existence, relatedness and growth and they are the most important forces that drive our participation in every part of our life. Our most fundamental need is to exist – our need for food, shelter, economic independence, health. Beyond this we need relationships that give us purpose, love, friendships, feelings of belonging and a sense of who we are. And then there are needs that relate to our own growth, development and self-expression as a person, providing us with a sense of fulfilment and of achieving our own potential as a unique creative human being deeply connected with our world.

Figue 5 Compilation of human needs that drive motivation based on theorists A) Maslow[15] B) Alderfer[16] C) Glasser[17] D) Robbins [18] E) McClelland [19]. Also includes (F) the need to care beyond human needs by seeing ourselves as interbeings connected to all living and non living things that sustain our existence on this planet[20]
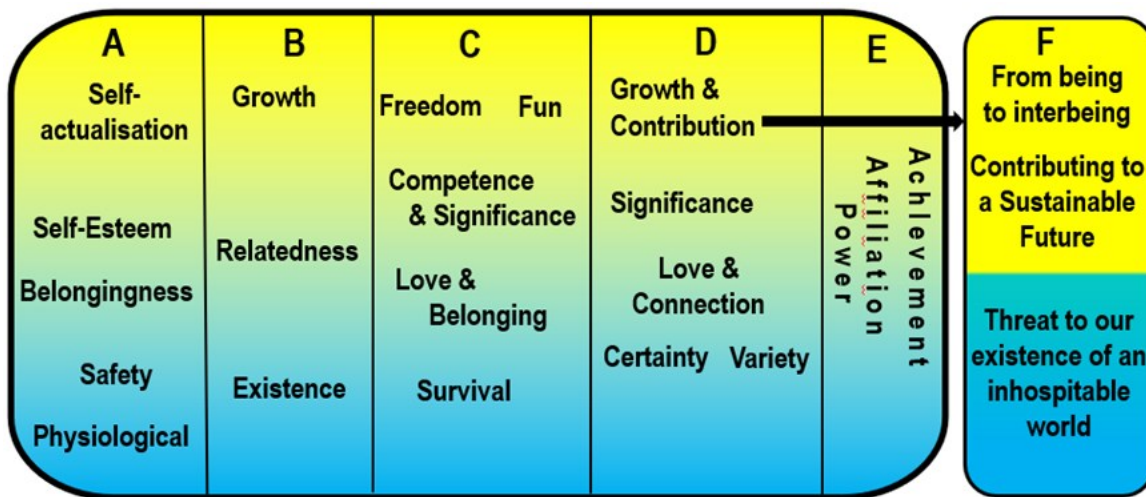
Glasser[17] offered five basic needs (column C in Figure 5):
Survival – physiological needs like food, water, shelter, safety.
Love and Belonging - psychological need for love, relationships and connecting with others.
Power - psychological need relating to competence and significance.
Freedom - psychological need relating to autonomy.
Fun - psychological need for happiness, learning.

Robbins[18] highlights an additional psychological need, namely the need to give or contribute to the greater good or causes that are bigger than ourselves and our immediate set of important relationships (column D in Figure 5). Satisfying this need is manifest in the causes we support and the voluntary work that people undertake on behalf of others or other things. We might speculate that this is also the domain in which needs to be developed in the context of living a life that is more likely to achieve a more sustainable future and is therefore particularly relevant to the global achievement of the UN's Sustainable Development Goals.

McClelland[19] identified three motivators that he believed we all have: a need for achievement, a need for affiliation, and a need for power (column E in Figure 5). McClelland argued that, regardless of our gender, culture, or age, we have all three motivating drivers, and one of these will be our dominant motivating force. This dominant motivator is largely dependent on our culture and life experiences. Where *achievement* is the dominant motivator the person has a strong need to set and accomplish challenging goals, takes calculated risks to accomplish their goals, likes to receive regular feedback on their progress and achievements, often likes to work alone. Where *affiliation* is the dominant motivator the person wants to belong to the group, wants to be liked, and will often go along with whatever the rest of the group wants to do, favors collaboration over competition, doesn't like high risk or uncertainty. Where the doimnant motivator is *power* the person wants to control and influence others, likes to

win arguments, enjoys competition and winning, enjoys status and recognition. Perhaps the value of this motivational framework is in explaining how an individual might engage with a problem or challenge.

But the time has come for us to recognise that we need to think and act beyond human needs in order to create a future that is sustainable we need to, "learn [and act] for oneself, for others and for the planet" [21 p. 14]. Individually and collectively we need to learn how to *contribute* in ways that minimise damage and optimise affordance for a sustainable regenerative future [22 p. 674]. I include this ideal in the compiliation of needs (column F in Figure 5).

The constellation of needs shown in Figure 5 provides a useful starting point for understanding what motivate us in any aspect of our life, but individuals will experience these needs differently and they will have different levels of significance in each person's life. The way an individual constructs their life and invests time and effort in doing things in different aspects of their life, will be a manifestation of how they strive to meet this constellation of needs in the particular circumstances of their life.

The survey we undertook during our inquiry (see Willis in this magazine) revealed that a significant project such as the trying to help nature, the environment and sustainability can meet to varying needs most of the needs identified in the Figure 5 framework, which is quite remarkable.

Conceptual Diagram for Understanding Motivation in the Context of Living for a More Sustainable Future
One of the goals of our current inquiry into helping nature, the environment and sustainability is to develop a better understanding of the motivational forces that cause us to act and commit to ways and means of living that are consistent with the principles underlying the SDGs. To this end we have conducted two participant surveys aimed at understanding the motivations that are causing them to do what they are doing in order to help nature, the environment and sustainability. Drawing on the results of these surveys, and other perspectives derived from our work, we might begin to develop a framework that reveals the way in which motivation and commitment to living for a more sustainable future emerge in our lives. Figure 6 attempts to synthesise the elements of such a framework informed by the ideas outlined above.

