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## Exploring Creative Ecologies



**creative academic magazine**

Issue Number 5 September 2016

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## Executive Editor,

## Jenny Willis



This, our 5th edition of Creative Academic Magazine is a perfect example of how dynamic our work is and how ideas are, indeed, built on the shoulders of giants. What began with a simple comparison between nature’s ecosystems and our individual acts of creativity has evolved into a sophisticated, complex set of ideas, as individuals contribute their own thoughts and experiences.

Norman introduces us to the inception of his model, with its roots in principles dear to, among others, Dewey and Rogers, and Darlene Chrissley illustrates her own process of creative evolution. There follow a number of articles drawn from the narratives produced for our #creativeHE project. Next we have various contributions showing how individuals are seeking to make sense of and apply the concept of creative ecologies, especially to HE pedagogy. We report on the findings of our survey on World Innovation & Creativity Week 2016, and other items of news.

The magazine is uniquely illustrated by our Guest, Simon Rae, whose distinctive style we encountered in CAM4. Thank you to Simon and all who have been involved in CAM5, not least Norman, for his vision and relentless effort to produce an outstanding magazine.

In fact, CAM5 is an important milestone in our creative development. It is

*‘the first act in our ambitious plan for the coming year to link the idea of creative ecologies to the idea of creative pedagogies - what teachers do to invent and facilitate ecologies through which students learn and are encouraged to create’*

*(see page 74 for our rough plan)*

We hope that this magazine will inspire your own ideas and welcome your contributions to this exciting work.

*Jenny*

# Concept of a Creative Ecology

Norman Jackson



*Norman is Co-Founder of Creative Academic.*

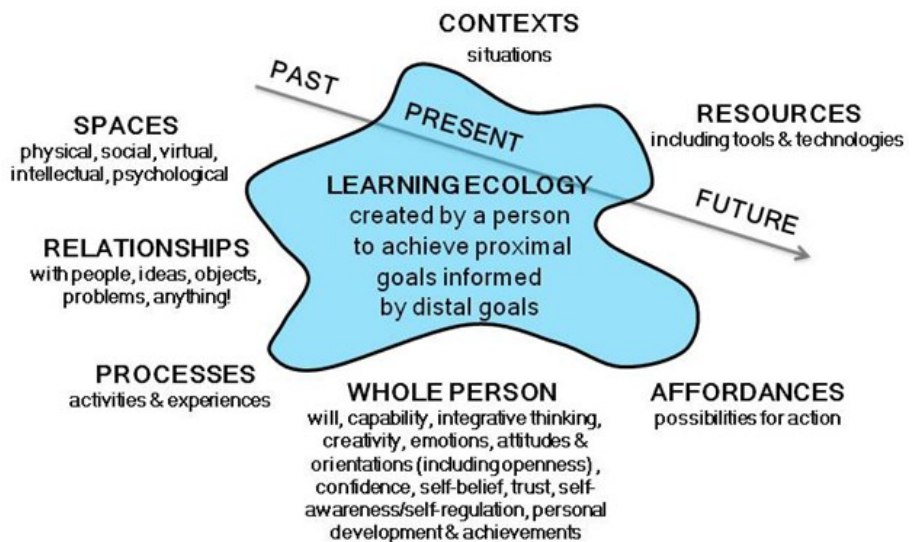
## Ecologies for learning

In nature an ecosystem comprises the complex set of relationships and interactions among the resources, habitats, and residents of an area for the purpose of living. Each organism within an ecosystem has its own unique ecology within the ecosystem through which it lives its daily life, so the whole ecosystem is made up of many individual ecologies competing or collaborating for resources and contributing to the system as a whole so that the whole system is maintained and sustained.

A similar conceptualisation can be applied to human ecological systems or ecosocial systems - the set of relationships and interactions among the people, resources, habitats, and other residents of an area for the purpose of living<sup>1</sup> While all ecosystems are complex adaptive systems that learn to live with, and when necessary adapt to, their environment, the making of meanings, sharing of understandings and development of capability (learning) are a primary interest and purpose of human ecosocial systems together with their continuous development and improvement<sup>2</sup>

Every organism has an environment: the organism shapes its environment and the environment shapes the organism. So it helps to think of an indivisible totality of 'organism plus environment' - best seen as an ongoing process of growth and development<sup>3</sup> From an environmental perspective it does not make sense to talk about the environment in which we are learning without reference to ourselves as the organism that is perceiving and interacting with the environment we inhabit in order to learn.

Applying the idea of ecology to learning, personal development and achievement, including our creative achievements, is an attempt to view a person their purposes, ambitions, goals, interests, needs and circumstances, and the social and physical relationships with the world they inhabit, as inseparable and interdependent. The idea of ecology encourages us to think more holistically and more dynamically about the way we inhabit and relate to the world. It encourages us to think in a more holistic way about our life: how we connect up the moments in our lives to form experiences and achievements that mean something to us.



Exploring Learning Ecologies <https://www.lulu.com/>

*Figure 1 Components of a learning ecology<sup>1</sup>*

## Model of a learning ecology

To help explore, apply and evaluate the idea of a learning ecology I have developed a model which can be used as a tool to aid reflection of complex, self-determined learning experiences (Figure 1 & 2)



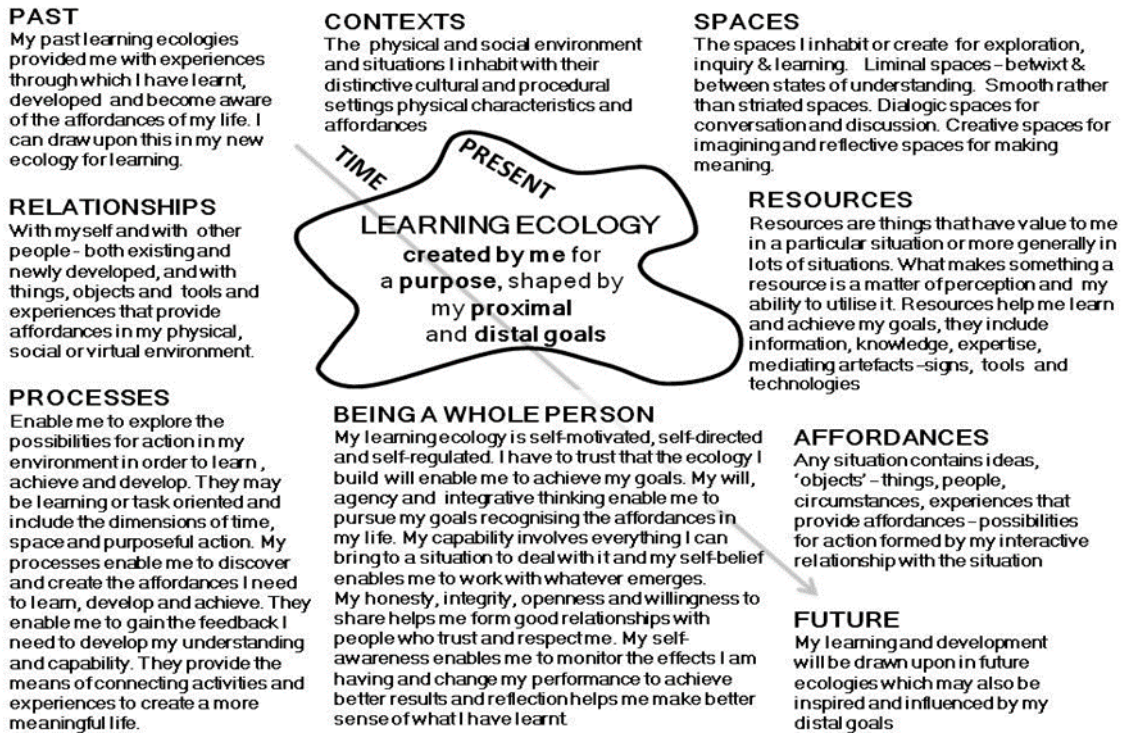
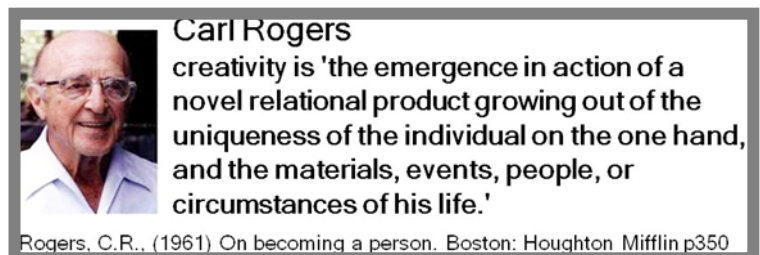


Figure 2 Explanation of the components of a learning ecology<sup>1</sup>

Growing out of the exploration of this idea is a belief that our ecologies for learning embrace all the physical, virtual and psychological spaces we inhabit in our everyday lives and the learning and the meaning we gain from the contexts and situations that constitute our lives. This includes the big significant spaces like work and home and all the interstitial spaces, like driving to work, that connect the big spaces in our life. Our ecologies for learning are the host and the product of both imagination and reason and they are enacted using all our capability and ingenuity. They are therefore our most important sites for our creativity and they enable us to develop ourselves personally and professionally in all aspects of our lives. If this belief is well founded then surely, our ability to create our own ecologies for learning and development must be one of the most important and creative capabilities we need for sustaining ourselves, achieving our purposes and maintaining our sense of wellbeing in a complex, ever changing and often disruptive world. Yet to date, there has been little consideration of these ideas in the educational or professional development practices.

## Ecological perspectives on personal creativity

There is an interesting and productive interplay of ideas as we journey through life forever coming across ideas and connecting and combining them with ideas and beliefs we already hold, and from time generating ideas that are entirely new to ourselves, but not necessarily new to the world. My involvement in trying to understand creativity preceded and influenced the way I engaged with and developed the idea of lifewide learning out of which grew the idea of learning ecologies. As these ideas grew I could see how our creativity must be involved in our ecologies for learning, development and achievement. So it is not surprising that as I have journeyed with the idea of creativity over the last fifteen years, I have come increasingly to appreciate and respect the way Carl Rogers framed the idea of personal creativity<sup>4</sup> His view of personal creativity (see quote on right) and how it emerges from the circumstances of our life, is an ecological concept. The ecological metaphor affords us the most freedom and flexibility to explore and appreciate the ways in which we and our purposes are connected to our experiences and the physical, social and psychological world we inhabit.





But the idea that creativity and the experience of being creative involve people acting and interacting with their world can, like so many ideas in learning, be seen in the ideas and writings of John Dewey<sup>6</sup>. Glavenau and others<sup>5</sup> provide a description of Dewey's model of human experience. 'Action starts... with an impulsion and is directed toward fulfilment. In order for action to constitute experience though, obstacles or constraints are needed. Faced with these challenges, the person experiences emotion and gains awareness (of self, of the aim, and path of action). Most importantly, action is structured as a continuous cycle of "doing" (actions directed at the environment) and undergoing" (taking in the reaction of the environment). Undergoing always precedes doing and, at the same time, is continued by it. It is through these interconnected processes that action can be taken forward and become a "full" experience<sup>5:2</sup>.

These ideas were developed by Woodman and Schoenfeldt<sup>7</sup> who proposed an interactionist model of creative behavior at the individual level. This model was later developed by Woodman et al<sup>8</sup> to embrace the organisational social-cultural context. The interactionist model, is an ecological model of creativity. Creativity is viewed as the complex product of a person's or persons' behaviour(s) in a given situation. The situation is characterized in terms of the contextual and social influences that either facilitate or inhibit creative accomplishment. The person is influenced by various antecedent conditions ie that immediately precede and influence thinking and action, and each person or persons has the potential to draw on all their qualities, values, dispositions and capabilities (ie everything they are, know and can do and are willing to do) to engage with the situation.

The creative behaviour of organizational participants is a complex person-situation interaction influenced by events of the past as well as salient aspects of the current situation. Within the person, both cognitive (knowledge, cognitive skills, and cognitive styles preferences) and non- cognitive (e.g., personality) aspects of the mind are related to creative behaviour. In sum, individual creativity is a function of antecedent conditions (e.g., past reinforcement history, biographical variables), cognitive style and ability (e.g., divergent thinking, ideational fluency), personality factors (e.g., self-esteem, locus of control), relevant knowledge, motivation, social influences (e.g., social facilitation, social rewards), and contextual influences (e.g., physical environment, task and time constraints)<sup>8</sup>

Meusburger<sup>9,10</sup> also emphasises the significance of places, environments and spatial contexts in personal creativity and draws attention to the way in which creative individuals seek out environments that enable their creativity to flourish (box right).

People who are driven to be creative seek and find favourable environments to be creative in. They also modify existing environments in ways that enable them to realise their creativity and they also create entirely new environments (eg an ecology for learning) in which they and others can be creative. They are able to see the affordance in an environment they inhabit and use it to realise their creative potential.

The interactionist ways of looking at creativity is consistent with the ideas of '*creativity as action and of creative work as activity*'<sup>5:1 & 11</sup>. 'In contrast to purely cognitive models, action theories of creativity start from a different epistemological premise, that of *interaction and interdependence*. Human action comprises and articulates both an "internal" and "external" dynamic and, within its psychological expression, it integrates cognitive, emotional, volitional, and motivational aspects. Creativity, from this stand-point, is *in action* as part and parcel of every act we perform<sup>6</sup>. Creativity exists on the other hand also *as action* whenever the attribute of being creative actually comes to define the form of expression<sup>5:2</sup>. We might anticipate that there is no clear boundary separating creative work and work that is essentially not conceived, defined or presented as being creative but which results in smaller or larger acts of creativity and leads to the emergence and formation of new ideas or things. In other words there must be a continuum of activity that is essentially creative to activity that is essentially not creative. Probably a lot of the work done by people whose work is not categorized as being creative is of this type. The model of an ecology for learning, development and achievement shown in Figures 1 and 2, is an interactionist model : people interacting with their environment and the people and things in their environment.

'Creative, talented people are not just raised, trained, and embedded in particular milieus. In their careers they tend to be attracted to certain institutions and places where they can develop their abilities and ideas, have the occasions to interact with other knowledgeable agents, procure the necessary support, be inspired, tackle challenges, and command the necessary resources'<sup>9:98</sup>

'A creative milieu or environment represents a certain potentiality that must be activated through human communication and interaction. What makes a location attractive is its possible or imagined advantages, not the realized ones.'<sup>10:2</sup>

## Thinking spaces within a creative ecology

An ecology for learning, development and achievement that contains affordance - our potential for creative thinking and action, embraces not only the physical, virtual and social spaces in our environment, it also contains the mental / psychological spaces that enable us to think about and experience ideas and situations in a variety of ways. A learning ecology both hosts and stimulates our imagination which feeds into the full range of cognitive processes whenever we are confronted with a problem or engage with an opportunity. Imagination that is connected to , and

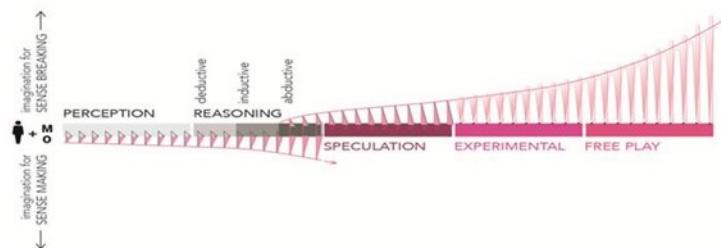


Ann Pendleton-Jullian  
& John Seely Brown



### 'Pragmatic Imagination'

The imagination both resolves and widens the gap between what is unfamiliar - new/novel/strange - and what is known. This gap increases along the spectrum from left to right. Within the range of abductive reasoning, there is a shift from using the imagination for sense-making to sense-breaking, where one first widens the gap and then resolves it with the imagination.



<http://www.pragmaticimagination.com/pragmatic-imagination-principles/>

integrated with other cognitive processes, is the way we perceive the affordance in a situation.<sup>12</sup> Ann Pendleton-Jullian and John Seely Brown coined the term 'pragmatic imagination' to emphasise the important role played by imagination in enabling us to see affordance in a situation or thing. 'The Pragmatic Imagination pro-actively imagines the actual in light of meaningful purposeful possibilities. It sees opportunity [affordance] in everything'<sup>13</sup>. At the neurological level creative insights can arise in two processing modes—spontaneous and deliberate<sup>14:1015</sup>. An energetic ecology for learning and achievement creates an environment within which both of these modes of gaining creative insights are possible.

The physical, social and virtual spaces we inhabit - sometimes all at the same time. Are rich and varied, large and small. And during any day in our life we may find or put ourselves in many different spaces within which certain activities are or can be performed, certain contexts, situations and people are encountered and interacted with and certain objects, resources and tool are used. Our cognitive processes and emotions flow through these places and spaces as we assume, enact and embody different identities and perform different activities. Some of these spaces are huge and may seem to dominate our lives, like work for example. Others might seem inconsequential, like driving to work, yet these interstitial spaces that form the matrix of our daily life - that join up the larger spaces in our life, also provide the space to think and engage with the things that matter in our life.

The spaces we create within an ecology for learning, development and achievement that enable us to think and interact with the thoughts of others, are rich and varied. They include<sup>1</sup>:

**Spaces for conversation & discussion** - our learning ecology spaces are dialogic spaces within which conversation and discussion can take place between an individual, themselves and the people involved in their learning ecology. Within our learning ecologies we create spaces for conversation with others and ourselves that are relevant for a particular purpose, goal or learning project.