Figure 6 A representation of how motivation and commitment to living for a more sustainable future emerge in the contexts, circumstances and environments of our own life.
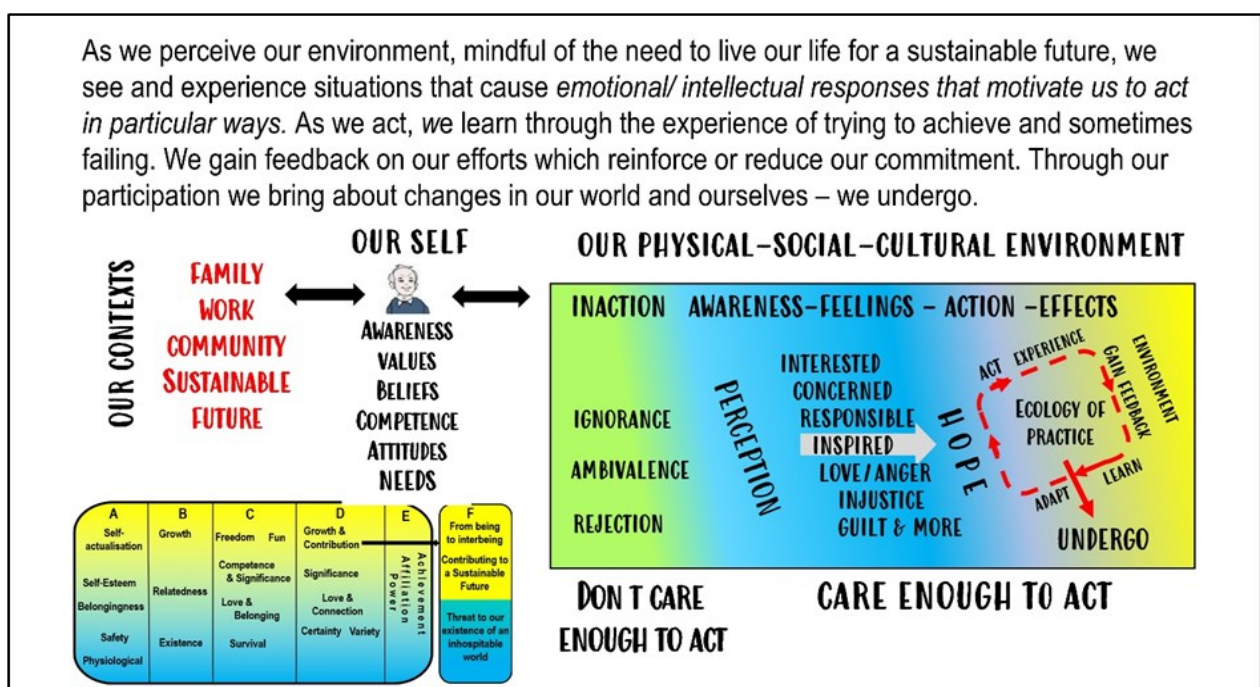
The left side of the diagram represents a person located in their environment containing the everyday contexts and circumstances that they inhabit - the lifewide dimension of their life[4]. Their participation in life through their relationships with family, friends, work and much more, gives their life meaning. These are the contexts and environments which provide us with opportunities to engage with the ideal of living for a more sustainable future. Once we are aware of the fragility of the planet and the damage we are doing to it we can make living in ways that are more sustainable to our contexts.

Every person has a set of physical, social, intellectual and psychological needs that they try to satisfy through their everyday living in these different parts of their life. As we saw through our survey, a significant personal project or commitment to change our habits or add new experiences to our life can satisfy to varying degrees many of the needs identified in the map of needs included in the diagram: Including the need to contribute to a more sustainable future.

Through their life experiences people develop knowledge, values and beliefs which inform decisions they make in the present about the way they live and these will affect their future.

The right side of the diagram attempts to represent the way motivation emerges as we interact with our environment, mindful of the need to try to live for a more sustainable future. Awareness is the foundation for motivation and action. As we perceive our environment, influenced by our knowledge, values, beliefs & needs, we see and experience situations that cause an emotional/ intellectual response that motivate us to act in particular ways in the contexts and affordances of our life. We learn through the experience of trying to achieve and sometimes failing. As we try we gain feedback, information about our efforts and effects, which feed our emotions and reinforce or reduce our commitment to what we are trying to accomplish in both the short and longer term.

The motivation to do something, especially if it is something we don't usually do, represents a shift in attitude from not caring about something (or not caring enough to act), to caring enough about something to want to act in ways that in some way help that something. Through the experience of acting on behalf of that something we learn to care more or less about it. In the words of John Dewey we undergo. We become different because out attitude (beliefs, concerns and values) towards something has changed and who we now are will influence how we think and behave in future.

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Impact of Pathway Inquiries On Health and Wellbeing
Jenny Willis

Introduction

The Pathways Inquiry was premised on a belief that by helping nature and the environment, we gain reciprocal rewards in the form of health, wellbeing, opportunities for development and self-actualisation. In order to test this hypothesis, towards the end of the 6 month inquiry, participants were invited to reflect on their experiences using a set of prompts.

Over the next few weeks please use these questions to reflect on your experiences and how they have affected you. (…)
Q1 In what ways has your experience of trying to help nature, the environment and/or some aspect of sustainability contributed to your health, your sense of wellbeing or any aspect of your development as a human being?
Q2 In what ways has your experience affirmed or conflicted with the beliefs and values you held prior to the inquiry?
*Q3 Are there specific things you would like or plan to do in the future that have grown out of this inquiry?*
Q4 As a result of your experiences has your understanding or attitude to the SDGs changed? Are you more or less committed to the idea of living your life in ways that are consistent with the principles of the SDGs?

It was recognised that there might be some overlap with responses made to an earlier questionnaire survey[1], but this time, there was an explicit focus on personal health, wellbeing and development. The concept of health is well understood, and in other articles in this issue the nature of development and self-fulfilment is discussed[1], but what is meant by wellbeing? The term is now ubiquitous and used loosely in many everyday contexts (wrongly) as a synonym for happiness; for this study, a more formal understanding is required.

The OECD [2] has been refining a model which brings together personal dimensions and the external environment which both forms and is affected by the individual to create their sense of wellbeing. This is a dynamic, ever-changing state. Figure 1 reproduces the model, showing the contributors to quality of life, influenced by material conditions such as wealth and how this personal state is interrelated with wellbeing of the environment (forms of capital). An alternative, simpler model is that of the NEF[3] which envisages 5 Ways to Wellbeing: take notice, keep learning; give; keep active; connect.

Figure 1 OECD Model of Wellbeing
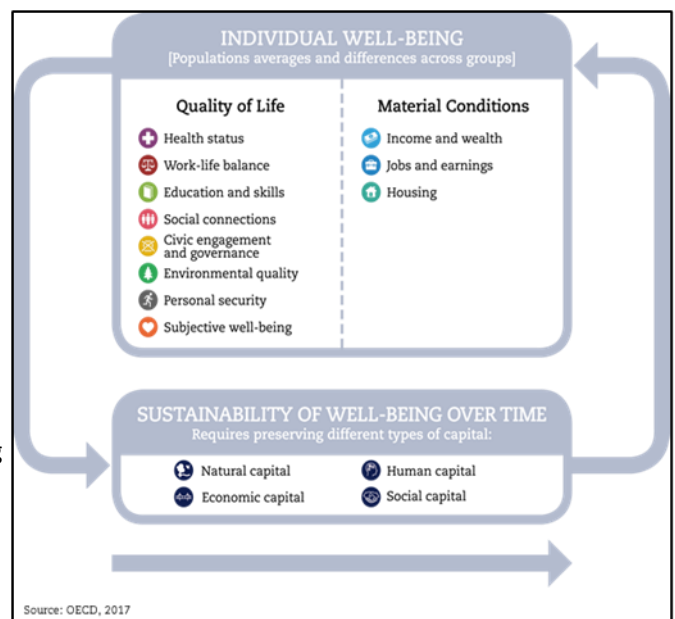
As responses to the survey are discussed, it will be pertinent to consider whether there is evidence of any of the factors listed in the individual wellbeing box or by the NEF's Ways to Wellbeing, and whether absence of a factor is a detractor from   individual wellbeing.

Narratives

Responses were submitted in narrative form and collated by question into a single document, made available to all participants.[4] Some respondents illustrated their texts with photographs from their projects. There were 12 returns, representing projects being conducted in Europe, Canada, the Caribbean and South America. This offered an interesting diversity of settings and partnerships.

The SDGs targeted explicitly in these projects were:
- #3, Health (5 projects)
- #5, Gender Equality (1 project)
- #11, Sustainable communities (3 projects)
- #12, Consumption (1 project)
- #13, Climate (2 projects)

- #15, Life on land (all projects)
- #16, Peace/ justice (1 project)
- #17, Partnerships (1 project)

As with the previous surveys[1], textual analysis was done manually to identify key themes, each of which is illustrated below by relevant quotations from respondents.

Q1a In what ways has your experience of trying to help nature, the environment and/or some aspect of sustainability contributed to your health, your sense of wellbeing or any aspect of your development as a human being – positively?

Responses to question 1 have been divided into (a) positive factors and (b) negative factors. There were 3 positive themes, the first related to the project process and the other two to personal and other outcomes:

- **Interaction with others** included
- Having shared values
  Developing mutually helpful relationships with neighbours

- Learning from others
- *It has encouraged me to search out groups active in the town*

- Working with others
  My focus on Goal 12 has broadened from sustainable practices in the staff development workshops that I teach to now including the development of a workshop on sustainability

- **Self-fulfilment,** through
- Recognition of achievement
- *Our community project has been captured in a video made by the Trust and we have just won a Community Champions Award*

- New learning
  the experience has been a positive one, and I have learned a lot

- New role
  I realise my concept of being a grandmother has morphed alongside my thinking about my project has developed.

- **Other outcomes** for the individual and community
- Sensitisation/awareness
  I have been sensitised to the simplest of natural phenomena

- Community development
  The possibility of creating strategies with the community thinking about the common good, leads to the feeling of contributing something to improve society

- Improved health/wellbeing
  That sense of well-being that is so elusive to describe – just thank God for this day and that I can do something- to be enjoyed by others

- Creativity

  My art practice has also developed as I have now begun creating jewellery, art pieces, and coasters with my flowers.

Q1b In what ways has your experience of trying to help nature, the environment and/or some aspect of sustainability contributed to your health, your sense of wellbeing or any aspect of your development as a human being – adversely?

The adverse factors were (a) of a practical nature and (b) to do with attitudes and commitment.

- **Practical**
- Financial
  … has required significant physical effort and financial cost and there have been many times when the words 'no gain without pain' have come to mind.
- Weather
  The poor spring weather dented my enthusiasm
  A few things have hindered my experimentation a little. First the weather
- Depredations of wildlife
  I seem to be feeding the wildlife instead of my family!

- **Attitudinal/values**
- Unresponsiveness of others
  The initial lack of response of people I wanted to involve in my projects
- Divide between supporters and others
  In particular there can be a significant divide between those whose work or personal interests mean that they have greater exposure to and knowledge of issues of sustainability and those who seem to be unaware.

In short, personal attitudes and practical issues emerge as paramount in supporting the natural environment, and these can have a positive or negative effect depending upon their presence. These findings are consistent with both the NEF and OECD models of wellbeing. Negativity derives mainly from a sense of being helpless to make the changes desired i.e. when environmental or other external factors are beyond the control of the individual.

Q2a In what ways has your experience affirmed with the beliefs and values you held prior to the inquiry?

The responses to this question have also been divided according to whether they affirm or refute the proposition, that there is any conflict with personal values. Five affirmative themes emerge:

- **Collective power**
  we can do more by working together

- **Patience and perseverance – time and effort**
  it requires effort and the use of our resources to do so
  I have remembered that change can be tricky, slow and more "organic" (how appropriate) than logical, systematic or mechanical

- **Individual or small actions can be effective**
  sometimes it is easier to think that someone else will do it or that small actions are not going to change the world, but when you reflect and remember the purpose and impact it can have, you regain the motivation to keep going
  We often hear about climate and environmental issues as a macro challenge. The experience of the last number of months has demonstrated how a positive impact on health and wellbeing, particularly on a personal level, may prove to be a an influential key to how we make individual changes which subsequently address those macro challenges.

- **Need to leave a legacy**
  The overriding value I held prior to the enquiry was the need to protect the environment; and to do this to understand it better. I would say the experience has affirmed these.

- **Unanticipated impact/change**
  I also seem to have developed a new belief regarding education, and human relationships: they take time, they "brew" , and they may take their own shape, not always the one i expected . As obvious as this statement may have been rationally, this experience made me see it this way also emotionally.

Q2b In what ways has your experience conflicted with the beliefs and values you held prior to the inquiry?

The causes of conflict again appear to be either practical constraints or attitudinal. These were:

- **Practical**
- Time constraints
  I have confronted time constraints and conflicts: mine and my family's, so that even a 6-month timescale gives only few real opportunities to focus on the project.

- Scale
  I feel i need to ask more on (sic) how people want to develop this ideas, and also keep expectations on small, realistic scale

- Knowledge limitations
  The tensions for me are around my own knowledge base as to what can be recycled, what can't
  lack of understanding and inability to quickly search and find answers that I can action
  sharing of files and version control and use of sites like a virtual learning environment, email, teams

- **Personal**
- Self-belief
  I did not believe that I could do something that would have long lasting effects.
  Suddenly, the SDGs coalesced with my spiritual quest and assumed a greater meaning
  …has reconfirmed my belief in my status not only as a 'citizen of the world' but as a part of the natural world with the capacity by my words and actions to work with the rest of nature or to contribute to destruction of the rest of nature and thereby 'self-destruction'. Recognising that co-dependency leads to survival is essential. Symbiosis is often 'win-win'.