**Spaces for exploring, inquiring & adventuring** - for venturing into territory that is not well known or understood. In these spaces we have to deal with uncertainty, ambiguity and perplexity as we encounter things we have not encountered before. We often don't know what we need to know when we start a significant new learning project so we have to engage in what John Dewey (1922 cited in Cook and Brown 1999<sup>8</sup>) called 'productive inquiry': finding out what we need to know in order to do the things we need to do. Productive inquiry can be applied to all situations : from scientific investigations to situations that crop up in our daily lives. It is a capability we need in all working contexts. 'Productive inquiry is not a haphazard, random search; it is informed or disciplined by the use of theories, rules of thumb, concepts and the like'<sup>15</sup>

**Spaces for imagining & reflecting** - one of our greatest assets as a human being is to be able to create mental spaces for us to think about our past experiences and interpret and draw meaning from the memories we reconstruct. Our ecologies for learning provide the mental space for us to look back on the past and imagine possibilities for the present grown from experiences of the past and our encounters with the present. We use the term reflection to describe this process but this term seems to conjure up faithful reproductions of situations remembered. But we have the wonderful ability to play with the memories of our experiences to imagine 'what if' and generate entirely new possibilities from situations we have experienced or are experiencing. This enables us to create mental models that help us make good decisions and plans about what to do and to create visions of a different future that inspire and motivate us to try to achieve.

**Spaces to integrate our thinking** - through our imagination we can generate ideas, connect them to all sorts of things, select and combine particular thoughts and create entirely new perspectives and possibilities as we integrate imagination with other cognitive processes in the manner described by Pendleton-Jullian and Seely Brown<sup>13</sup> Our ecologies for learning contain within them the possibility space for synthesising, integrating and reconstructing our understandings and feelings to make entirely new interpretations and meanings by combining and connecting ideas. Such ways of thinking about our mental spaces for creativity require us to integrate the imaginative, associative and synthetic ways of thinking, with the critical and analytical ways of thinking. Integrative thinking combines creative generative ways of thinking, in so far as they will lead to connections that have not been thought of before, and critical ways of thinking so that from such connections new possibilities can be analysed and evaluated and then brought into existence.

## The will to be creative and our perceptions of being creative

But one thing is certain, mental processing alone might result in novel ideas but it is not enough to bring something new into physical existence. Mental processing must be accompanied by the package of dispositions, qualities and capabilities necessary for success when tackling difficult problems and challenges. Ron Barnett<sup>16:15</sup> was right when he said " 'Will' is the most important concept in learning and education. Without a will nothing is possible." Will forms around purposes that are usually deeply rooted in our distal goals - the sort of person we want to become, our ambitions and the contributions we want to make in and through our life. It becomes operationalised in the particular things we try to do and accomplish. Being creative is a matter of personal choice and sometimes necessity in particular circumstances together with our willingness and ability to work with whatever emerges through our engagement with these circumstances.

'Being creative' has both narrow and broader meanings<sup>11</sup> The *narrow* meaning immediately leads one to think of activities directly associated with artistic self-expression - like singing, acting, dancing, painting and making films. The *broader* sense encompasses those activities associated with what Richard Florida calls the 'creative class'. This includes the arts but also involves activities such as architecture, design, advertising, video game development etc. The *broadest* meaning embraces the idea that we can all be creative in any aspect of our lives and that being creative includes any idea or act that is unique to our own capabilities and vision. This includes actions which can range from developing your own food recipes, setting up a charity to address a local problem, establishing a website to support a network of people who share an interest, writing your own music and singing our own songs, building our own house, writing a blog post or developing a new practice or procedure at work.' The list of possibilities is infinite but fundamentally creativity is about bringing ideas, objects or products, processes, performances and practices into existence. This may be accomplished by an individual - personal creativity, or a group of people working together - co-creativity. A creative outcome is often a combination of individual and collective creativity.

The meanings we give to creativity and our unique perceptions of what being creative means to us, frame our thinking and actions and the way we experience being creative and ultimately the way we reflect on and learn from that experience. These things are all manifestations of our unique ecologies for learning, developing and achieving within which, I argue, our creativity emerges in the manner so eloquently described by Carl Rogers 'the emergence in action of a novel relational product growing out of the uniqueness of the individual on the one hand, and the materials, events, people, or circumstances of his life' <sup>4</sup>



## Exploring our own ecologies for personal creativity

These are just a bunch of ecological ideas that make sense to me because they seem to explain how I perceive my own creativity and how it emerges in the circumstances of my life not as a random haphazard act but as something that I encourage and work with in both active and opportunistic ways. In this particular set of circumstances I saw the affordance in #creativeHE to share these ideas with other people who were also interested in creativity and invite them to see if they had any meaning in their own life and then set about developing an ecology to enable collaboration and interaction to happen. The results of interactions in this ecology are shared on the #creativeHE website and in the following pages.

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### #101creativeideas Project

Dear friends,

We are about to bring to life the #101creativeideas project. This is a fantastic opportunity for YOU to share your creative ideas on how to encourage, support and/or assess students' creativity in higher education. Ideas can be big or small but we are looking for concise descriptions of no more than 50-80 words.

So if you are doing something that is interesting or novel in your practice, please fill in the form below and share your idea.

All ideas will be credited and made available through an online OER collection under a CC BY NC 4.0 licence.

A panel consisting of students and practitioners in higher education will select 101 of the most interesting ideas. These will be turned into a published resource.

You can start submitting your ideas now and they will be collated and reviewed in January. The 101 ideas that are selected will be shared via Twitter 1 idea per day up to the start of the World Creativity an Innovation week in April 2017.

Thank you for your contributions,  
Eleanor Hannan and Chrissi Nerantzi  
#101creativeideas

**Editor's comment** This article was offered as a background paper to the #creativeHE collaborative inquiry 'Exploring Creative Ecologies'. It brings together three posts made by Darlene Chrissley and a short reflective commentary that tries to relate her ecological perspectives to the ecological framework I am proposing in the first article of this issue.

## Ecology of a Creative Life

### Darlene Chrissley

<http://darlenechrissley.com/a-creative-life/the-ecology-of-a-creative-life/>

*Darlene lives in Canada in the beautiful Dundas Valley. She is president and founder of Lifescapers. She's a writer, performer and master coach who aspires to be a creative force for good in the world. Over the past two decades she has worked with hundreds of individuals from all walks of life, in Canada and around the world. Her corporate clients come from health care, government, banking, media, IT and manufacturing. Private clients include entrepreneurs, artists and individuals committed to developing their potential and realizing their dreams. She brings creativity and imagination to learning design, with a focus on creating experiences that shift people's perceptions and behaviour. See more at: <http://darlenechrissley.com/about-me/#sthash.2mHsLai8.dpuf>*



### Version 1

It has taken me fifty years to understand my own personal ecology; the conditions that best support me as a creative being. In the absence of this knowledge I have often felt ungrounded and unsure. Finding it has made me at once more stable and more free.

My ideal ecology balances four distinct quadrants: Introspection, Expedition, Integration and Exhibition.

Over time I have adopted a set of creative practices that support me in each quadrant. When I make space for each and move between them in an easy flow I am happy and productive and my work is original and meaningful.

**1. Introspection:** I require long periods of solitude during which time I let my mind wander. I daydream and imagine. I meditate. I free-write and collage and make sketches. I pose myself intriguing questions and do my best to answer them. I wonder and ponder life's tough questions. I stare at walls and lie in the backyard with my eyes closed listening to birdsong. I go for long walks and swim lengths and do nothing at all.

**2. Expedition:** I'm an explorer at heart and I love nothing better than to go "walkabout" through strange or familiar environments. I wander through used book stores and art galleries, eavesdrop on conversations in cafes, go to movies and plays and concerts and festivals of all kinds. I've volunteered at the Havelock Jamboree and canoed with Wild Women. I've chanted in sweat lodges, skinny dipped in Norwegian fiords, watched the sun rise and set from my perch inside the rim of the Grand Canyon, climbed rock faces and repelled back down again. On expedition I encounter the world, close up and personal. The goal of any expedition is that experience of being alive that Joseph Campbell said we are all looking for. I take a little black book with me when I go on expedition, and I write down what I see and hear and think and feel and wonder as I go.

**3. Integration:** I could easily spend my whole life in a back and forth between introspection and expedition. Between experiencing life and thinking about it. But I have learned that my greatest satisfaction comes from integrating my thoughts and experiences and giving them form in an artistic medium, whether it be a blog or book or film or performance. When I come into the workshop and ask myself what I want to make of everything that I have seen and thought, an idea always begins to form in response. The philosopher Rollo May used to say that passion loves form. That's been my own experience. The hard part is to get myself into the workshop.

### My Creative Process: Ecology of a Creative Life (Version 2)

It has taken me many years to understand my own personal ecology; the conditions that best support me as a creative being. In the absence of this knowledge I have often felt ungrounded and unsure. Finding it has made me at once more stable and more free. My process has me continually cycling through four distinct spaces: The World, The Sitting Room, The Workshop and The Stage. Over time I have adopted a set of practices that support me in each space. When I make time for each one and move between them in an easy flow I am happy and productive and my work is original and meaningful.

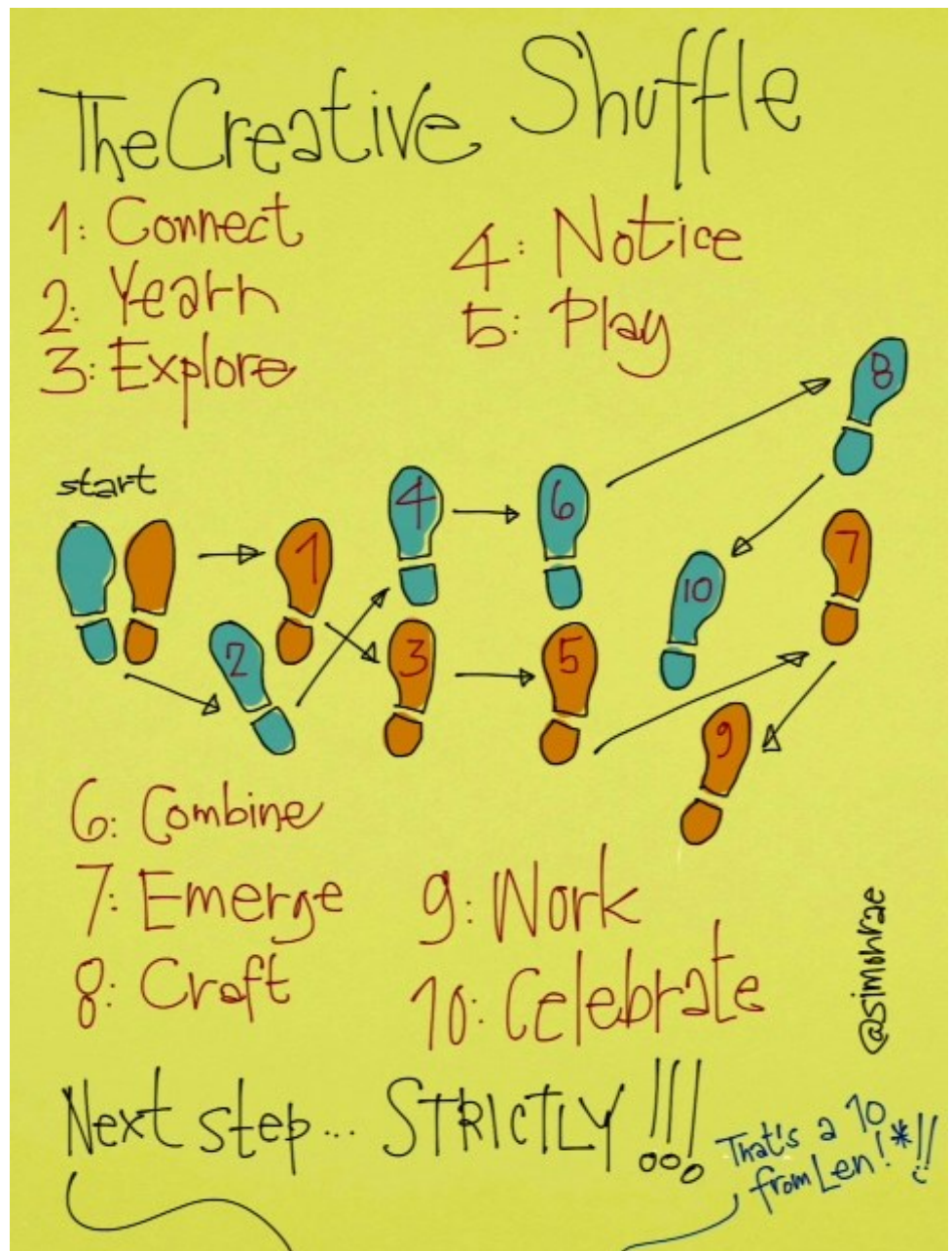
**1. The World:** I'm an explorer at heart and I love nothing better than to go "walkabout" through strange or familiar environments. I wander used book stores and art galleries, eavesdrop on conversations in cafes, go to movies and plays and concerts and festivals of all kinds. I've volunteered at the Havelock Jamboree and canoed with Wild Women. I've chanted in sweat lodges, skinny dipped in Norwegian fiords, watched the sun rise and set from my perch inside the rim of the Grand Canyon, climbed rock faces and repelled back down again. On expedition I encounter the world, close up and personal. The goal of any adventure is that experience of being alive that Joseph Campbell said we are all looking for. I take a little black book or Evernote on iphone and I write down what I see, hear, think and feel and wonder as I go.

**2. The Sitting Room:** I require long periods of solitude during which time I let my mind wander. I daydream and imagine. I meditate. I free-write and collage and make sketches. I pose myself intriguing questions and do my best to answer them. I wonder and ponder life's tough questions. I stare at walls and lie in the backyard with my eyes closed listening to birdsong. I go for long walks and swim lengths and do nothing at all.

**3. The Workshop:** I could easily spend my whole life in a back and forth between introspection and expedition. Between experiencing life and thinking about it. But I have learned that my greatest satisfaction comes from integrating my thoughts and experiences and giving them form in an artistic medium, whether it be a blog or book or film or performance. When I come into the workshop and ask myself what I want to make of everything that I have seen and thought, an idea always begins to form in response. The philosopher Rollo May used to say that passion loves form. That's been my own experience. The hard part is to get myself into the workshop.

**4. The Stage:** The time comes when I must take my new creation out of the workshop and present it to the world. I feel most vulnerable as I open myself and the work up to feedback. There is a mix of anticipation (I hope they like it) and dread (What if they hate it?). A mix of pride (I made this) and shame (It is not quite as wonderful as I hoped it would be). I try not to be too attached; to remember that I am not my work. I focus on the work as contribution; something for others to encounter on their own expeditions.

This process is fundamental to my personal fulfillment, my work as an artist and the value I bring to my readers, my audience and my clients. - See more at: <http://darlenechrisley.com/a-creative-life/the-ecology-of-a-creative-life/#sthash.TA8M4PVB.z0efxtYf.dpuf>



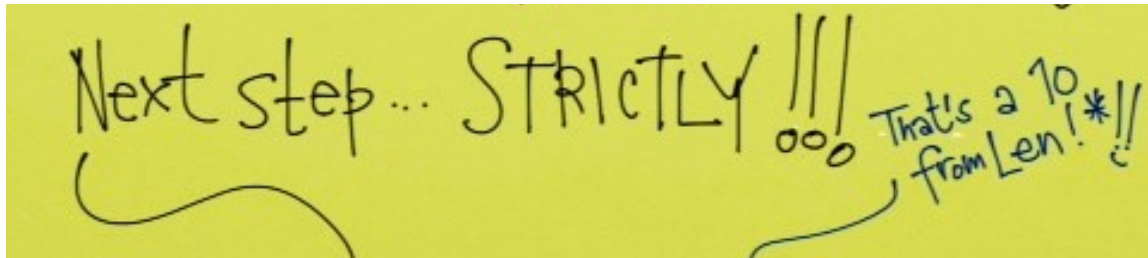


## Ecology of a Creative Life: My creative Process

<http://darlenechrisley.com/10-step-creative-process/#sthash.BJeXANas.dpuf>

Life is a creative art form. It takes creativity and imagination to create an original life and make a unique contribution to the world. Imagination is the source of everything that we create. It is also the capacity that allows us to see unrealized possibilities in what already exists. When we say someone is creative, we mean that they have an active imagination, the tendency to follow their curiosity to see where it leads, and they have the ability to translate what they imagine into something that can be experienced with the senses.

The creative process is the discipline by which a new work is brought from the realm of imagination into the physical world.



### 10 Step Creative Process

#### 1. Connect to your creative source

We are all creative beings. Creativity is our birthright, part of our essential nature. Deep inside us is a well of imagination just waiting to be tapped. Sometimes the well seems dry, or the rope that holds the bucket broken, or the bucket too small. But with regular creative practice it is possible to keep the well full and to draw from it at will. So pull out the paints, join the choir, start writing again, take up wood working, audition for a play. Visit a gallery, attend a concert, browse in a little out of the way antique shop or hardware store. Go for a long walk. Experiment with a new cookbook. Go into the workshop and start making a better mousetrap.

#### 2. Pay attention to your inner yearnings

Take some time to listen to your inner voice. Take notes, draw pictures, make a collage to capture the words, images and feelings that arise as you listen to your deepest self. What do you love, what do you value, what do you dream about? Your deepest desires are important and worthy of being acted upon.

#### 3. Explore the world around you with curiosity

Pay attention to your surroundings. Engage the world around you with curiosity and a sense of wonder. See familiar people and places with new eyes. Venture into new places and conversations you might have avoided in the past. Be open to what you might discover. Prepare to be surprised, delighted, and moved.