Responses to question 2 align with those of question 1 in respect to negative factors, these again being practical constraints or deficiencies and conflicting attitudes/beliefs. There is evidence that the OECD contributors to wellbeing are absent or restricted, hence a sense of conflict arises. The positive factors for affirming beliefs are more diverse, including issues of power, personal dispositions, expectations and practicalities such as scale.

Q3 Are there specific things you would like or plan to do in the future that have grown out of this inquiry?

Respondents' plans for the future cluster around three themes:

- **Continue/expand present activities**
  From this inquiry, new projects have grown
  The project for the future has become a professional one soon to be 'live' as a bookable workshop for 23-24.
  Turn the material into an article for the next magazine.

My story around this project is but a single individual. I shall also write my project story for a wider audience than just the project members

In the short term I will be converting a lovely old kitchen sink into a little pond using some ideas from the Wildlife Trust.

- **Local community involvement**

  Carrying out activities that promote environmental awareness within their classmates and teachers, this will expand to their families and therefore to the community.

  We plan to re-engage our community with the aim of extending our B-Line south through the village. Thanks to our experience we have the confidence to expand our vision for a biodiversity corridor from 3km x1km to 5km by 1km.

  I hope to engage with both the local town council and councillors, and the local library services, with the intention of planning and creating opportunities for participants to experience the impact of collaborative and incremental engagement.

  I will continue to spread the word in my family and to support the SDGs, despite ever-present wars and natural disasters..

- **Values/expectations**

  I feel that I am now wearing SDG (sun)glasses and I notice that others are seeing me as someone committed to the SDG agenda.

  As I reflect on this I am wondering if it is also my time of life

It seems that involvement in projects has resulted in plans for future-related action on the part of most respondents. These build on current activities, often through sharing with others and community projects are clearly developing. This reflects the positive presence of opportunities for learning, working with others and giving to the community, features of the NEF model of wellbeing. For some respondents, there has been personal, existential change which they are carrying into the future.

Q4 As a result of your experiences has your understanding or attitude to the SDGs changed? Are you more or less committed to the idea of living your life in ways that are consistent with the principles of the SDGs?

Responses relate to the degree of commitment and to examples of how this is manifested.

- **Commitment**
- Unchanged

  Perhaps slightly more pessimistic about our likely success as a planet, but not less determined.

  I feel that the commitment in my case is the same, although i have developed a more "patient ", respectful view, of the way others are committed, or decide to live.

- Slightly changed

  I do think that perhaps I am seeing the SDG's through a "first-world" privileged lens and that as such I can do my best to live a life congruent with sustainable practices. So, I would say my attitude has changed somewhat – I need to be ok with what I can do and to believe that by doing that, the effect will pass on and up somehow.

- Noticeably increased

  It has in fact become something that I need to embed across my work and promote and discuss.

  The bottom line is that I know my wildflower project nested within my community engagement project has benefited me greatly.

- **How?**
- Example to others

  My own life and my family's [lives] are also permeated by responsible actions in relation to the SDGs.

there is so much we can do as individuals to adapt the way we live, support local initiatives and influence governance at the local, regional, and national levels and to do this in a way that is inclusive.
Sustainability is an issue which should be taught in schools and, within the curriculum, should be empha-sised Nature's interdependency. I shall promote this approach through networks both public and professional.

- Belief
Yes, I am more committed to the SDGs but in a spiritual rather than necessarily practical way
I shall continue to battle with my sense of scepticism about the negative aspects of human nature - apathy, lack of con-cern with the wider aspects of life and the environment, and the duplicity and greed of those in power

Whilst a few respondents are still struggling with their individual micro, ability to have a significant impact on the meso or macro environment, the majority are optimistic and have found the project a positive experience. These feelings are summed up by two of them:

The perception that all of life is recycled 'dust from dust' is profound and forces me to be conscious of the effect of eve-rything we do on our environment.

Sustainability has many meanings. It is essential for humankind to recognise that human beings are also part of nature and that the actions of human beings should be to recognise the co-dependency of this living planet; the planet and other parts of what is deemed nature are not purely for consumption by human beings. The concept of stewardship is an important one which should be revived and implemented.

Here, respondents are making a more explicit link between their individual and social wellbeing, as modelled by the OECD.

Implications of Pathways inquiries for personal wellbeing and development

This investigation sought to examine the impact, if any, of Pathway inquiries on personal development and wellbeing. Figure 2 proposes a synthesis of Maslow's Hierarchy of Needs[4], Alderfer's ERG model of growth[5] and the NEF's 5 Ways to Wellbeing[3]. It aims to illustrate how different termi-nology used in the three models actually refers to common themes all culminating in   wellbeing. The model allows us to compare the   emergent themes from this survey with these formal models of personal wellbeing.

Figure 2 A comparative model of personal wellbeing
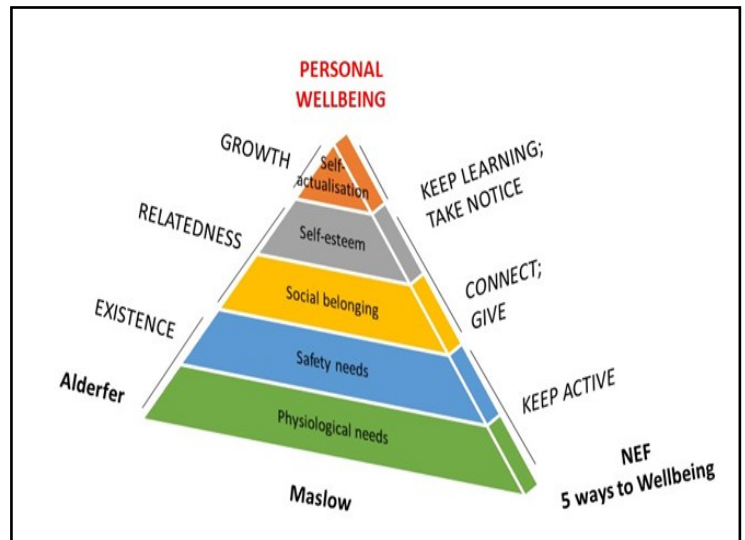
Model/Survey Evidence	Q1 How project contributed to health/wellbeing/ development	Q2 Project has affirmed or conflicted with beliefs	Q3 Future plans	Q4 More or less committed to SDGs
Existence (Alderfer) Physical needs (Maslow) Safety needs (Maslow) Keep active (NEF)	Costs involved Weather Depredation by wildlife	Lack of time & knowledge Scale of problem	Scale back plans	Scale Stewards of planet
Relatedness (Alderfer) Social belonging (Maslow) Give (NEF)	Social interaction Community benefit	Collective power Legacy	Work with community	Serve as model
Growth (Alderfer) Self-esteem (Maslow) Self-actualisation (Maslow) Take notice (NEF) Keep learning (NEF)	Differing values Recognition Learning New role	Lack of self belief	Expand, develop activities	Self-belief Existential growth

Table 1 amalgamates the 3 models and maps the responses to the 4 survey questions against them, using colour coding to show any positive impact (green shading) or negative impact (rose shading) through participation in the Pathways inquiry.

Table 1 Mapping responses against models of wellbeing and self-actualisation

The analysis shows immediately that the greatest areas of difficulty have been at the practical, existential level of (constrained) resources. However, the rose boxes are outnumbered by the green, suggesting that the impact of the project has been predominantly positive. The dimension in which it has been most successful is that of Relatedness, working with and for others, and learning with or from them.

Self-actualisation and wellbeing feature strongly, but differing values between people involved in an inquiry and lack of self-belief are found to be inhibitors.

Despite the difficulties sometimes encountered, participants' responses to question 3 indicate that this has been a positive experience for them and one which has made a change in them, to be carried into the future, thanks to having learnt lessons such as the need to set realistic targets.

Based on these self-reports, there is considerable evidence that Pathway Inquiries have contributed positively to the health and wellbeing of participants and beyond this to their environment. The feedback gained from the effects of individuals' actions on their environment, contributed to their sense of wellbeing. Overall, the collaborative inquiry has enabled the group to develop its understanding of how people actualise themselves through the process of trying to help nature, the environment and sustainability.

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Transformative Learning through
Collaborative Inquiry for More Sustainable Futures
Norman Jackson, Jenny Willis & Melissa Shaw

Introduction

One of the biggest barriers to learning how to sustain and regenerate ourselves and the planet are the beliefs and habits that make us reproduce what we do in an unsustainable way. Laininen[1] argues that we need to transform our beliefs, abandon old habits, and create new habits in the lifewide dimension of our life through a combination of education for sustainable development and experiments in self-education while trying to live for a sustainable future. It's a messy business and attempts will often fail, but if we don't try there will never be change.

Transformative learning for a sustainable future is defined as learning that transforms our existential understanding and conceptions about the interdependence of humans and nature, the essence of humanity, fundamentals of wellbeing, and the role of economy in our world and daily lives The centre of knowledge content is not subjects or sciences, but the wholeness of our world and our lives. Learning focuses around understanding the connections between humans, nature, society and the economy with an aim to develop solutions for our sustainability challenges and making a sustainable world real while learning. Learners' own life experiences have to become part of the learning substance, and participation in change processes within [and for a different] *society must become part of learning* [1 p.180] (our addition in parenthesis).

Our collaborative inquiry aimed at learning for a sustainable future, fits fairly and squarely within this vision of transformative learning for a sustainable future. It encourages and facilitates a pedagogy for self-education that enables a community of interested, self-motivated, autonomous adult learners to better appreciate themselves as a whole person in relationships with others and their worlds. Through their own process of inquiry into trying to help nature, the environment and living for a more sustainable future they develop a *"deep realisation and coherence of the purpose, direction, values, choices and actions* [in their] *life"* [1 p.180]. By participating in collaborative inquiry we are engaging in a form of individual and collective self-education, experimenting within selected contexts, circumstances and situations in our own lives and sharing the results with others who are doing the same so that collectively we gain new and deeper understandings of how to transform ourselves and our world.

Self-Education and Personal Transformation through Lifewide Action and Learning

According to Wals & Kieft[2] in the early years of Education for Sustainable Development (ESD) much attention was given to the meaning and content of the SD in ESD. In recent years more emphasis has been placed on the Educational aspect of ESD. *"There has been a shift from training and instruction (simply put: telling and training people how to live their lives) to learning and capacity building for SD (simply put: enabling people to contribute to sustainability in a meaningful and contextually relevant way). This shift reflects the perceived need for continuous engagement in sustainability in formal, non-formal and informal settings on the one hand and the need for capacity-building, participation and self-determination for sustainable development on the other"*[2 p17].

A fundamental question about the role of education in society remains to be asked: Is education about social reproduction or about enabling social transformation, and this debate is reflected in the way educators imagine the educated citizen interacting within society[3 p.8–11]. This question is not answered in the same way across the globe but the way it is answered has major implications for the way ESD is interpreted and implemented. Using the two composite conceptions of education, and the two corresponding views of an educated citizen. Figure 1 provides a heuristic constructed a to aid visualisations of these conceptions.

Through the inquiry we are participating in a form of self-education and learning for a sustainable future (we will use the term Education for a Sustainable Future ESF) and we can use the framework developed by Wals & Kieft[2] to show how our approach sits within what they call the social role of the educated person: in other words we are educating ourselves while performing the social role of an educated person within the contexts and circumstances of our lives.

These authors maintain that the 'E' in ESD (ESF) can be conceptualized in different ways, depending on the amount of space there is for participation, self-determination and autonomous thinking and action and the reflective evaluation of the consequences and effects of actions the world, self and others. When this space is narrow and

constrained, a more transmissive version of ESD (ESF) is likely to result with a strong emphasis on instructional forms of teaching and knowledge transfer. When this space is broad and perrmissive, then ESD (ESF) will emerge characterized by higher levels of participation, self-determination, autonomous thinking and action, knowledge co-creation and personal, social and environmental transformation.