#### 4. Notice what attracts your attention

Notice what attracts your attention, makes you curious, makes you laugh, tugs at you, sticks in your mind and refuses to go away. Follow what attracts you to see where it might lead. Capture words, images, sounds, smells, tastes, ideas, and feelings in a small notebook reserved just for this purpose.

#### 5. Play with the symbols and images that arise

Inquire more deeply into your yearnings and attractions. Notice images and symbols that reoccur or seem to have energy or pull for you. Take the time to play with them. Paint them. Post them. Make up stories or songs about them. Don't just interpret them rationally. Play with the form and feel of them. Make up wild and possible and probable meanings.

## 6. Experiment with connections and combinations

Experiment with various connections and combinations between the events, images and symbols from your inner and outer life. Turn them upside down and sideways, shifting perspective. What sense are you starting to make out of things. What meaning are you starting to see? What truth are you starting to understand? What course of action is becoming clearer?

## 7. Notice the form that begins to emerge

Notice how the yearnings, attractions, symbols and images are starting to seek expression in your life. What new creative ideas are sprouting, what new creative projects are starting to formulate? Pay attention to the form that your creativity wants to take at this time. Doodle or mind map around the form as it starts to emerge.

## 8. Begin to intentionally craft the form

Your new creation will begin to take on a form of its own. Its shape will become clear, the work it will take to bring it to completion. Commit to the form and to the process of making it real. Make plans. Take action.

## 9. Work with the tension between vision and reality

As you begin the work of crafting, a creative tension exists between the form you can imagine and the form that you can create. This can lead to frustration and discouragement. Or you can choose to draw energy from the tension and strengthen your commitment to the process. Don't be afraid to experiment and take risks. Pay attention to your results. Learn from failure.

## 10. Bring image and form together and celebrate completion

Gradually you will bridge the gap between the work that exists in your imagination and the one you are creating in the material world. You will create something real, a piece of original work. It can be tempting to judge the work wanting, and focus on the ways that it falls short of what you originally imagined. Focus instead on the satisfaction of having finished what you started, given form to what otherwise would not exist. You have contributed something of yourself to the world. Celebrate completion.

# Applying the Framework for a Creative Ecology

## Norman Jackson

In her posts Darlene recognises the ecological nature of her own creative process and practices. She recognises that her thinking and actions are deeply connected to the relationships she has with the physical environment she inhabits. In this commentary I try to relate her insights to the framework for a learning ecology (Figure 1 & 2).

### PAST

My past learning ecologies provided me with experiences through which I have learnt, developed and become aware of the affordances of my life. I can draw upon this in my new ecology for learning.

### RELATIONSHIPS

With myself and with other people - both existing and newly developed, and with things, objects, tools, ideas and experiences that provide affordances in my physical, social or virtual environment.

### PROCESSES /ACTIVITIES

Enable me to explore the possibilities for action in my environment in order to learn, achieve and develop. They may be learning or task oriented and include the dimensions of time, space and purposeful action. My processes /activities enable me to discover and create the affordances I need to learn, develop and achieve. They enable me to gain the feedback I need to develop my understanding and capability. They provide the means of connecting activities and experiences to create a more meaningful life.

### CONTEXTS

The physical and social environment and situations I inhabit with their distinctive cultural and procedural settings physical characteristics and affordances



### SPACES & PLACES

The mental spaces & physical places I inhabit or create for exploration, inquiry & learning, creativity and achievement. Liminal spaces - betwixt & between states of understanding. Smooth rather than striated spaces. Dialogic spaces for conversation and discussion. Creative spaces for imagining and reflective spaces for making meaning.

### RESOURCES

Resources are things that have value to me in a particular situation or more generally in lots of situations. What makes something a resource is a matter of perception and my ability to utilise it. Resources help me learn and achieve my goals, they include information, knowledge, expertise, mediating artefacts - signs, tools and technologies

### AFFORDANCES

Any situation contains ideas, 'objects' - things, people, circumstances, experiences that provide affordances - possibilities for action formed by my interactive relationship with the situation

### FUTURE

My learning and development will be drawn upon in future ecologies which may also be inspired and influenced by my distal goals

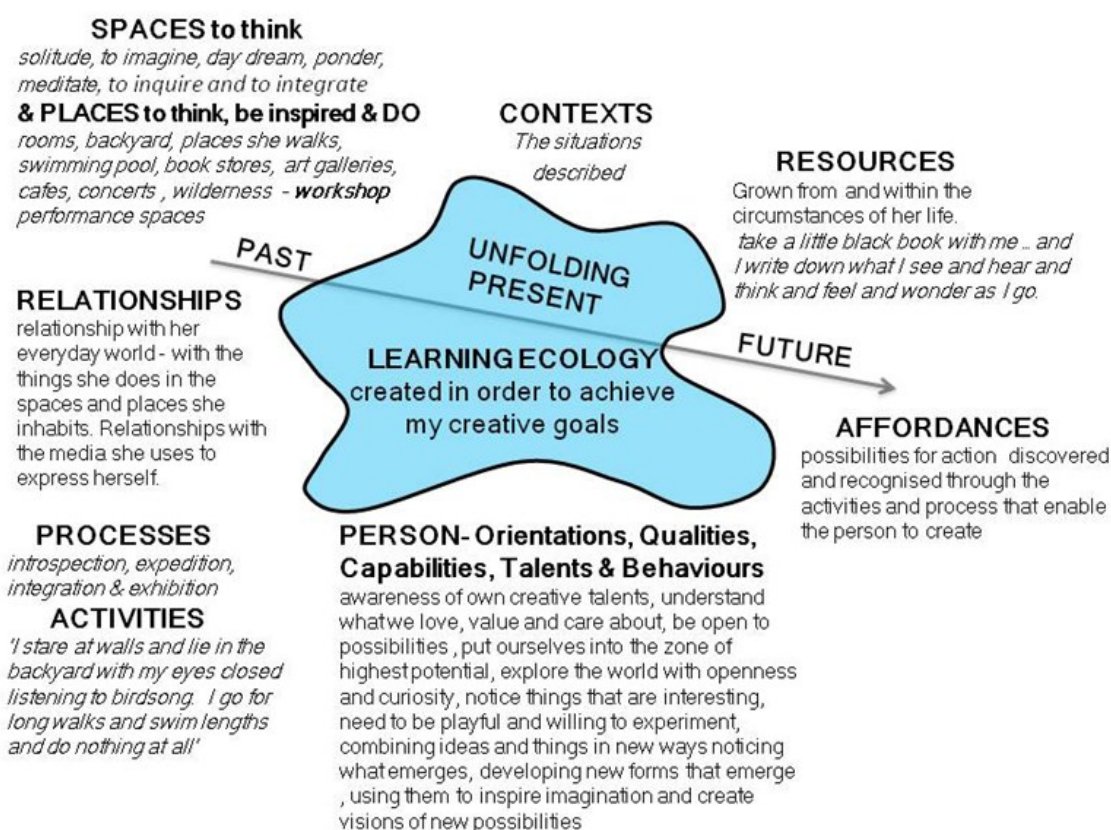
Figure 1 Components of a learning ecology<sup>3</sup>

In the first version of an 'Ecology of a Creative Life' Darlene is talking about the ecology she creates, on the scale of her whole life, in order to fulfill a purpose - to be creative. She describes her sequential *process* of creation - introspection, expedition, integration and exhibition, and the *activities* she engages in that enable her to be creative within a temporal framework. Her narrative reveals herself in an intimate relationship with her purpose and her environment. She creates spaces (solitude) to think - to imagine, day dream, ponder, meditate, to inquire and to integrate. She deliberately adopts the mindset of an explorer, inquisitive, open to new possibilities and venturing into new experiences.

She engages in activities that do not directly relate to the production of creative outcomes. *I stare at walls and lie in the backyard with my eyes closed listening to birdsong. I go for long walks and swim lengths and do nothing at all.* And activities that open up new possibilities [I go] *"walkabout" through strange or familiar environments. I wander used book stores and art galleries, eavesdrop on conversations in cafes, go to movies and plays and concerts and festivals of all kinds....*

She talks about particular *places* where she does these activities - rooms, backyard, places she walks, the swimming pool, book stores, art galleries, cafes, concerts and the wilderness. We get the impression that she views the whole world she inhabits as a resource - perhaps another way of looking at it is she is searching for affordances that she assumes are there in doing these things in the spaces and places she is doing them and waiting with 'watchful anticipation' for these affordances to emerge. As she wanders she records her experiences and what she notices and feels. *I take a little black book with me when I go on expedition, and I write down what I see and hear and think and feel and wonder as I go.* She is creating resources from her experiences that she will later draw upon.

**Figure 2** Applying the model of a learning ecology<sup>3</sup> (Figure 2) to Darlene Chrissie's explanation of the ecology of her own creative life.



When she is ready she puts herself into a space for engaging and enacting her creativity to produce something that is new to her. She calls this space the workshop. We can see that all the things she has done before contribute to these moments when she is ready to create. *My greatest satisfaction comes from integrating my thoughts and experiences and giving them form in an artistic medium, whether it be a blog or book or film or performance.* In this version of a creative ecology creativity emerges as Darlene engages with her 'problem' in the medium she chooses to represent herself having prepared herself through everything she has done or imagined prior to this point in time. Through her narrative Darlene reveals that she is in a relationship with her

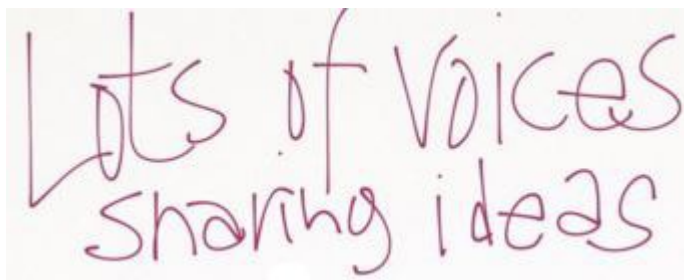


everyday world through the things she has done and the thoughts she has had in the spaces and places she has inhabited. All these things have meaning and they all have potential to help her generate the thoughts, ideas and feelings that will enable her to be creative. *When I come into the workshop and ask myself what I want to make of everything that I have seen and thought, an idea always begins to form in response.*

The final stage of Darlene's process is when she exhibits or shares what she has produced. There is little information about these spaces and places that feature in her creative ecology but these also hold potential for creative thinking and action.

In the second version of an 'ecology of a creative life' Darlene emphasizes the spaces in her ecology. *My [creative] process has me continually cycling through four distinct spaces: The World, The Sitting Room, The Workshop and The Stage.* This reveals that for her there is a close link between place/space and the mental and physical processes that occur in these spaces/places.

In the third insight into her own ecology for creating Darlene engages with the psychological dimensions of her creative process. She tells us that we are all creative but certain behaviours and orientations are, in her view, more likely to result in creativity. We have to develop these aspects of ourselves to support us in creating our own creative ecologies.



Firstly, we must discover where our creative talents lie. Understand what we love and value and what we care about. She suggests that to be creative we need to be open to possibilities and put ourselves into the zone of high potential where we can encounter and discover new things, ideas, people, experiences, feelings. We need to explore the world, engage with it with openness and curiosity. We need to be willing to

venture into spaces and relationships that are new. We need to be able to notice things that are interesting or different that hold potential and we need to record or capture these things so that we can make use of them in the future. We also need to be playful and willing to experiment combining ideas and things in new ways and noticing what emerges and then developing new forms that emerge using them to inspire imagination and create visions of new possibilities. In this way we will bring new things into existence.

One final point Darlene makes is that it is the whole of her process that creates the sense of achievement and fulfilment not just the results emerging from her creativity. It is the whole ecology she creates in order to be creative together with the results that emerge from her ecology. *'This process is fundamental to my personal fulfillment, my work as an artist and the value [I create].'* The description of the ecology she creates in order to lead a creative life is entirely consistent with Carl Rogers' ecological concept of personal creativity 'the emergence in action of a novel relational product growing out of the uniqueness of the individual on the one hand, and the materials, events, people, or circumstances of his [her] life' <sup>4:350</sup>. Rogers' explains, 'The main-spring of creativity appears to be...man's tendency to actualize himself, to become his potentialities. By this I mean the directional trend which is evident in all organic and human life-the urge to expand, extend, develop, mature-the tendency to express and activate all the capacities of the organism, to the extent that such activation enhances the organism or the self.' Seen through this wonderful perspective the ecologies we create in order to create are also the means by which we expand, extend, develop, mature and express ourselves as we endeavour to achieve more of our potential.

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# Story of a Creative Ecology: Dewitt Jones

Norman Jackson

Norman is Co-Founder of Creative Academic and  
Commissioning Editor for Creative Academic Magazine



**So what can we learn about creative ecologies from creative people?** I believe that we can learn a lot about creativity from people who have done something creative and are able to explain what they did and how, why and when they did it.

Mostly we gain such insights by observing people, like colleagues or friends when we are doing something with them and they share with us their thinking and decision making processes and actions to make something or

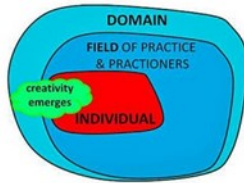


Mihaly Csikszentmihalyi

*Creativity: The Work and Lives of 91 Eminent People*

Creativity is a process that can be observed only at the intersection where individuals, domains and fields interact.

This environment has two salient aspects: a cultural or symbolic aspect called the *domain*, and a social aspect called the *field*.



make something happen. We can also learn in other ways for example when people write biographies of creative people who have made significant achievements. For example, social psychologist Mihaly Csikszentmihalyi, interviewed over 90 people who had made significant achievements in their field including Nobel prize winners and people who had distinguished themselves in many different fields - arts, sciences, technology. Through this study<sup>1</sup> Csikszentmihalyi realised that Big-C creativity requires not only unusual individuals, but a domain of knowledge and practice and a field of people with expertise in the domain that can validate the outcomes of their work. In this research-based in-

sight Csikszentmihalyi identifies the fundamental connection between individuals and their creative achievements to the disciplinary, practical and social environment in which they are working and performing.

Another source of insight and inspiration comes from the many resources on the internet as creative people record their thoughts and experiences in blogs, or in talks and interviews. One example is a YouTube recording of a talk given by the award winning photographer Dewitt Jones, in which he tells the story<sup>2</sup> of an assignment he completed for Dewers Whisky. It describes a scenario in which he had to produce a photograph of salmon fishing in Scotland for the company's advertising campaign. As the story unfolds he finds himself in a set of circumstances that he did not imagine but his actions and thought processes reveal the way in which his technical expertise and imagination intermingle to produce the results he wanted - a stunning set of images that are the result of him, with all his uniqueness, interacting in real time with his environment and the people in it. It provides a wonderful example of pro-c creativity<sup>3</sup> which I argue emerged through his creative ecology.

A transcript of his story is provided below but you can watch him tell it using this link: <https://www.youtube.com/watch?v=PVL2ruZiXso>

## Dewitt Jones' Narrative<sup>2</sup>

This is not assignment for the [national] geographic but a big advertising campaign I did for Dewars Scotch, and they sent me over to Scotland with an obscene budget and a crew of nine, and three clients to watch over me. No pressure.

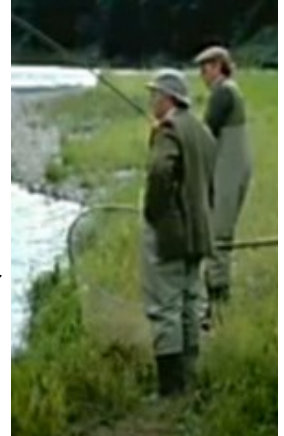


One of the things they asked me to do was photograph salmon fishing on Scotland's river Tweed. Man ... I'd done my homework, I knew what I wanted I came down that windy road to the river Tweed. I had images in my head of backlit salmon and silver cataracts and leaping fish and the windy road delivered us and there it was. It looked like the East Sandusky River, the river without drama. I turned to my art director and said, "What are we going to do?" He said, "I don't know I'm car sick I'm going back to the road."



It was up to me. How many times every week is up to you? I got talking to one of the guides, the gillies. The gentleman there in the foreground. Each beat of the river, each stretch has a different guide, a different gilly and they know every rock, and every shoal and every riffle. He told me that salmon fishing in Scotland is a very formal affair you wear a coat, a tie, and a hat and chest waders. I'm getting intrigued.

He told me when you catch a salmon you bring it up to the fish hut, and in that hut there's a leather book and in that book there's a list of every salmon that has been caught on that beat in the last 100 years. Now I'm getting intrigued, now I'm seeing these great formal dumps that these guys are doing in this salmon giver on the river.



Then he said, "You know Dewitt there was mist on the water this morning, that's unusual for this time of the year. My intellect climbed all over what he said. I want to be in the place of most potential. I'm out there two hours before dawn, and when the sun starts coming up I got the boat, I got the gillie, I got the fisherman, I got the right lens, I got the right focus, I got my first right answer. I got to room up there for tight little bottle of scotch I know what I'm doing right.



Then my intuition starts screaming at me it says, "Turn around Dewitt, you're shooting the wrong way." Yes sir, I listened to it. I turned around man it was really getting nice. I'm trying to pay attention to realize that this photograph is made by body language not by facial expression.....and at the same time my intellect realizes the sun's going to come up behind those trees so I yelled at the guys to get the boat rowed down there because I want to be in the place of most potential.. Talk about having my technique down, I've got a walkie-talkie in that boat yes. I'm not worried about making mistakes I'm just looking for the next right answer and they just kept coming. This was

the final ad, "Why would a man rise before dawn to fish for salmon on Scotland's river tweed? Why indeed. The good thing in life stays that way."