Figure 1 Positioning of ideas about 'education' alongside the social role of the 'educated person'[3 & 4 p.8].
Field D is the domain of self-education through action-led collaborative inquiry.
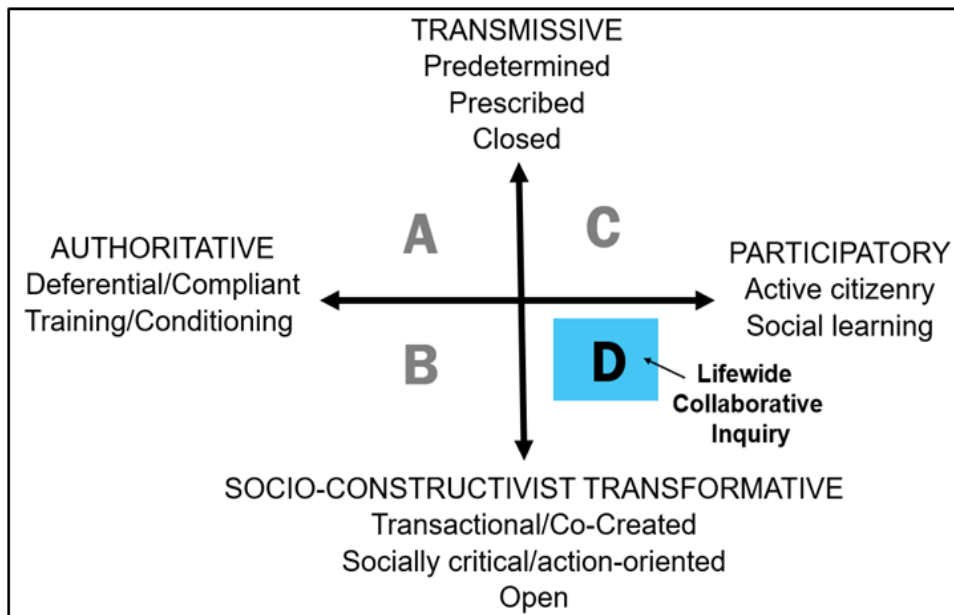
Furthermore, as the 'E' (including self-education) in ESD is increasingly being emphasized there is more attention for the kinds of capacities of qualities people need to develop in order to be able to contribute to sustainable development. The concept of 'sustainability competence' refers to those qualities people need to have to be able to act when confronted with a sustainability challenge.[2 p.7] Self-education, in the context of collaborative inquiry aimed at engaging with some aspect of a more sustainable world and future, is fundamentally about developing such competence which is most usefully related to the original definition of competence *"an organism's capacity to interact effectively with its environment"*[4]

The lifewide collaborative inquiry is characterised by highly contextualised, experiential and reflective learning as individuals participate in their own action-based inquiries in their own everyday environments. This is combined with social learning as participants interact and share perspectives through group meetings and conversations and contributions to surveys organised by the facilitators. Using the Jickling & Wals framework as a reference point, we might position the lifewide collaborative inquiry we have undertaken in domain D of Figure 1.

Our Approach to Self-Education through Collaborative Inquiry
This is the fourth collaborative inquiry in 2 years that Lifewide Education has facilitated and the longest by far. We chose 6 months duration, partly to provide enough time to enable our interventions to mature, and partly to test our own commitment and resolve. Most of the participants had been involved in a previous Lifewide collaborative inquiry and had already demonstrated their commitment to living and learning for a more sustainable future.

The inquiry was led by three members of the lifewide team who were all experienced facilitators. Their role was to encourage and support participants, coordinate meetings, undertake participants surveys and curate the knowledge gained through inquiry. The facilitators also participated fully in the action-led inquiry contributing to the knowledge development process and curating results.

"There can be no learning without action, and no action without learning" Reg Revans[6]

We used an action learning approach to explore how we might as individuals helping nature, the environment and sustainability. The inquiry took place between early March and September 2023. A summary of the expectations is shown in Figure 2.

Figure 2 Summary of our approach to collaborative action and inquiry to help nature, the environment and sustainability.

Participants were invited to identify one of more of UNESCOs 17 Sustainable Development Goals (SDGs) that relate to nature, environment and sustainability and form their own Action Learning Project around something that was relevant and meaningful in their own life. The scope and focus for individual projects, how they would be conducted and who would be involved, was determined by the individuals concerned and the people they were collaborating with. There was an expectation that individuals would maintain some sort of record of their activities and their effects (eg diary or blog) but this was left up to the individual. There was also an expectation that participants would share their intentions and experiences with other participants.

> ## COLLABORATIVE LEARNING FOR SELF-EDUCATION
>
> **1 Create a pathway of actions to help nature, the environment and sustainability in our own contexts and circumstances.** *Learn through the experience of trying to do something in the environments we inhabit every day.*
>
> **2 Record experiences, achievements and learning (any format/ media).** *Create a knowledge-base to aid sharing, reflection and understanding.*
>
> **3 Share the journey and what has been learnt with each other and with others through zoom meetings, thematic surveys, mini presentations, digital stories.** *Help co-create a social experience that enriches opportunity for learning.*

Collaborative Learning
A monthly Zoom meeting was the formal way in which we came together to share our plans, our experiences and our learning. The strength of a collaborative inquiry is the space it affords for discussion, alternative perspectives, reflection, mutual appreciation and mutual inspiration. The Zoom meetings were essential to the development of a sense of community and to helping participants' sustain commitment to their own action-based learning. Over the 6 months participants were able to share their ideas and designs, and report progress through short 10min presentations. Meetings were recorded for those who could not attend and posted on the Pathways Inquiry webpage https://www.lifewideeducation.uk/pathways.html

We also conducted two questionnaire surveys aimed at gathering views on participant motivations for a) engaging in the inquiry and acting on behalf of nature, the environment and sustainability b) the extent to which their participation in their own action-based learning project affected their health and wellbeing (see articles by Willis in this magazine).

Encouraging creative self-expression
We believe that creativity is important for health and wellbing and consider it likely that as an emergent phenome-non it will be embedded in our thinking, activities and actions. Mindful of this we encouraged participants to con-clude their inquiry with a digital story which can be viewed at https://www.lifewideeducation.uk/pathways-stories.html

Sharing with the wider world
While we voluntarily participate in these action-based inquiries in order to learn and develop our own thinking and practice, our intention is to share what we have learnt with whoever is interested. This is why we try to synthesise our experiences and learning in the magazine.

Underlying Theory for Change
Ultimately, collaborative inquiries are concerned with bringing about change – in ourselves and in the world around us. The articles in this issue that discuss the research projects and their findings (see Willis), together with participants' digital stories available at https://www.lifewideeducation.uk/pathways-stories.html provide evidence consistent with Hiatt's 5 dimensions of change[7], listed below.

Awareness of the need for change. Self-education through reading, watching videos and interacting with others provides a foundation of knowledge that informs the way we see and understand the world. Perhaps also, as we perceive our environment mindful of the need to change, *we recognise affordances* that, if we act upon, we can make a difference.

Desire to encourage, participate in and support change. Being aware and recognising opportunities to act must be accompanied by an emotional need to act. Without the will to act nothing will happen. Through our exploration we

came to appreciate the diversity and complexity of the motivational forces that drive us to participate in change. Caring about something beyond ourselves and our immediate needs is the universal motivational force for engaging with the SDGs. Furthermore, collaborative inquiry is performed within a supportive and interested community which shares and reinforces this core motivational force.

Knowledge of what to do to bring about change. The process and the social environment encourages participants to act and experiment to try to involve themselves in new experiences for which they might have little previous knowledge. In this way new knowledge is developed through trying to bring about change and then being changed in the process.

Competence and confidence to realize or implement change. Our competence derives from past experiences of trying to   accomplish something but at the start of trying to accomplish something new we may not feel competent. While our initial steps might be tentative we gain confidence in our own competency through trying to bring about change, by experiencing challenges and learning how to overcome them.

Reinforcement to ensure the results of a change continue. While our inquiries are time bound personal change projects do not necessarily end at the end of an inquiry. The changes that have happened in ourselves, lay the foundation for further initiatives and change in the future. Perhaps more important than reinforcement is *commitment.* The *desire to try again and to keep   trying* even if not successful because deep down we know we are doing the right thing.

What do participants think they have gained from participating in the inquiry?
But what else do participants tell us about their experience of the 6 months Pathways inquiry? The quotations that follow are their own, unedited words, as expressed in the surveys, digital stories, emails or monthly Zoom meetings.

Meaningful interaction with others who care about similar things
The value of collaboration and interaction with others who care about education and learning for a sustainable future is a   recurrent theme, captured in the following remarks:

'Being amongst people who share my attitudes, values and beliefs about learning and education, and who want to develop their own understandings through actions that are directed to living for a more sustainable future, is the fundamental reason why I participate in these inquiries. It's a journey with interesting and good people and the way I feel about the overall experience depends on my sense of whether my companions are gaining fulfilment from their experiences. Our monthly zoom meetings provides me with an opportunity to judge this and my general sense is that those who have shared their stories are benefiting from the experience.'

'SDG 17 underpins a lot of my personal philosophy with the notion of 'partnership' in its many formats, presenting opportunities not only for engagement with others but also with the environment itself.'

It seems that companionship is valued for its affective nature as much as, if not more than, for the benefits of the results of collaborative work.

Perhaps also there is something special about the motivations that come from sharing the journey with companions who have similar beliefs, values and a common purpose. We are inspired and motivated by the companions we journey with.

Interaction with nature and wellbeing
As the second quotation above notes, interaction with nature and the environment is also important, with one person contrasting the option of living our lives in symbiosis or parasitism:

'Involvement in the project has re-confirmed my belief in my status not only as a 'citizen of the world' but as a part of the natural world with the capacity by my words and actions to work with the rest of nature or to contribute to destruction of the rest of nature and thereby 'self-destruction'. Recognising that co-dependency leads to survival is essential. Symbiosis is often 'win-win'. Parasitism leads to there being a 'loser'.'

More broadly, humankind and nature are seen as complementary or one:

'Sustainability has many meanings. It is essential for humankind to recognise that human beings are also part of nature and that the actions of human beings should be to recognise the co-dependency of this living planet; the planet and other parts of what is deemed nature are not purely for consumption by human beings. The concept of stewardship is an Important one which should be revived and implemented.'

'I reflected that tending the family and tending the planet can be complementary.'

'My journeys along these three different pathways has (sic) strengthened the belief that NATURE IS NOT SOME-THING DIFFERENT – WE ARE NATURE.'

Respondents often link their interaction with the natural world explicitly to their sense of wellbeing. This can be brought about through physical exercise or simply the pleasure of observing and enjoying the world around us.

'There is no doubt that reflecting consciously on my most recent experiences in an informal, reciprocal relationship with nature and the environment has had a positive impact on me.'

'My health and sense of well-being has been improved by being outdoors and watching the vegetation grow. I have loved the sense of nurturing the plants and trying to give them the optimal growing conditions. I also found the aspect of 'possibility' very cathartic to my well-being. Meaning, thinking, my imagination and planning what I might be able to cook/use and/or create with the plants that I am growing as well as looking at them in an aesthetic sense, seeing plants growing into each other as they grow more mature.'

'As a living being, I resonated with the living things around me indeed, I enjoyed and revelled in the experience of the growth and development of the plants around me. I watched as the cycle of the season transpired over several months. I am always amazed at the naturalistic circle of life and seeing that every year I have been alive is magical to me.'

Self-fulfilment through contribution and collaboration

Another common theme among respondents is their sense of growth, their self-actualisation, through taking part in a project which has the potential to impact on their environment.

'The possibility of creating strategies with the community thinking about the common good, leads to the feeling of contributing something to improve society, which generates meaning and purpose in the actions we do, and that feeling of purpose and contribution to the universe. It moves hope and therefore personal well-being.'

'That sense of well-being that is so elusive to describe – just thank God for this day and that I can do something- to be enjoyed by others. If anything, I think that's a very self-actualization kind of feeling.'

Being part of a collective endeavour is significant both for the practical strength of collaboration and for the affective impact of interacting with others:

'It is the human element of what I do that evidences not only the interest and intent of individuals and groups from many different backgrounds, but also the underlying principles of hope and care. Having an opportunity to share experiences with interested peers has been valuable and inspiring, and the diverse international perspectives have highlighted not only commonalities in aspiration, but also the importance of sharing and collaboration in the work we do.'

'This inspiration is twofold – from both a knowledge perspective and from a peer inquiry approach. While I can continue to do the work I do at a local level from a practical perspective, the experience of the last six months has provided a broader perspective and enhanced my own learning. The collaboration has provided enlightened viewpoints and some tangible evidence that we are all striving towards an aligned goal. Knowing on a personal level that something is important and right is only one element, hearing that perspective from others in many different ways, both individual and collective has contributed to the   development of my work. On a personal level it has highlighted the importance of the human element in what I do and affirmed the potential impact we really can have on 'living well'.'

Awe, wonderment and personal change

Participants record their deeper appreciation of nature and amazement at the profound metaphysical change they have experienced.

I've made some deeper meanings and realisations in the course of our conversations and reflections'

One person describes the process of:

'looking at things from different perspectives, looking at a tree from below and enjoy how the light catches the leaves, looking for and being fascinated by the details in a leaf, a frog, a patch of meadow.'

Another admits:

'I was quite unprepared for this metaphysical experience which has given me a new sense of oneness with nature, and in consequence a greater appreciation of the SDGs.'