## Ecological perspective

Dewitt's story illustrates how when we are involved in a project to achieve something, our creativity emerges through an ecology that involves ourselves in a relationship and interacting with our environment including the people in it, and the problems, challenges and affordances that we perceive. A relationship that is consistent with the ecological concept of creativity proposed by Carl Rogers<sup>4:350</sup> 'the emergence in action of a novel relational product, growing out of the uniqueness of the individual on the one hand, and the materials, events, people, or circumstances of his life on the other'.

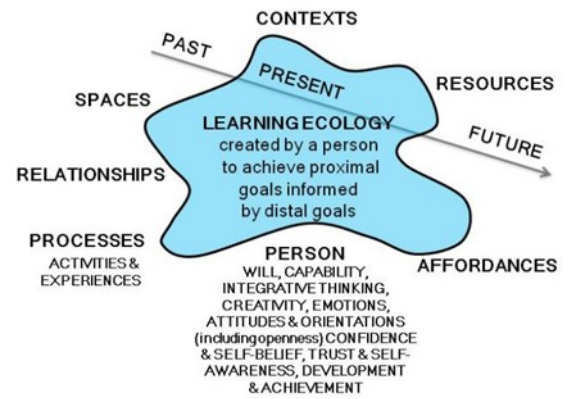




Jackson<sup>5</sup> proposed a model to explain this the components and relationships within such an ecology (Figure 1). This framework is used to evaluate DJ's narrative.

DJ describes what he did, how, when and why he did it, in order to achieve the goal of his professional assignment (producing an advert for Dewers Scotch). This proximal goal is set within his long term ambition (implicit distal goal) of sustaining and developing himself as a world class professional photographer.

In his narrative DJ shows us that when we are faced a new and unknown context and situation we draw on past experiences and imagine the immediate future as a way of preparing for it but we are surprised when the reality of the situation does not match our expectations. We have to understand the new situation and DJ shows us that we need to engage with our problem/challenge and the context (environment) in a purposeful but playful, open, exploratory, intelligent and emotional way.



Exploring Learning Ecologies <https://www.lulu.com/>

Figure 1 Model of a Learning Ecology<sup>5</sup>

Initially, his ecology is geared to developing knowledge that is relevant to the specific context and situation and the actions he might take to achieve his goal. He has created the space to inquire and explore in order to seek and sense the possibilities and opportunities for action (affordances) 'I want to be in the place of most potential'. In seeking this knowledge he formed a relationship with the people who knew the environment and the context better than anyone else - the gillies. We can see through his story telling that he has a vivid imagination and he shares with us the way his excitement as he began to recognise the possibilities for action. He demonstrates well how he uses his imagination and it's easy to imagine him imagining possible situations for taking photographs in these sites with 'most potential' and then 'working out' how he would act in order to get the photographs he needed.

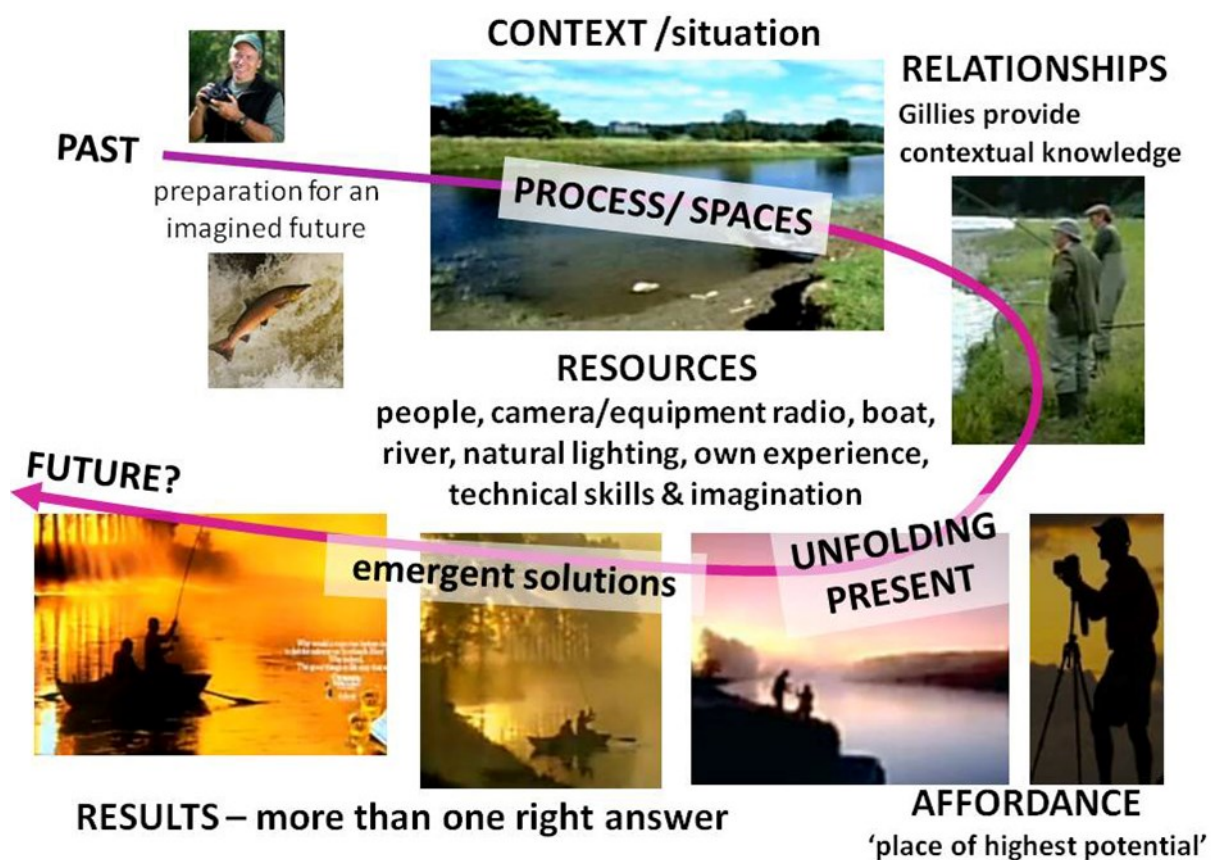


Figure 2 Summary of Dewitt Jones' ecology for learning, achieving and creating. He searched for and found creative affordance in the situation as he engaged with it and responded to it using a combination of professionally acquired skill, technology and his own imagination and creativity which he called intuition.

Taking the photographs was not a random act, it was carefully thought through in advance and required considerable planning and the involvement and active participation of the gillies with whom he had formed a working relationship. It also required him to utilise the resources and technologies that were available to him. It also involved performing in the moment, the unfolding present of sunrise. In these moments he brought to bear his technical knowledge and skill and drew on his vision of what he was trying to achieve to act in ways that gave him the shots he was searching for but not knowing how the evolving natural conditions would enable him to produce these shots in advance. He improvised with the skill and knowledge of an expert in order to obtain the results that had highest potential for achieving his goal. He reveals that the results he was seeking were driven by a desire to produce an image of great beauty with aesthetic and emotional appeal as well as satisfying the technical brief he had been given.

The ecological perspective suggests that creativity emerges over time from our interactions with all of these things in the elegant manner described by Rogers.



### Carl Rogers

creativity is 'the emergence in action of a novel relational product growing out of the uniqueness of the individual on the one hand, and the materials, events, people, or circumstances of his life.'

Rogers, C.R., (1961) *On becoming a person*. Boston: Houghton Mifflin p350

It is not easy to identify creativity in one particular thing, rather it is integrated into our ways of thinking, behaving and being when we are in situations that require or encourage us to be creative. The wisdom in DJ's story of personal creativity is in the way he reveals that not only do we need technical knowledge and abilities to fulfil our goal, we need to learn about the environment we are inhabiting and working in, and sense through our deep involvement where, how and when we might discover and create possible solutions (possible right answers) to our problem. In his case much of his learning came from the conversations he had with the people who had local knowledge. Furthermore, he shows us how creativity is not about searching for one right answer, that we should not be satisfied with one possible right answer that is good enough, but should carry on searching for more possibilities. And perhaps we only recognise the answer that we want to use, when we have time to reflect and think about all the possible answers we have achieved. Perhaps also the best possible answer (in this case the product used in the advert) is not just our decision but is negotiated with others - presumably his clients had some say in the matter. In this way we can perhaps connect back to Csikszentmihaly's insight that creativity requires not only talented individuals grappling with problems that they care about, but also a domain of knowledge and practice and a field of people with expertise in the domain that can judge and validate the outcomes of their work.

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# **CREATIVE ECOLOGY**

## **NARRATIVES**



# Creative Ecology for a Special Ninetieth Birthday

Jenny Willis



*Jenny is Executor Editor of Creative Academic Magazine and its companion, Lifewide Learning, of which she was a founder member. Her career in education has spanned teaching in all levels of the public and private sectors; her research interests include pedagogy, personal and professional development, creativity, wellbeing and identity. She has a special interest in mental health and the destigmatisation of mental illness.*

In August 2016, my father would celebrate his 90<sup>th</sup> birthday. What could I give him? The answer was obvious to me: a special album that charts his life from boyhood, through marriage and children, his years in the Royal Air Force, to settling in the Cotswolds and now his role as grandfather and great-grandfather. In order to produce this gift, I would need a new, creative, ecology. This is the story of that ecology.

## Context and objectives for my creative ecology

I have already indicated the immediate context of this ecology: my father's momentous 90<sup>th</sup> birthday. It would be an opportunity to bring together important moments in his life, from past, through the present to the future. My immediate, or proximal, goal was to make him feel happy and valued, but I admit to a distal one of leaving a concrete legacy on which future generations of the family may reflect and build.

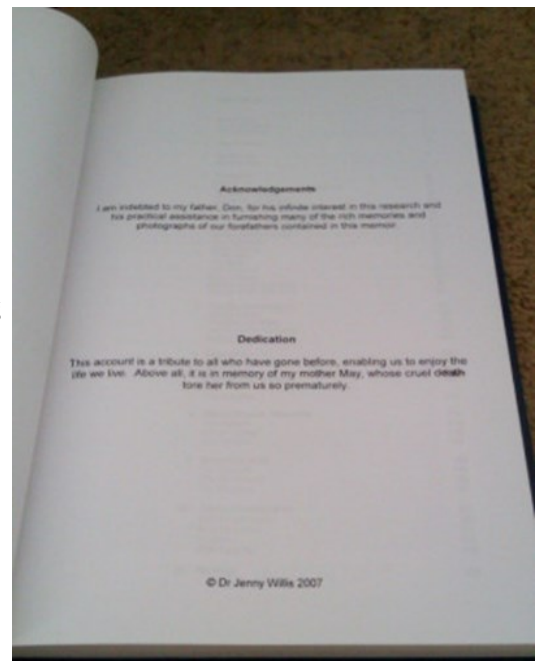
None of this could happen, though, without my motivation and perception of the opportunity (affordance) given by this 90<sup>th</sup> birthday to create something which might bring pleasure whilst having a place in our family's history. And, like any ecology, it would be inter-dependent on the resources, including human, spaces in which it existed, and processes involved in creating the album.

## Creative process

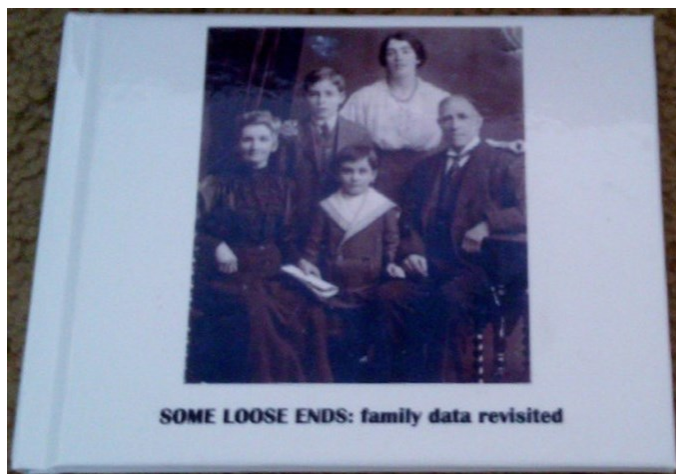
This new ecology was, in fact, just the latest in a developmental process that had begun when my mother died suddenly in 2004. I had instinctively reached out to my family's heritage as a way of valuing each member's life, and of engaging my father in conversation about his experiences. This was not overtly meant to motivate him at this time of grieving, but it was effective in giving him a new interest and meanwhile changing my relationship with him. For instance, it had always been my mother who spoke with me on the phone, now I was having 1-hour conversations each day with my father, a practice which continues still, and wherever I am in the world.

## Connections to past ecologies

The iterative process which led to the creation of this photo-album of my father's life had its roots in my research into our family history. I built this on information my father provided, our conversations and the photographs that we gathered together. By 2007, I had written a volume which had uncovered many family secrets, and which I had printed and bound for each of us. The ecology evolved to my publishing an addendum, comprising some extraneous links, a few years later. On that occasion, I used a well-known commercial publisher to produce the photo-book I had designed. This in turn was based on my having used the same company to print a special calendar that I produce annually as a Christmas present for my father. I illustrate it with images from our travels or his garden during the last 12 months, and am able to include family birthdays to save him needing to insert them himself.



## Current creative ecology



What, then, did this latest creative process entail? I cannot answer this question without bringing in the resources on which I drew and the spaces in which the album was conceived and produced. Initially, that was a conceptual space, my ideas, but it would bring in the significant places and times of my father's experiences. The practical space in which the creation happened was my laptop computer, on to which I had downloaded the commercial design template, located in my study.

Every stage of the creative process required decisions: which events? Who to include? Had I unintentionally omitted someone, who might be upset? Which photo-

graphs? How many on a page? What captions, so that future generations could follow the story? What cover design? How many copies? The list was endless and inevitably the album is only one of countless possible insights into 90 years' experience.

This decision stage called for sensitivity to the feelings of others and forced me to confront some of my own values: I could not exclude one of my nieces, her partner and their two children, but I knew that their common-law relationship jarred with the values I had grown up with, and were an unwelcome reminder of some of the skeletons we thought our family had left in the past. Decisions were ongoing, and fortunately, the design could be altered and rearranged as I progressed.

I began by selecting images of my father's parents, who met and married in India. His father was a regular soldier, so any childhood continuity for my father usually revolved around holidays with his sister and cousin at his grandparents' home in Scotland. Next came his own career, from joining the Royal Air Force as a youth, through to receiving the MBE and eventually retirement. In the course of those years, he would meet and marry my mother, they would have three children, and move home 29 times. I selected images that would give equal weight to events surrounding my mother and each of us children. Retirement came at an early enough age for my father to have a second career, which provided a period of stability in the house my parents purchased and where he still lives. Images from these years see the children having families of their own and now the grandchildren producing great-grandchildren.

The process of creating the album was inseparable from the resources available to me and my understandings of what was important and meaningful in my father's life. It was very much about a relationship between me, my father and his/our life and the resource I had to represent his life in the medium I was trying to express it. My involvement, who I am and the desires and means I have to express myself was of central importance - I am the only person in the world who could have done this.

My own disposition and passion for writing, thinking and creating through my intellect underpinned this creative project. This has led me over the years to accrue the technical devices, and develop the skills to use them, that I deployed in designing the gift. I scanned all the photos and edited them to give me the best quality and size for my design. I downloaded the commercial template that I would use, copied into it my images, then set about compiling pages chronologically. I chose a calligraphic font for my captions, to add elegance, and opted for a pitch of 20 points throughout the album. I changed the suggested layout of some pages and added new pages to accommodate all the events I had chosen. Where I felt more images were needed, I revisited my photo albums and computer folders to fill the gaps.