The following quotation expresses the comprehensive change that the individual perceived:

'I am now more knowledgeable and confident about tackling and leading nature-based solution projects and I have developed my knowledge of both the place and the community in which I live. Working outdoors has improved my fitness and I have been able to create some wildflower/wildlife movies and magazines that have given me real pleasure.'

Another participant was moved to say:

'The sense of wonder and awe about what is and how things can be. I just say that completely from my head and my heart. Wonder and awe in what I've seen in the gallery, what I've discussed in terms of hearing people talk and in the creative and enthusiastic way… '

Overcoming difficulties and other challenges

Change may be accompanied by learning, something which is frequently faced with challenges that must be overcome:

'I have been quite surprised at what I have learned during the process of this inquiry. My thoughts at the beginning of the   growing season have dramatically changed in ways I couldn't have envisioned. I have had mixed results to my experience, none of which I could have anticipated. Overall, the experience has been a positive one, and I have learned a lot. Not the least of which is that I need to investigate and research more into home gardening and growing veggies.'

Ethical problems may be encountered:

'If we work as ethical individuals, that will benefit us all. I think overall in my experience of working on this, it has given me more insight into the kinds of actions that I want to take in the future and the reasons why I would want to put those in place.'

Delayed or imperceptible outcomes are repeatedly referenced as a source of frustration, undermining motivation.

'I'm not certain that I have achieved a great deal in practical terms over these past months, but I feel a shift in perspective and a direction, motivation and way of being for my future. I hope that I have started to plant seeds of awareness, ideas and hope in my family, and which my granddaughters will take forward into their lives for the future challenges they must face.'

Commenting on the compilation of digital stories one participant said:

'people have overcome all sorts of issues to produce something which I think is an outstanding achievement.'

Enjoyment

The words of one participant remind us that action research projects like this:

'Have to be joyful at the end of the day. And if not, why do we do it?'

He thanked fellow participants for:

'The JOY that you have brought to the meetings. (…) You go away feeling uplifted and inspired.

Another participant commented:

I have thoroughly enjoyed being part of the project and its influence is still having repercussions for me in my professional life as well—it's galvanising me

Collaborative Inquiry An Emancipatory Approach to Self-Education for Sustainable Futures
We have reached a point in human history where the moral purpose of education and individuals' commitment to learning throughout their life, need to be broadened to encompass the health and vitality of the planet and the life it supports. Creating such a culture of commitment within human civilisation needs to be a core mission of all forms of education including self-education. According to Wals and Jickling[3]:

'Education is viewed as a means to become self-actualized members of society, looking for meaning, developing their own potential and jointly creating solutions. In this view a sustainable world cannot be created without the full and democratic involvement of all members of society; a sustainable world without participation and democracy is unthinkable. If we juxtapose more instrumental views of ``education for sustainability'' with more emancipatory views of ``education for sustainability'' we can imagine, on the one hand, an ``eco-totalitarian'' regime that through law and order, rewards and punishment, and conditioning of behavior can create a society that is quite sustainable according to some more ecological criteria. Of course, we can wonder whether the people living within such an ``eco-totalitarian'' regime are happy or whether their regime is just, but they do live ``sustainably'' and so will their children. We might also wonder if this is the only, or best, conceptualization of sustainability. On the emancipatory end of the continuum we can imagine a very transparent society, with action competent citizens, who actively and critically participate in problem solving and decision making, and value and respect alternative ways of thinking, valuing and doing. This society may not be so sustainable from a strictly ecological point of view as represented by the eco-totalitarian society, but the people might be happier, and ultimately capable of better responding to emerging environmental issues'. [3 p225]

The collaborative inquiry approach we have adopted is consistent with the emancipatory approach to education for sustainability advocated in the passage above, accepting that:

'Sustainability is as complex as life itself. The concept of sustainability is related to the social, economic, cultural, ethical and spiritual domain of our existence. It differs over time and space and it can be discussed at different levels of aggregation and viewed through different windows…It concerns cognition, attitudes, emotions and skills. It does not lend itself to unilateral, linear planning or a reductionist scientific paradigm and thus involves the systemic integration between theory and practice into systemic praxis'. [3 p. 227].

And accepting[3 p.227]
- *sustainability as (socially constructed) reality (and as such a phenomenon to be taken seriously);*
- *sustainability as ideology and therefore political;*
- *sustainability as negotiated, the result of (on-going) negotiations;*
- *sustainability as contextual, its meaning is dependent on the situation in which it is used;*
- *sustainability as vision to work towards [as such it requires imagination];*
- *sustainability as dynamic and/or evolving concept;*
- *sustainability as controversial and the source of conflict (both internal and with others);*
- *sustainability as normative, ethical and moral;*
- *sustainability as innovation or a catalyst for change;*
- *sustainability as a heuristic, a tool to aid thinking;*

When we commit to action and learning for a more sustainable future we are commiting to things that are beyond ourselves and our own needs – for example the needs of nature, the environment and healthy planetary systems that support all life. What our inquiry has demonstrated is that in participating in actions for a particular sustainability purpose, we may indeed also satisfy our own physical and psychological needs, including our health and wellbeing coupled to our growth and fulfilment as a human being. Perhaps also there is a sense that part of our fulfilment is spiritual in nature – a deeper connectivity with the things we care about.

Concluding thoughts

There are abundant opportunities to learn about sustainability through formalised education – just google 'learning for a sustainable future'. These often take the form of on-line courses and along with reading and watching videos on this subject, they enable us to develop knowledge about sustainability and what we might do to act on behalf of a sustainable future.

Our approach starts from the position that we are embedded in the contexts, circumstances and situations of our life. Each day we enact our life in a range of environments and relationships – home, family, work, friendships, community and more. These are the lifewide environments in which we act, learn and change ourselves and our world.

We assume that participants have enough knowledge about what sustainability might mean, in any of their contexts, to begin acting on behalf of an aspect of sustainability that is important to them.

Each participant engages with the challenges and changes they want to bring about but they are also willing to interact with other members of the collective to share their experiences and gain more educational value from the experiences and insights of the collective— we all benefit from the wisdom of the crowd that shares our experience.

Figure 3 The importance of community in learning for a sustainable future

By coming together as a collective we create an additional social environment and context within which people can learn with and from, and encourage, inspire and   support each other in their actions. This slightly edited cartoon by environmental activist and artist Brenna Quinlan, captures the spirit of this very well. In doing this we give meaning and substance to fulfilling the social [and environmental] role of the 'educated person' (Figure 1)[3] , and we make our journey through life more interesting and meaningful.

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