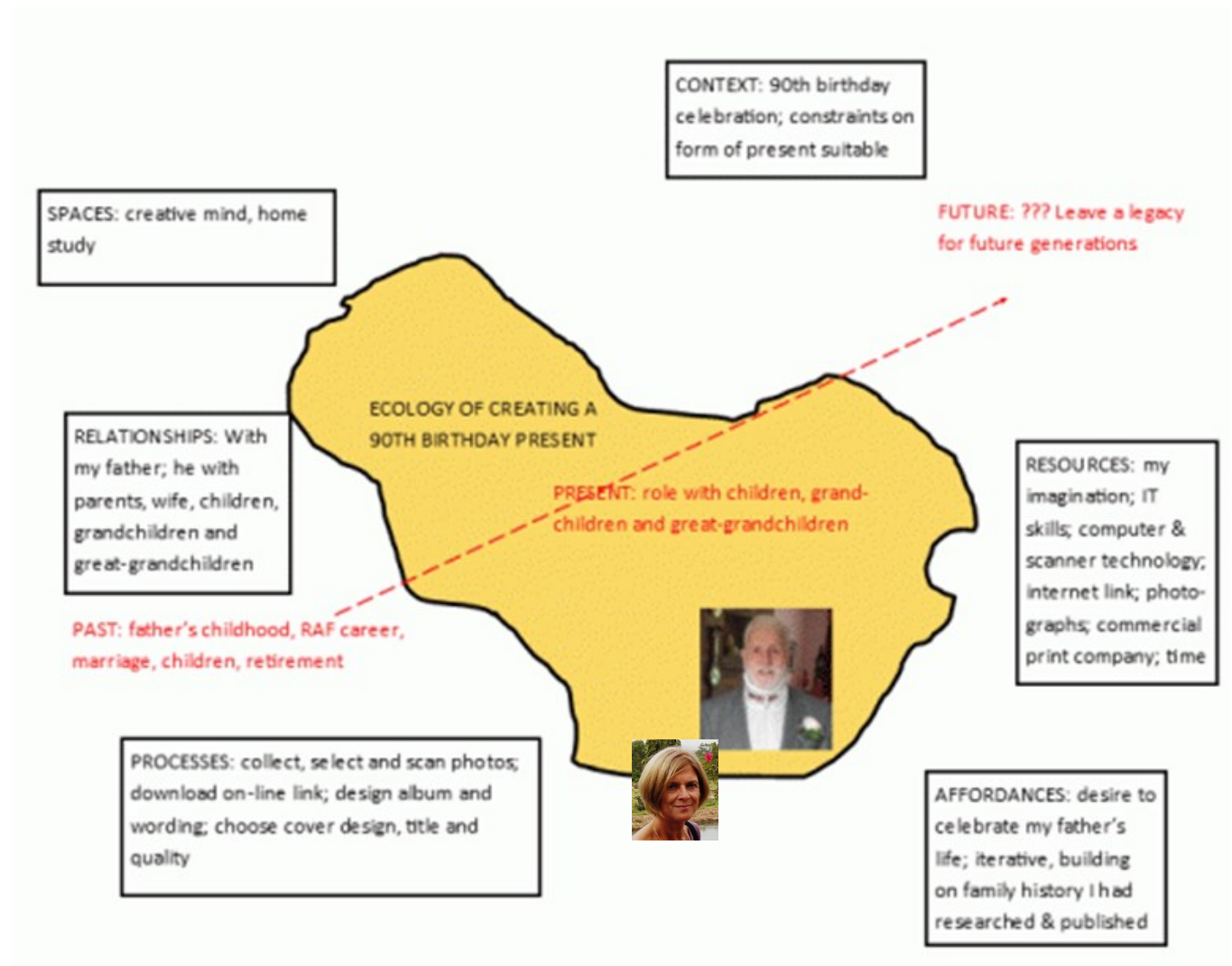
The final page was to consist of a family tree, showing my parents and each of their parents, followed by the children, spouses, grandchildren and great-grandchildren that my father heads. To design this with an image of each person, I used Publisher, then saved the file as a PDF. This enabled me to fix the whole tree and adjust it to the size of the album page.

Until now, the process had been essentially solitary, though drawing on the results of past interactions with others. Before finalising the copy and placing an order, I invited my husband to view it and agree with some wording. Having done this, I uploaded my design to the commercial website, made the last decisions on quality of paper, cover material and so on, then placed my order.

Time is another significant factor in the ecology. Being retired, I have more time available than I would have had when employed. I am always looking to the future, so had allowed myself ample time to design the album and have it printed by an overseas company. Time is also a prime element of my commitment to a project: I will engage myself to the point of obsession, finding the hours I need to create a professional product that I am satisfied with. At the end of the day it's my own judgement and no-one else's that determines whether I am content with my own creativity.

### ***Constructing my creative ecology***

In my original draft of this article, I deliberately avoided using subheadings in the narrative of my ecology, since elements converge and are not neatly separable. However, in summary, I offer an analysis of this ecology, based on the model proposed in the first article in this issue<sup>1</sup>. The image shows how the project links past, present and future, and the context, resources, affordances, people, relationships, spaces and processes that went to form it. I can recognise all these things in my creative ecology but fundamentally it's how I as the unique person I am engaged with this deeply personal project in the ways I know how to and in ways that emotionally expressed how I felt about my father and the life he has lived.





I have included a recent image of my father. Readers may notice that he is wearing a surgical collar - you cannot see the back brace and wrist support he also requires to cope with physiological problems. Nor can you see the psychological issues that have blighted his life for many decades, placing limitations on both himself and his family. I allude to these in the context box.

To understand why I chose to create an album where others might have planned a family meal, you should know that mental illness may be lurking behind even the apparently robust nonagenarian. Since my childhood, what would today be called Post-Traumatic Stress Disorder (PTSD) has imposed severe limitations on what my father can do. He is unable to travel (hence has never seen any of my homes or attended my university ceremonies), does not like being amongst many people, and cannot act spontaneously. The idea of a 90<sup>th</sup> birthday party would fill him with extreme anxiety, bringing on physical illness.

The creation of a special album does not pose any of these threats to his wellbeing. It was itself, born of another ecology, that in which I grew up and which I continue to negotiate my way in and out of. Indeed, the very resources and relationships that I brought to this project are themselves products of a self-sufficient environment which brings personal contentment but cannot, in the long run, compete with a wider society where evolution and dilution are essential to survival.

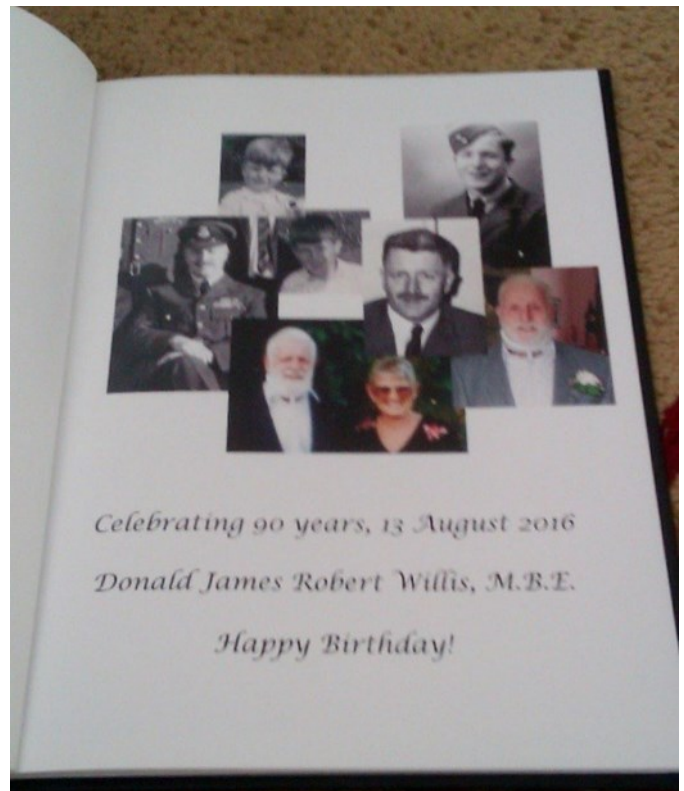
So what did the final product look like? It has just arrived and I am delighted with the quality of the album itself. I hope it has created a lasting tribute to my father's achievements and that it will bring him as much pleasure in the reading as it has me in its creation.

#### *Acknowledgement*

This article is a lightly modified/edited version of an original post I made in the #creativeHE conversation.

#### **Reference**

1 Jackson, N. J. (2016) Exploring Learning Ecologies <http://www.lulu.com/home>



#### **POSTSCRIPT**

*The album has been a huge success! I made a copy for myself and siblings. Not only has it been pored over by those mentioned in my story: I took it north to an aunt's 60th wedding anniversary in August, where it stole the show with all present, then it went with us to our Tamil relatives in Canada. They were especially fascinated by the photo of my father sitting as a young man in front of the government buildings in Colombo, their former homeland.*

## A selection of comments & responses

### Teryl Cartwright

What a beautiful story and journey to share! Thank you for this! I think some of our greatest creativity comes from love. I also admired your persistence, this was a long project to undertake and I wonder if you were ever overwhelmed or distracted on top of the other challenges you named. I like how this creation can inspire others for the future too.

### Nikos Mouratoglou

A great work indeed! Patience and will definitely were needed I suppose. As for the ecological perspective I strongly agree but I would like to ask you something the motives for producing this book could be attributed only to internal or external factors, or in a combination of them? This was something I discussed with a friend who supported that external conditions form internal motives. I refer to this, as I think that motives are of interest for the ecological perspective, or not?

### Jenny Willis' reply to Nikos

I agree that there was a combination of intrinsic and extrinsic motivation in my project. This is a really tricky chicken and egg question and is further complicated by the nature of the project itself: would I have chosen that form of creation if I had not had the competence to achieve it, or was the nature of my project determined by my existing skills in this area? Ultimately, there is a large degree of self-fulfilment in my creation, so it is quite an egotistical motivation at this level. I guess it is also egotistical to want to leave an artefact for future generations. Maybe I am hiding behind the extrinsic motivation of creating something that will bring pleasure to my father.

### Nikos Mouratoglou

+Jennifer Willis I don't think that it is egotistical. In contrast I found it really interesting, creative and original/authentic.

# Creative Puzzle Making Ecology

## Teryl Cartwright

*Teryl works at The United Methodist Stewardship Foundation, helping to provide stewardship training to the member churches and affiliates of the Susquehanna Conference in central Pennsylvania. She is freelance writer of curriculum, fiction, and drama as well as an online course developer and facilitator for the Institute for Discipleship.*



In May I was exploring the topic of creative problem making and Will Shortz, editor of the New York Times Crossword puzzles, agreed to a phone interview. In doing research before we spoke, I ran across this Gif which explains the most clever crossword in history <http://www.dailydot.com/unclick/clinton-1996-election-nyt-crossword-gif/>



I thought --what better way to "speak his language" and learn creative problem making than designing a set of clues that could work for two completely different crossword puzzles? Since I didn't do crosswords and hadn't tried making them before I had no idea what I was in for in the week I had to do it. I used many methods to find, research, and describe words--and couldn't use many of the best I found.

I was stuck about four days in with trying to follow all the rules of symmetry and clue making. To make my deadline, I finally had to cut some answers that had really bad clues and allow the puzzle to be unsymmetrical. My puzzle: <http://www.terylcartwright.com/creativity.html>.

I was attempting to fill a hole in my creative ecology, looking for some identified components of creativity I had not cultivated. One of the ideas I wished to grow and develop included how Will judged and then chose puzzles that were progressively harder each day of the week out of the numerous submissions he reviewed. What made a "Monday puzzle" as opposed to some incrementally harder "Thursday" puzzle? It seemed to me if he could creatively edit (not an oxymoron) or create differentiated puzzle clues and answers, then he must be able to regularly and systematically access multiple perspectives of puzzle solvers at will. To do this for so many years successfully, he also had to sustain and improve this creativity because the New York Times crossword puzzle has remained the best despite competition and changing demographics. The other path I wished to follow was an exploration of the fact that he is the only person in the world to have the degree of "enigmatologist." He had found a way to collaborate with his professors and university to self-direct his learning process and make his own unique course of study, something I was interested in pursuing in my own areas of interest.



My research was an indirect way to interact with him. If I compared this decision to another aspect of creative ecology, it would be an attempt to fit into the surroundings, not so much camouflage as adapting to the perceived environment. The contrast between a biological ecology and a “creative” one is that the diversity is valued and measured differently. In nature’s biodiversity, the dominant species will occur many times more often than the second most common species and it will be proportionally greater than the next species. All words in language also follow a similar pattern of Zipf’s law. Yet creative “dominances” fluctuate when the person, group, or culture tends to migrate to make unusual singleton things suddenly dominant --until the next trend or innovation attracts the attention.

I used many methods to find, research, and describe words--and couldn't use many of the best I found. I was stuck about four days in with trying to follow all the rules of symmetry and clue making. To make my deadline, I finally had to cut some answers that had really bad clues and allow the puzzle to be unsymmetrical.

My “creative ecology” had to change, but I resisted starting over. Small changes such as working on the clues first and then the puzzle or looking for inspiration in new places weren’t enough. I finally had to “unlearn” the way I was thinking about solving the puzzle making problem. I also had to decide whether to extend the timeline to make the rules work or extend the rules to make the timeline work. I chose to be “creative” by not making a puzzle fit a predetermined aesthetic template. It is ironic that I was making a puzzle to fit in, yet allowing my puzzle not to.

I shared the puzzle as it was with Will and he was gracious enough to share some of his insights on puzzle making. It really was a honour to have some of his time. While structure and theme are important, he emphasized that good clues are the “bridges” to make the solving of a problem interesting for the other person.

One of my choices in joining in this online creative ecology was not to share all of what Will said in order to allow readers to decide if the puzzle was creative. (I guess it is time to cross that bridge.) Will had told me his readers wouldn’t want a puzzle with two solutions since solving a puzzle with one right answer was the most satisfying for them. The creative ecology here that I dealt with were my internal reactions to this unexpected external feedback. I felt sorrow that the puzzle wasn’t as appreciated as I hoped and relief I hadn’t had the interview first (since I might have never tried to make a puzzle with this input). I am grateful that a video shared here by Dewitt Jones talked about having more than one right answer.



I had not learned what I had intended about differentiated perspectives and processes in creativity since the interview took other directions and I didn’t change the flow back to the original starting point. I imagined other puzzles like creating two different symmetrical grids for one set of clues, or puzzles with clues that were not labelled across/down or complete word within word puzzles. I had wanted to experience varying depths of creative thinking and instead had increased the surface area of my search.

The surprising outcome wasn't that I made a Schrodinger puzzle, but that I came up with a lot of other ways to think about puzzles and what other kinds could be made. I realised that in creating an ecology to solve one puzzle it can lead to new insights to help me solve many more.

Image source

<http://images.clipartpanda.com/crossword-clipart-get-idea-crossword-3d-block-clipart-75709161.jpg>

# Creative Moments: How creativity enables the apparently inconsequential to become significant

Andrew Middleton



*Andrew Middleton is Head of Innovation & Professional Development (IPD) at Sheffield Hallam University and is Chair of the UK Media-Enhanced Learning Special Interest Group. He is best known for leading academic innovation in the use of the recorded voice to enhance learning and teaching, learner-generated resources, models of audio feedback, and smart device learning.*  
[a.j.middleton@shu.ac.uk](mailto:a.j.middleton@shu.ac.uk), @andrewmid

I am interested in the idea of the ‘apparently inconsequential’. It is a phrase that has emerged for me in the last week or so on several occasions as I have been thinking about the studio as a learning space and whilst trying to understand why many of my colleagues do not notice something that I see as critically important: learning moments in-between dominant learning spaces. This pondering comes from my study of the non-formal learning space; that space which is experienced, but which is mostly unnoticed by managers, planners and designers of universities and their curriculum and co-curriculum. It is a legitimate and significant part of one’s learning ecology of coming to know, knowing, and understanding.

In the last few weeks, I have led discovery workshops for academic staff about the effect of space on student ‘becoming’. I have written about ‘in-between space’, read about Third Space, Third Place, Hybrid Space, liminality, interstitiality. I have desperately written words as a way to find arguments to contest dominant academic interests in formal learning. In all these activities I have been shaking out an intellectual rug in an attempt to discover something that I know exists and that I am nearly ready to reveal to myself.

A complex, invisible, but potentially lucid, conceptualisation awaits me on the tip of my brain. It is not just a matter of intellectual curiosity. I need this idea to crystallise. I know that when I have this explanation I can use it immediately to make clear to everyone that the millions of pounds we are investing in buildings is misdirected or at least of unknown value. I know something (nearly) that others do not seem to know at all.

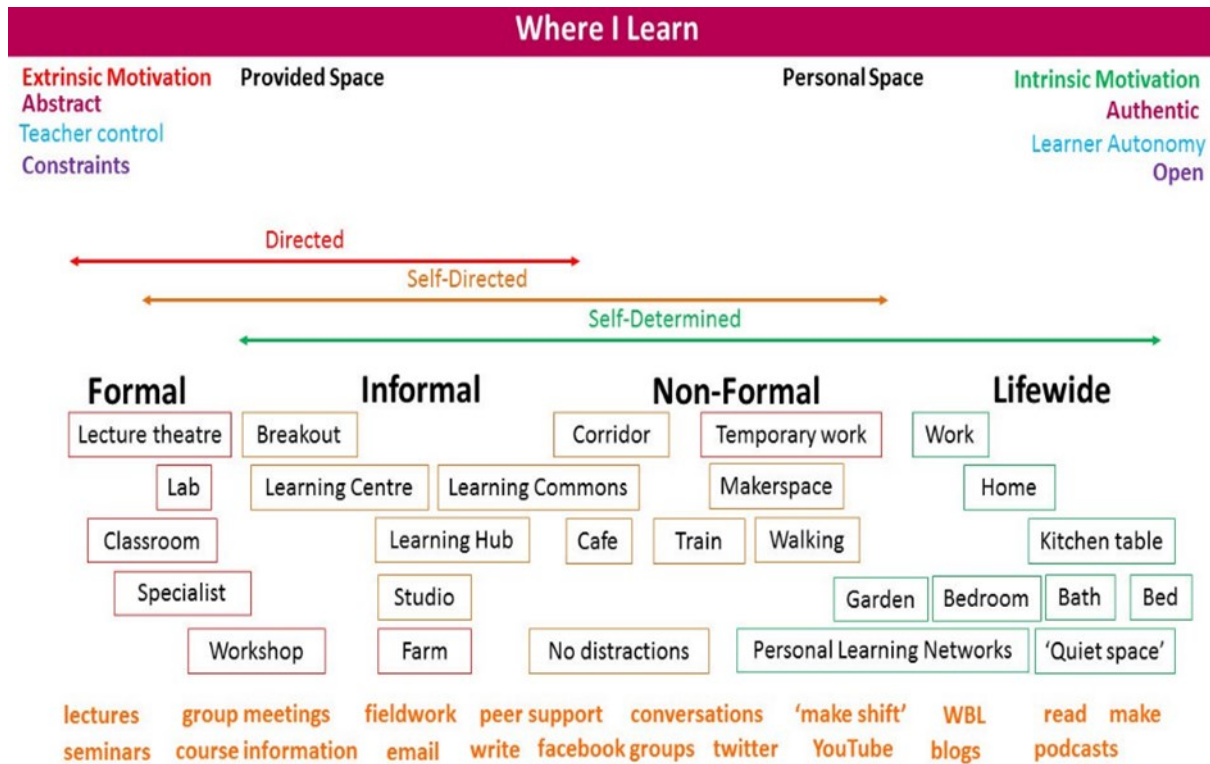
## Creativity emerging in the workshop

Returning to a workshop I ran at our recent university conference on learning spaces, I had an impetuous realisation that the 30 people in the room with me could be mustered to generate a representation of this idea with me.

We were a resource together, each having arrived in this room because our paths had directed us to momentarily converge, unravel and co-construct something. Already relationships had formed as stories were elicited in the earlier stages of the workshop to reveal that our common interests were founded on uncommon trajectories.

For the moment we had each other. I asked the participants to come to the back of the room, to clear away the desks and chairs. They stood like a group of carol singers ready to respond to my invitation. “Where do you learn?” I asked each in turn. With each response I found a space on the map we constructed on the whiteboard.

As each response was offered I marked it up on the board. As I wrote I provided a conceptual commentary that established a context for each of their/our contributions. This question, answer, conceptualisation process involved the whole room; our whole mind. This was afforded by the time we set aside, and the opportunity and the space I created. Each participant had moved from sitting in their small group conversations to standing together to draw out and draw upon dimensions of experiences. Some of these dimensions were surprising, and some were more predictable. Each person, in this process, had rich stories to share about their learning and each offered insight for me, the map, and for each other I presume.



**Andrew Middleton** @andrewmid · Jun 26

'where I learn' - summary from my workshop with @DrAlisonPurvis #shult16 I'll be using this in workshop on belonging

## Later

I grabbed a photograph of the whiteboard 'map'. There was something rich there about formal, informal and non-formal learning spaces. I tweeted it immediately and went to my next conference session. I felt 'likes' and 'retweets' hitting my device in my pocket and looked at them later. They reminded me of what we had created earlier in the day and I made a note to think more about the map and reconstruct it in a more visible and intelligible form.

Other ideas occurred to me that helped me to make sense of what we had done. How all this related to lifewide learning in particular and how it related to ideas about both intrinsic and extrinsic motivations. I tried to bring these ideas onto the map, but representing them adequately was difficult. Nevertheless I tweeted the revised map out and peers who had not been at the conference picked up on it. They challenged one or two of the ideas in the representation. They were right! So the map goes on and the thinking goes on! And still that idea is waiting to be revealed, but through that moment is getting closer.

This brief episode amongst many helps to describe what Rogers (1961/2004:350) refers to as "the emergence in action of a novel relational product growing out of the uniqueness of the individual on the one hand, and the materials, events, people, or circumstances of his/her life" and represents the potential of the educational developer to lead creativity.

### Reference

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## interstitial space chat



# Creating a Table: an ecological perspective

Jonathan Purdy



*Jonathan has a background in visual arts practice, arts education and multimedia design. He is currently completing Masters/PhD research focused on issues and phenomena for higher education students learning creativity in alternative learning spaces: community settings; workplaces; virtual contexts; and real-world settings. He's asking whether learning to be creative can reside in 'crossover learning' between higher education institutions and alternative learning spaces? Jonathan is otherwise occupied as a Lecturer in Academic Practice at Southern Cross University, Australia.*

## Introduction

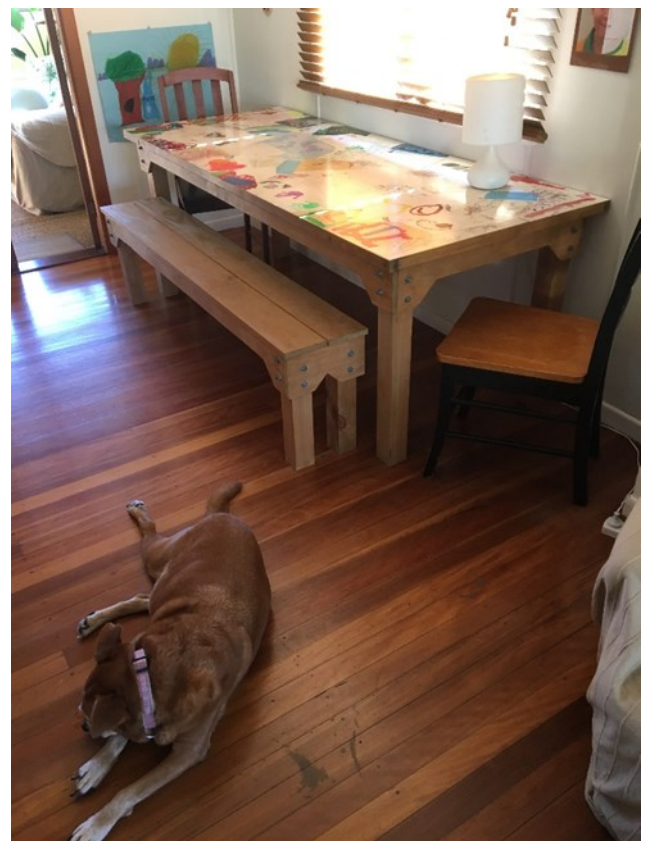
The 'novel product' in this narrative of creation is a table. It very neatly fits the broad definition of creativity - novel and useful. Through this narrative I will express the ecology that surrounds its creation. The narrative itself is interesting to me as it may produce a second act/product of creativity, with its own ecology. For now, an ecological perspective on one product of creativity is enough; that of the table. I will be attempting to express the uniqueness and usefulness of the table on the one hand, and the materials, events, people, and circumstances of the ecology on the other. The framework utilised in this narrative is a model of learning ecologies, as developed by Norman Jackson <sup>1</sup>, starting with a past-present-future ecological perspective.

## My creative ecology

The desire for this table emerged from a need within our family home. An outdoor art-making/dining table serves us well in summer months but not winter. We needed an indoor table for meals, games, art-making, conversations, junk accumulation and where dogs can hide from thunder.

**Past:** my formal learning past is in visual art, design and education. My informal learning related to this table ecology is childhood woodworking, sculptural construction and making something out of limited resources. Trips to the timber yard and quarry with my father yielded an appreciation of materials and the need for a sturdy trailer to haul the materials back home. Weekends were spent holding the ends of two-by-four timber while my father's panel saw ripped through the hardwood grain. Intermittent rides on my skateboard or bike blew the sawdust off my clothes.

**Present:** my current ecology gets regularly connected to past learning, generally stimulated by discussions recalled at the time of creative activity. Key discussions with three people were synthesized: discussions with a repurposing designer friend influenced the choice of a door table top (more precisely a faux door used to protect stacks of doors during shipping); discussions with my father, the ultimate eclectic woodworker, impacted the construction; discussions with a friend who decoupaged his car to cover the rust, lead to my children's drawings forming the table top surface. Discussion, exploration and synthesizing learning experiences have a strong presence in this ecology. My current research interest involves investigating issues and phenomena of higher education students' learning creativity in alternative learning spaces. The research is underpinned by Rhodes<sup>2</sup> four P's of creativity (particularly 'press') and the transition by HE students from little-c to Pro-c as defined by Kaufman and Beghetti<sup>3</sup>. This aspect of my creative ecology influences this narrative rather than the table. However, future changes to the table will be influenced by my current research and new understandings.



*The table and Millie*



*My friend's rust-disguised car*

**Future:** one of the initial conceptions in designing the table top surface was that it would evolve over time. The distinct possibility of intentional and accidental additions (drawing, cutting, food stains, paint spills) lead me to expect change. A more deliberate change to the table top will result from new artwork being plastered onto the decoupage surface. These new drawings, paintings and collages will be made principally by my growing sons. They will bring their own creative ecologies to the process and product.

**People:** prominent people in the creative ecology of this table feature in my past, present and future. Don Driver had a big influence on my fledgling art practice. He and his wife Joyce employed me on occasion to clean up their garden and assist

Don with construction of his sculptures. It was his assemblages and collages that had an impact on how I conceptualised art-making. I realised that art wasn't firstly about mastering technique but about ideas. Materials and techniques were the means to realise those ideas. I've since reflected again on Don Driver's work and recognise the symbiotic relationship of his ideas and materials. Many of his ideas came from the discoveries he made in and with the materials he found. Don was a man of few words, so I feel privileged to have spent time with him, being mentored in art-making. To illustrate Don Driver's view on ideas and materials, the following is a recollection from Jim and Mary Barr<sup>4</sup>. They were collecting ideas for a book, *Contemporary New Zealand Painters* when Don was typically reluctant to speak:

*We sat with him for most of a morning on a couch in his living room trying to get some words out of the man. By mid-afternoon we were desperate and suggested we visit the studio hoping this would loosen his tongue. Not a chance. Finally, when we were pushing hard about the materials he was using, Don looked up and said, "Sacramental." Sacramental. That'll do. We figured we could write a whole Don Driver book around sacramental. "In what way sacramental?" we asked him. Don gave one of his classic shrugs. "What I said was sack and metal"* <sup>4 para. 1-2</sup>

Bringing my table into existence also created affordance and purpose for us to co-create as a family. The artwork created prior to conception of the table is a mixture of individual and co-created drawings and paintings. Pieces made specifically for the table top have been co-created. Also, the inclusion of a collaged world map was a family decision. The table perpetuates family co-creation of artworks by providing a surface on which to make more drawings, paintings and sculptures.

**Ideation, imagination and creation:** an approach I've been introduced to recently in higher education is *ready-fire-aim*,<sup>5,6</sup>. The context was change management, notoriously difficult in the 'hard to turn container ship' culture of higher education. I've come to realise that *ready-fire-aim* describes my own approach to creativity. A reasonably lengthy period of getting *ready* involves ideation and tinkering, followed by taking a leap of faith to then *fire*. Only then can refinement occur with considered *aim*. There are similarities to divergent and convergent thinking, but importantly the catalyst for convergence in *ready-fire-aim* is the act of *firing*. My abhorrence of fire-arms has lead me to rename the approach *passion-production-purpose*. Producing something helps refine both the novelty and the usefulness of the creativity. There is reverse influence on the original idea and forward influence on the value and validity.

**Resources:** to pick up on an approach alluded to earlier, making something out of limited resources encompasses 3 key characteristics in my creative ecology: it connects me to my maternal grandfather who was a tinkerer, collector and developer of 'bits and pieces'; the furniture in our house can best be described as eclectic upcycling; and a constraint-driven creativity. Grandpa entered folklore in our family for having fashioned a television remote control from an old electric razor.



*Family co-created drawing and sculpture*



**Materials:** a synthesis of materials requires both careful selection and an understanding of material characteristics. The table top is a faux door saved from landfill, with a tidy flat surface. The artwork on the table top has journeyed from creation to walls to storage boxes to decoupage. All other materials are sourced from a 20-year collection of 'bits and pieces' or purchased from hardware shops. The qualities of materials are considered carefully as the eventual form they take in the table is exposed. Wood grain, nuts, bolts, screw heads and door hinge recesses are all visible in the final table and accompanying bench seat. The exposed structure makes selection of materials more layered. The spaces where these materials reside are ecologies themselves, aiding or inhibiting the process of deliberation and selection.

**Spaces (and the processes they afford):** Google images, Pinterest and YouTube are the virtual spaces I inhabit while ideating. My garage and the outdoor spaces that surround it are the physical spaces that contribute to realization of the creative product. Importantly though, a certain retail hardware shop is a key space during the 'consideration of materials' phase of the creative activity of building a table. Deliberation of suitable materials, quantities and qualities occurs in extended periods of time spent in hardware shops. Problem solving, testing of materials and realization of design ideas can all take place in a hardware shop journey: transit to the shop; wandering the isles; and then transit home after purchasing the materials. This is thinking time, away from the construction space. The construction space is close to the eventual 'home' of the table, allowing in-situ refinement. Other important spaces are those in which I've co-created drawings and spaces that my children have created drawings that form the surface of the table top. These spaces are usually the old dining table, a breakfast bar or festival workshop spaces. For co-created drawings, intimate spaces are shared with my children, where close proximity and shared drawing implements encourage discussion and joint creative decision making. These conversations and decisions are now imbued into the decoupage surface of the table.



*Decoupage drawings in the table top*

### Concluding comments

In the same way a personal recipe book can represent a lifetime of experiences and influences, the creative ecology of my table

emerges from my collection of learning, practices, inspiration and people. Some are represented clearly in the construction and appearance of the table. Other facets of the ecology mentioned in this narrative are implicit. The facets, although expressed under headings in my narrative, are not isolated - they are deeply related and connected often by particular meanings that I have given them. Resources offer affordance and involve people in my present and my past. Spaces are filled with materials, people, ideas and feelings. The novelty and usefulness of the table can be directly linked to many ecological facets. This narrative is a second act of creativity emerging from the first and my involvement in the #creativeHE conversation and the production of this magazine. In this way my creative ecologies are linked across time. When I made my table I did not know what my future would hold but the making of my table held potential for future creativity. Ecologies are ever evolving, influential and able to be developed. I'm looking forward to the next product of my reformed creative ecology.

### Acknowledgement

This article develops my contribution to the #creativeHE conversation <https://plus.google.com/communities/110898703741307769041>

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Image credit - Decoupage car [http://www.alisonleeds.com/2010\\_10\\_01\\_archive.html](http://www.alisonleeds.com/2010_10_01_archive.html)



**Editor's Comments:** extreme busyness is one of the problems of our age but one of the advantages of asynchronous on-line discussions is that you can still connect to and participate in the conversation even if only sporadically, regardless of where your life takes you. Our ecologies not only have to help us learn and achieve they have to help us juggle complex lives involving family and a host of other things. This contribution by Debbie illustrates this facet of a creative ecology extremely well.

## Exploring Creative Ecologies - Deb's Ramblings

### Deborah Baff



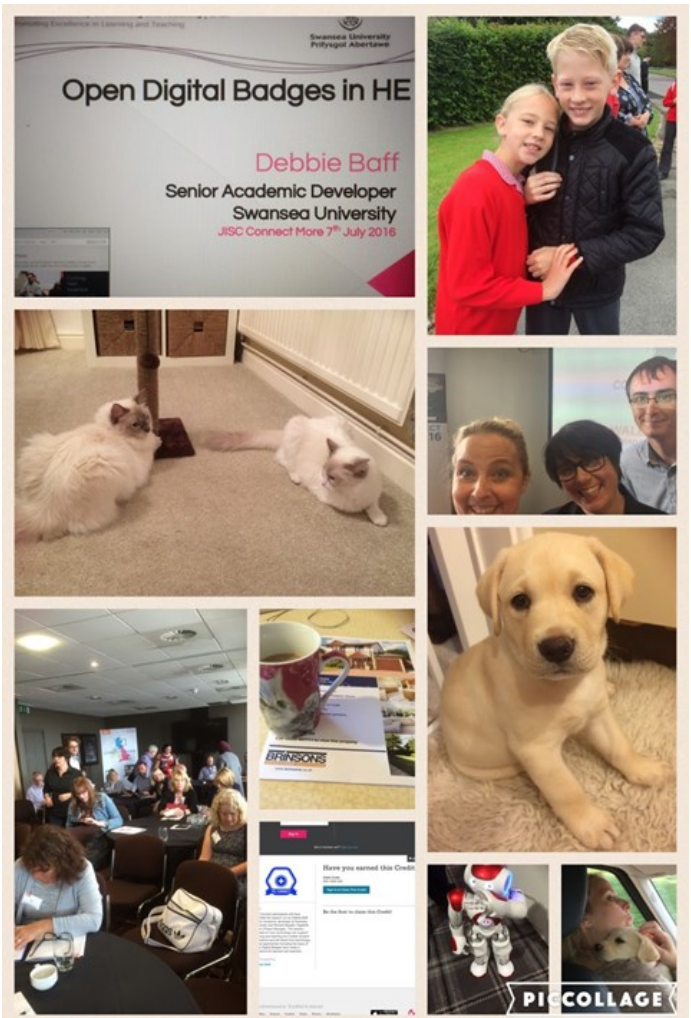
*Deborah is a Senior Academic Developer at SALT Swansea University. She is passionate about open education and recently completed a Masters in Online and Distance Education with the Open University. She loves working in Open Collaborative Learning Environments which is why she is such a great contributor to the #creativeHE social learning conversations.*

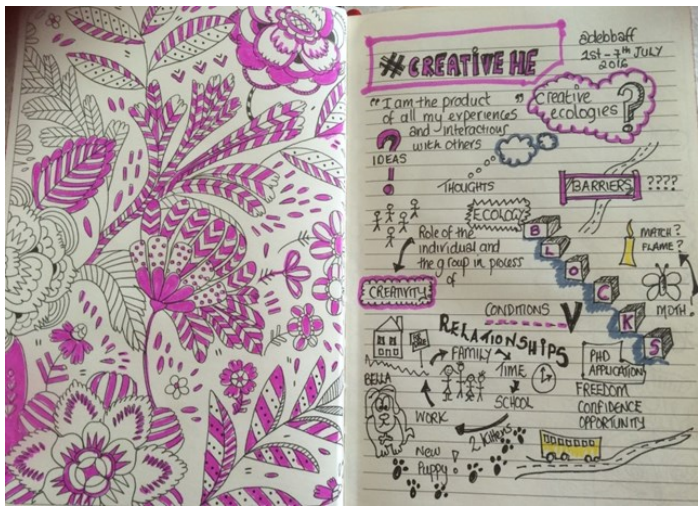
Blimey this has been a week and a half ! (and no I'm talking about the football :) Despite my best intentions I haven't been able to engage with this as much as I wanted to this week. I have managed to drop in here and there to catch up with some of the many interesting contributions but this has been largely snatched short pieces of time, although of course sometimes just checking in on my phone has been enough to feel part of it but I feel that this was only from an observer's point of view and I felt at some points that I was missing all the lovely stuff going on at the centre.

To be fair my life is to be fair fairly busy at the best of times with working full time and two children but I also now have nearly a 100 mile trip each day to get to and from work so this really does impact on my ability to put one foot in front of the other let alone feel even slightly creative !

However ... At the risk of it sounding like a 'the dog ate my homework' excuse, to add to my juggling skills over the last week I have also

- welcomed a new 7 week old puppy into our family this week ( we also have two 11 month old kittens so yes life is interesting) ...
- presented at a conference,
- completed and sent off my application for a PhD
- Waved my son off for his first transitional week at comprehensive ( blimey they grow up quick)
- we have also put our house on the market, had several viewings and have now sold our house all in the space of one week ... phew ! and breathe ... here is a little collage of my week ..





I'm not sure I have a solid grip of what a creative ecology is but if I have understood the model correctly though, I guess fits very nicely into the idea of creative ecologies and the fact that all these influences, experiences, relationships and interactions make me who I am and of course contribute directly to my own creativity ( or lack thereof ) !

On the odd occasion where I did manage to grab some time I really enjoyed and valued the ability to be able to engage with the course. I started the week full of hope and wanted to make some notes on the background articles in my rather snazzy new notebook which

has a page for grown up colouring in on the one side and then space for notes on the other. How cool is that ? It's probably a bit of the procrastinator in me but I do love a bit of colouring and find that sometimes this just allows my mind to drift and then thoughts seem to pop into my head. I have been experimenting with using sketchnotes recently, a useful tool to include in my creative ecologies. Here is my attempt at putting some of this into practice with my creative ecology notes.

The challenge for me though was continuing to find the space to be able to get my head in the right place to think so my notes sort of stopped at about Day 2. As you can see from the pictures (right) they actually seemed to get less creative as my time became more restricted. I note the space and time influences in the model for a creative ecology. To be creative requires enough space to be able to create whatever it is you are creating.

Interestingly what I did find is that when I actually found the time



to sit down and start-



ed to make some notes, my daughter ( who usually has her head buried in an iPad watching minecraft videos ) took it upon herself to come and sit next to me and ask me what I was doing. When I tried to explain that mummy was learning about creative ecologies ( I had a lot of odd looks at that point ) she promptly took herself off and came back with a raft of craft supplies, glue, ribbons, paper and snaffled some of my NEW felt tip pens and then proceeded to get busy making some bookmarks, one for her and one for her friend. She managed to create something useful out of nothing and out of nowhere, popped them on the kitchen counter and then just went back to her minecraft stuff, leaving me quietly impressed ( and quite envious!)

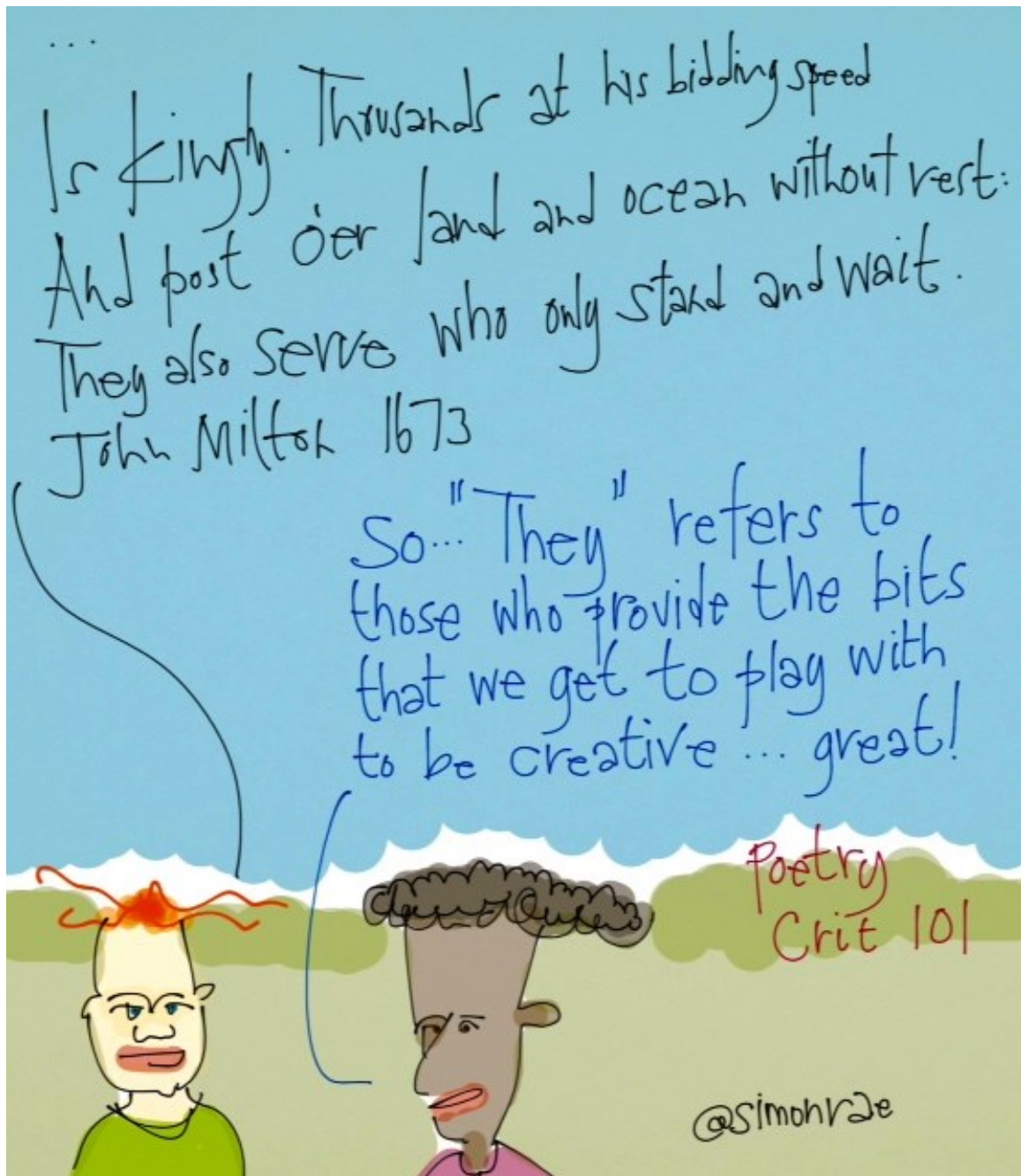


I'm not sure exactly where all this leaves me with my understanding of creative ecologies but I had a go so I thought I would share :)



Norman Jackson Moderator

What a lovely story of your life. It's lovely that you have a daughter that sees and is able to realise the affordance in her home environment (context), has the space, time, resources and will to find and use a medium that she and her friend (collaborative relationship) can work together using their imaginations and skills to create something where nothing existed before. As her parent I am sure you have, through your love and care, done much to provide a supportive environment and encouraged and nurtured your daughter so that she can make the most of the opportunities available to her in her home environment. Knowing you a little bit, I suspect that you have created a family culture in which having a go at creating something is a good thing (your colouring book and sketchnotes reveal this): a culture in which all of your creativities can flourish.





**Editor's comment:** for many people involved in education or professional development work one of their main outlets for their creativity are the processes they design and facilitate and the resources they create in order for their students to learn and develop. In this contribution Nikos describes a workshop that he prepared during the #creativeHE conversation. He was then able to develop his post into an article after he had facilitated his workshop and reflected on the experience.

## Applying the Idea of a Creative Ecology to My Experience of Creating and Facilitating a Workshop Using Lego

**Nikos Mouratoglou**



*Nikos is a Greek Language Teacher. After completing his Bachelor studies "Philosophy and Education" at Aristotle University of Thessaloniki, he continued his studies by entering the Master's Programm titled "I.C.T. in Education". This year he attended his second Master's Programm "Adult Education and Lifelong Learning" at the University of Macedonia of Thessaloniki, while at the same time he is a Ph.D. candidate at Aristotle University. His main interests include I.C.T., Higher Education, Writing Research, Lifelong Learning and Intercultural Theory. Nikos joined the Creative Academic team last year and has made many contributions to our magazines and #creativeHE discussions.*

### Introduction

My original post in #creativeHE discussion included my experience in helping to organize a workshop using Lego bricks. At first, I was not sure if this situation could be described in terms of a creative ecology and the main reason for submitting it in the group was to get the conversation started. As I read the background notes on exploring creative ecologies, I tried to relate my experiences, thoughts and ideas to the model suggested for a learning ecology (Jackson, 2016)<sup>1</sup> and through this process I developed a reflective, ecological narrative of this experience. Below is my first post in the #creativeHE group discussion:

My last creative moment (I suppose) was yesterday when I was trying to develop an adult education workshop by using the Lego Serious Play Method. The workshop's target group is undergraduate and post-graduate students in the field of Business Administration and therefore I had to adjust my thoughts, reach a lot of corresponding resources and explore the field in general. In order to so, in an early age I searched for information in google in order to gain an overview of the topics with which these students are familiar. Next I tried to think of someone I know and has equivalent knowledge so that he could inform me in a more specific domain that I had traced, the field of team working. As an educator I am used to designing such activities, but I had to adjust my thoughts and ideas in the specific context. After doing so, I developed four domains in which I started inputting activities, materials needed, an aim and eventually four frameworks came out. Hopefully, the workshop will take place on Monday at an international summer school for entrepreneurship organized by the Democritus University of Xanthi, in Greece.

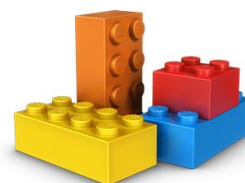
Interestingly, the conversation that emerged pretty quickly, provided me with some key points and some food for thought in order to think about my experience using the model as a reflective aid.

The first comment was made by Norman Jackson, the Moderator of the group discussion:

Thank you Nikos for starting the conversation. I think there is something significant about drawing out an example of your own creativity from your current unfolding life. In your story you have identified a purpose, the recognition of affordances, a process and activities, the search for and use of specific knowledge and the use of relationships. Are you able to say a little more about the way your creativity emerged through this set of interactions?

and then by Theodora Tziampazi commented:

Nikos, I have just seen this summer school in newsfeed and thought it would be great to attend! Not surprisingly, now I see you are a part of it! I am happy for that! Here are my observations on your project: 1) flexibility -you are not restricted to your field you



are specified in, but explore new paths which are connected to yours, mapping new perspectives! 2) collaboration-acknowledging the interdisciplinary nature of your task, you take advantage of your social networks, revealing how important is to walk side by side along these paths 3) apparently effective development, as your plan is going to be applied soon! I suppose you knew it in advance, I mean you designed it with the purpose of participating in the summer school. Is it so? I think our creative thinking is way too activated when we set a goal, when we are about to present and share our work.

The conversation was further developed with comments by Teryl Cartwright and Simon Rae discussing about the nature and the different forms of creativity (e.g. art)<sup>2</sup>.

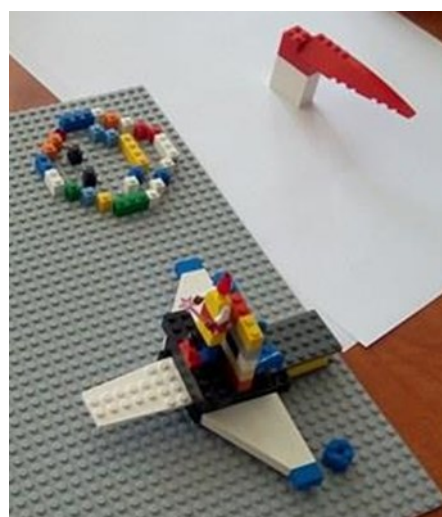
## Designing and implementing the workshop

First of all, our main goal or purpose was to design a workshop for international undergraduate and postgraduate students during an international summer school in entrepreneurship. The design needed to be challenging and engaging in ways that would promote students' thinking, creative, problem-solving and team-working skills in a context that was unfamiliar to them. The workshop was held at the start of the summer school, in order for the students to get to know each other and to have an alternative introduction to the subject of the summer school. For this purpose, we decided to use LEGO bricks and specifically the LEGO SERIOUS PLAY (LSP) method. According to Frick, Tardini & Cantoni (2013: 6)<sup>3</sup>, the LSP method has three applications:

*Real Time Identity for You:* goal is to allow participants to understand themselves and their colleagues better,  
*Real Time Strategy for the Team:* aims at unlocking the full potential of a team quickly, effectively, and deeply  
and

*Real Time Strategy for the Enterprise:* a process to continuously develop strategies in an unpredictable world.

In order to achieve the first two goals, seven groups of six members were formed. Each group received some bricks in a box and a grey basis where the participants were asked to choose a 'super power' and represent it using the LEGO bricks. Some of the participants combined their super powers producing larger and more complicated constructions. Through this they understood that by combining their representations, ideas and thoughts, better and more impressive constructions were built. In other words, this simple act resulted in the co-creation of meaning.



Afterwards, the participants were expected to introduce themselves and discuss with the rest of the group members what they have built and what this construction represented and meant for them. In this way, students shared their thoughts, ideas, experiences and revealed aspects of their personalities, something that helped students not only to begin forming relationships with each other, but also in some cases even to identify themselves with other members of the group. In order to maximize the impact of the introductory activity, students were invited to introduce a member of their group, for example give their name, characteristics, hobbies, and the superpower they had chosen, in the plenary session. Interestingly, even though the students were shy and hesitating at the beginning, the whole activity engaged them and gave them pleasure and helped them develop their confidence in the group.

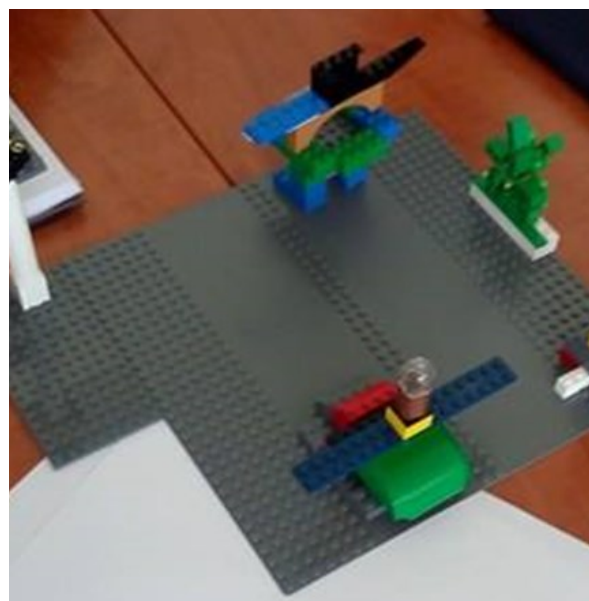
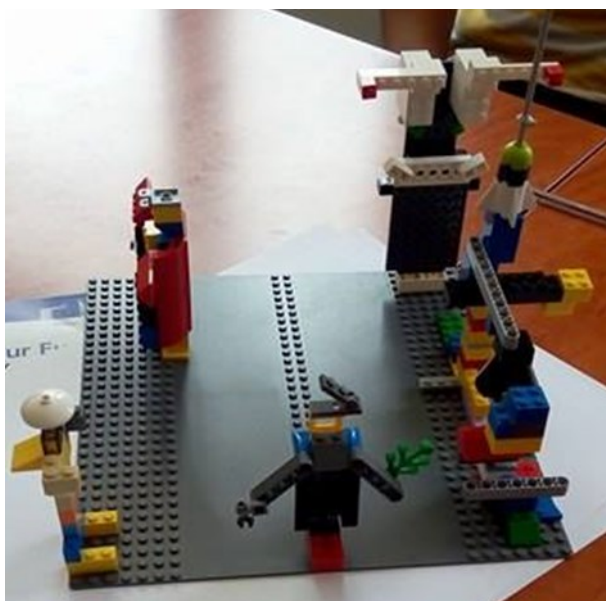
The second part of the workshop introduced the topic of recycling from an entrepreneurial perspective. In order to achieve the third application of the LSP method and promote students creative, thinking and team-working skills, we decided to form four contexts in which each one of the eight groups had to work with. We tried to adjust the content to the students' background, in order not only to raise their interest but also to utilize their knowledge and perhaps their equivalent experiences. The above mentioned activity allowed students to utilize their mobile devices (smartphones, tablets, laptops) in order to search for information and resources that they needed (mobile learning, inquiry based learning, problem-based learning). In the end, the groups were expected to find a solution, construct something that is related to it, and present it to the whole group. The contexts that were provided to the students are shown below, as well as some of their constructions:

**Context A:** Suppose you are a municipal authority and recently you have joined a European project titled “Green Cities”. Think of possible ways that you can confront with organic waste (e.g. food) in order to become more efficient and environmental friendly at the same time.

**Context B:** Suppose you are partners with each other and you try to find a solution for your business in the field of constructions and deconstructions. Think of possible ways of becoming more profitable and environmental friendly at the same time.

**Context C:** Suppose you are a private business in the field of automobile and parts market (place for detention of cars). Think of possible ways of becoming more profitable and environmental friendly at the same time.

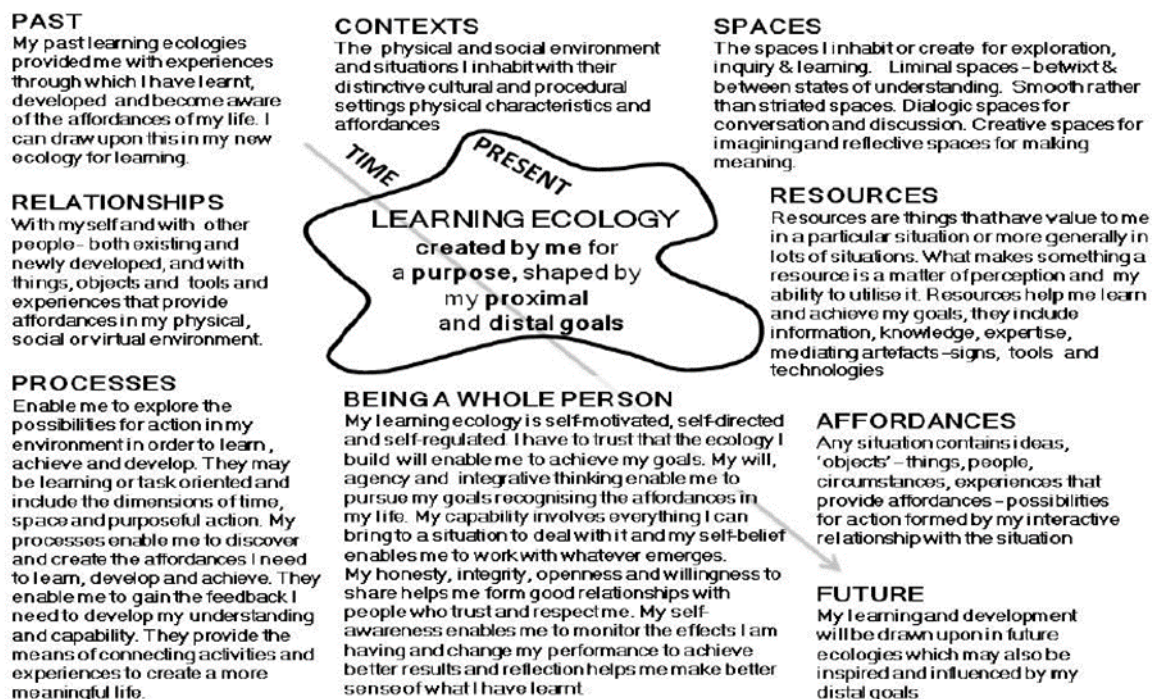
**Context D:** Suppose you are an administrative council of a business and decide to leverage alternative energy sources. Think of possible ways of becoming more effective and environmental friendly at the same time.





## Ecological perspective on design and implementation

The model of a learning ecology provides a holistic, temporal and multi-spatial framework for interpreting learning ecologies, in the sense of both lifelong and lifewide learning. I will try to reflect on my creative learning experience according to the below model:



**Purpose:** At the heart of this creative ecology (my proximal goal) was the desire to create an experience and environment in which the participants could interact in ways that would promote their creative thinking and that would be enjoyable. My role as a designer and facilitator was to create an ecology within which this particular group of people could learn. My creativity was dedicated to helping others be creative. It's a situation that will resonate with all teachers. Perhaps my more distal goal was becoming a better version of myself by taking on and tackling this challenge and learning from the experience.

**Past history:** My past experiences through which I had developed my knowledge of learning, group facilitation and LEGO were all important because without this past I would not have been able to design and facilitate this workshop. Specifically my experiences in my bachelor and postgraduate studies in education, my participation in various seminars, conferences and workshops, as well as my participation in the NGO EduACT in Thessaloniki (Greece), all provided me with the knowledge and understanding I needed for this new project. My bachelor studies in education and pedagogy triggered my interest and passion in the field of the educational programs and instructional design. Therefore a solid cognitive and experiential basis was built, something which was later enriched during my postgraduate studies in I.C.T. in Education (Aristotle University) and in Adult Education and Lifelong Learning (University of Macedonia). During my second master program, I took part in an online course titled #creativeHE, in which I came across LEGO SERIOUS PLAY for the first time. After searching on the Internet I found multiple resources that helped me understand what this method offers and a few days later I found out that an NGO in Thessaloniki has a special interest not only in educational robotics using LEGO bricks, but also in creativity and innovation. As a result, my participation in various workshops as well as in the organization of the First Lego League competition in Greece were also determinant factors that offered me new experiences, skills and knowledge that have resulted in the foregone background of this learning experience. Because of the knowledge and skills I had developed prior to this new situation, I felt prepared and confident that I could design and facilitate this workshop at the summer school. I had also developed relationships with people who could help me (see below).



**New knowledge resources:** As mentioned in the previous section, the goal that was set included the design of a challenging and engaging workshop that would promote students' thinking, creative, problem-solving and team-working skills placed in an alternative but also familiar context to them. The challenges addressed during the design process was to create a learning experience in a field that was totally different and new to us. Therefore, we had to read a lot, search for information and trace corresponding workshops or seminars that had similar goals and objectives. Moreover, we held some conversations with experts of the field of entrepreneurship, which eventually helped us to design the workshop. Furthermore, the LSP methodology was also something new to us and as a result we had to track down various resources in order to understand the way it works. Of course, the workshop was not fully based on the LSP method as we altered and adjusted some dimensions on the context that came up.

**Other resources:** In order to carry out the workshop we needed some resources and materials. For the first activity we used LEGO bricks, papers and colorful markers, whilst for the second activity we additionally needed a laptop and a projector for the PowerPoint presentation, students' mobile devices (smartphones, tablets and laptops) so that they can track down information and extra LEGO bricks for their constructions. The venue, in which the workshop was carried out, was agreed by the organizational committee of the summer school and therefore the basic equipment was already settled (desks, chairs, projector and laptops). However, students also created resources, such as conceptual maps, LEGO constructions, drawings and digital artifacts (infographics) in order to present their work at the plenary session.



**The affordances** for action and creativity with which we were provided, included the fact that we had to stimulate students' creativity in an interesting and alternative way by utilizing student's descriptive, creative and challenging imagination<sup>3</sup>. We designed an activity which aimed at two levels. At first, students had to reflect on their personality, pick a characteristic that is their asset and produce an artifact with LEGO bricks which would represent their "superpower" (creative imagination). Through their exploratory creativity, students presented their superpowers in their groups and eventually in the plenary session (descriptive imagination), a practice that not only helped students to familiarize themselves, but also contributed in the discovery of similar characteristics and experiences. In this way, team bonding proved to be reinforced. The second activity, strived for students' challenging imagination, as they had to think of possible solutions for different recycling topics (e.g. organic waste and energy). During the activity, the students collaborated with each other, discussed and exchanged ideas, posed probing questions, investigated their topics of interest and developed a SWAT analysis<sup>5</sup> for their ideas. Consequently, these two activities helped students to unblock their imagination and creativity, while at the same time engaged their thinking, negotiating, team-working, problem-solving and creative skills.

**The spaces** that were involved during the workshop's design and implementation were both physical and virtual. The physical spaces included the university, where we met with the rest of the NGO members to discuss and decide the purpose of the workshop, as well as the NGO's facilities in order to decide the materials and resources needed. The virtual spaces refer to an online community that the NGO EduACT owes and where we posted ideas, resources and the provisional designs for our workshop so that the rest of the community members would be able to submit their feedback. Through the design of our workshop we permitted and enabled particular sorts of spaces for thinking for example we encouraged interaction and collaboration around problem solving, imagination, exploration, integration through design and making and ultimately the sharing and making of meaning.

**Relationships:** the spaces mentioned above would not prove to be helpful unless there were some people that contributed in the whole process. First of all, the NGO's chairman who trusted and assigned us to design and implement the workshop, as well as the NGO's coordinator who also contributed in the designing procedure and the implementation of the workshop. Moreover, another educator was present for helping us with the materials needed and providing information to the participants. The two Professors of my faculty at Aristotle University of Thessaloniki are also two key personalities in the aforementioned experience, as they were the masterminds who decided to cooperate with the NGO and therefore I and the educator had the opportunity to offer our work and ideas to the NGO.

**Process & Activities** - The narrative above describes the process and the activities within the process that participants engaged in. These activities were not haphazard, they were deliberately planned with particular forms of interaction and learning outcomes in mind.

## Impact of my creative ecology

This analysis reveals that all the components of the proposed model of a creative ecology<sup>1</sup> are present in the narrative of my experience of designing and facilitating the workshop. However, the model might be developed further by considering the impact of the ecology. For example all the new resources and artifacts produced during the development of the learning/creative ecology and namely, the new knowledge, skills and attitudes as well as the modifications or the expansion of the human interactions by the adjustments of the relationships in the context of the personal network. Obviously, the impact of a learning/creative ecology does not only refer to the fulfilment of the main goal, but also contributes in participants' enrichment. As it can be noticed, the only stable and firm background that exists in a learning/creative ecology is the past (e.g. experiences, studies), while the rest are subjected to changes and differentiations depending on the goal, the people involved and the way they behave and interact and the context in general.

Another possible extension of the model could contain the "Unpredictable factors". By this, I want to emphasize the fact that during the development of a learning/creative ecology some unpredictable situations may arise and therefore a reconsideration of the "strategy-plan" can occur. Namely, in the present experience an unpredictable, but easy to adjust need emerged during the implementation of the workshop. While we announced the four contexts to the participants, one student asked whether his group was able to collaborate with another group. In particular, a student from the group of the energy factory (Group D) asked whether they could cooperate with the local municipal authority (Group A) in order to maximize the profit of both bodies and the environmental impact on the local community. This was something that we did not predict and therefore we had to respond flexibly and adjust the design to accommodate participants' ideas. However, in cases where significant changes are needed perhaps these could be avoided by piloting the workshop. This would reduce the anxiety levels of the facilitator. To sum up, during the development of a learning/creative ecology unpredictable factors may alter the whole procedure in crucial ways. As a result the workshop leader needs to be agile and mentally prepared to make necessary adjustments.

## Emergence of creativity

Clearly I used my creativity to design and bring to life a workshop that I had never facilitated before. Creativity should be viewed on a holistic, whole process, scale rather than on particular parts of the process. The fact that ideas emerged and were connected through discussions and collaboration with other members of the NGO was something new for me. In other words, I was used in developing an idea by myself and then presenting and discussing it with others. On this occasion creative ideas emerged gradually with the contribution of other members on each step. As a result each designing level was subjected to criticism, trying to think of possible weaknesses and malfunctions as well as better and more functional alternatives so that each level would be completed. The collaborative gradual character of the process provided me with the opportunity to think of ideas that in other cases I would not have thought due to the ongoing interaction in each level. Also it helped me to combine an idea that was mentioned formerly by someone (perhaps three levels back) with something that was currently stated by someone else in the present level and therefore by combining two ideas which did not belong to me, I was able to develop a third one. Therefore, the main characteristic of the creativity's emergence in the present experience was the gradual, exchanging, collaborative nature of the development process.

As for participants' creativity it will be described in terms of a personal judgement, as the feedback that we asked for did not include questions on their perceptions of how they were creative. From my point of view, during the designing and processing phase students' creativity emerged not only by collaborating with each other at the level of past experiences and relative readings, hobbies and interests, but also at the level of combining and enlarging upon other fields of studies. For instance, a group of students decided to include some marketing strategies in their work, while others developed an ecological approach. Moreover, the emergence of creativity was also manifested during the implementation and presentation phase, where one group of students decided to present their work by storytelling, others by role playing and others by creating leaflets and various artifacts in order to assist their presentation.

### References

<sup>1</sup> Jackson, N. J. (2016). *Exploring Learning Ecologies*. Lulu.

<sup>2</sup> The full discussion can be accessed at: <https://plus.google.com/communities/110898703741307769041>.

<sup>3</sup> Frick, E., Tardini, S., Cantoni, L. (2013). LEGO®SERIOUS PLAY® - A state of the art of its applications in Europe. White Paper, Università della Svizzera italiana, Lugano, Switzerland. Retrieved online at: <http://bit.ly/299sAbX>. [Last access: August, 9, 2016].

<sup>4</sup> The terms *descriptive imagination*, *creative imagination* and *challenging imagination* derive from the "LEGO®SERIOUS PLAY® - A state of the art of its applications in Europe. White Paper" (Frick, Tardini & Cantoni, 2013).



**MAKING SENSE OF  
CREATIVE ECOLOGIES  
HOW THE IDEA MIGHT  
BE USED**

***Personal interpretations,  
perspectives and reflections  
on the idea of  
creative ecologies***

# Micro-Ecologies for Creativity

Jenny Willis

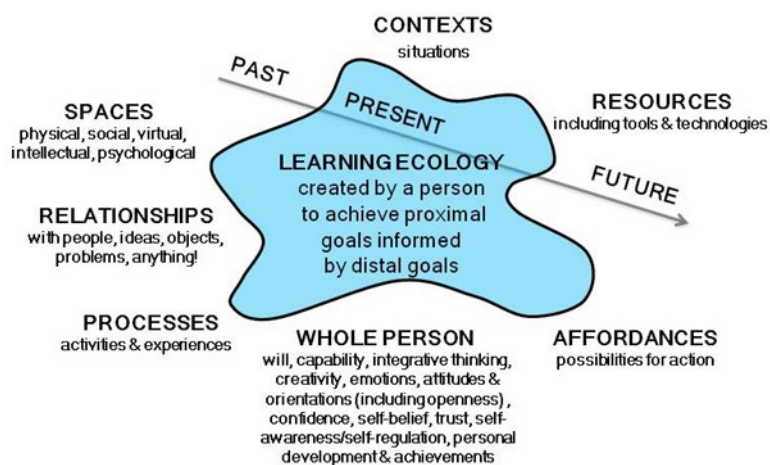
## Micro-Ecologies

Several times a week, I create a micro-ecology which can be viewed as part of ever-expanding ecologies that make up my life, and part of the lives of those involved. I refer to my creation of teaching material for the children I tutor for an hour or two a day. They range in age from 6 to 14, are mostly bi- (or pluri-) lingual, have diverse cultural backgrounds, and come from families where education is still seen as a passport to success in life. They are largely motivated and able, but a few are receiving tuition because they have learning difficulties or are struggling to keep up with their peers.

Ostensibly, I teach these children English language, comprehension and creative writing, but I see my role as an opportunity to open their minds to lifewide themes. I have written elsewhere about the conflicts this can cause with my Korean/Chinese employer's own pedagogical practice<sup>1</sup> In this article, I want to examine how my ecology fits with the framework posed at the start of the #creative conversation aimed at exploring creative ecologies (Figure 1).

The **context** for my micro-ecologies then, is small groups, sometimes individuals, participating in 1-hour teaching sessions. Sometimes they are aiming at an examination - 7+, 11+ and so on. I have no fixed syllabus to follow, but I need to ensure that they understand grammatical terminology and are able to meet the requirements of the English National Curriculum. My **proximal goal** is to improve my students' English competence; the **distal goal** is to make them more aware and developed individuals as a result of a liberal education perhaps conveying some of my beliefs and values about the world in the way I embody what it is to be a teacher.

I have already mentioned the **affordance**: I have seen this as an opportunity to engage with the children in a different way from their normal schooling, and to introduce them to ideas and topics that they may not have encountered in school.



Exploring Learning Ecologies <https://www.lulu.com/>

Figure 1 The ecological framework we are exploring<sup>2</sup>

My micro-projects involve the creation of teaching **resources**. To produce these, I rely on my experience teaching for 40 years, albeit in different institutions, different subjects, and different educational levels. This includes classroom management and my own interactive style of teaching. I draw on my extensive collection of books and artefacts, current news issues, things I have seen on TV or on the internet and, occasionally, prepare a lesson in response to a student's request. Recently, one 9 year-old asked to 'do something about animals', which resulted in discussions of Darwin, the Big Bang theory and many other topics that they had never before met. This week, following my focus on the 100 year anniversary of the start of the Somme, I have been tasked with preparing a lesson on Ann Frank (a train of thought by a statemented 11 year-old).

My resources also include my tools like my computer which I use to research, download information and media from the internet, and edit to create customised resources to support each topic. The way I find, filter, combine



and synthesise these materials to create new learning materials is an important source of creative expression in my teaching. I get ideas which I turn into artefacts as I am doing this so the products of my creativity grow through this process. I print a master copy, email a PDF version to my colleague for printing copies.

Time is an important factor: I like to be topical, so produce things freshly, and have the luxury of being retired, so am able to devote a lot of time to researching and creating the material. The **space** within which these creations are realised is both physical and intellectual: the idea of a theme is made concrete within the **context** of my study. It is then given life and particular meaning in the classroom, taken to students' homes to do follow-on homework, then back to the classroom. Intellectually, I hope to have transferred some ideas in the process that will inform each student's future. More than this I hope to transfer some of my values and beliefs about learning.

**Relationships and people** are clearly central to this process (ironic for someone who is a self-confessed isolate). Every resource is bespoke, taking conscious account of the abilities of the intended learners, the best ways of engaging them and the need to meet my employer's and parent's expectations. I have to be sensitive to cultural differences: for instance, most of my students follow a religion, from Hinduism to Islam and Christianity. If discussing evolution, I have to respect and make explicit reference to alternative explanations of how life began.

This being a small, local college, I get to know parents in a way not possible in mainstream teaching. I know them all and have a certain knowledge of their family circumstances. They are real people, not just so-and-so's father or mother. I learn about their health, family events, holidays. I find myself in situations with some of the younger children which are today highly sensitive: they want to sit close, cuddle and touch. I have to judge how to handle such moments.

Sometimes I upload my teaching resource to the TES website, as free material for other teachers to use, hence the products of my creative ecology are available to the ecologies of other teachers.

The **past** into the continuously unfolding present and potentially future line is apparent in this account, as I seek to plant a few seeds in my students' minds.

I have summarised each micro-ecology above.

## Connecting & Integrating My Micro-Ecologies

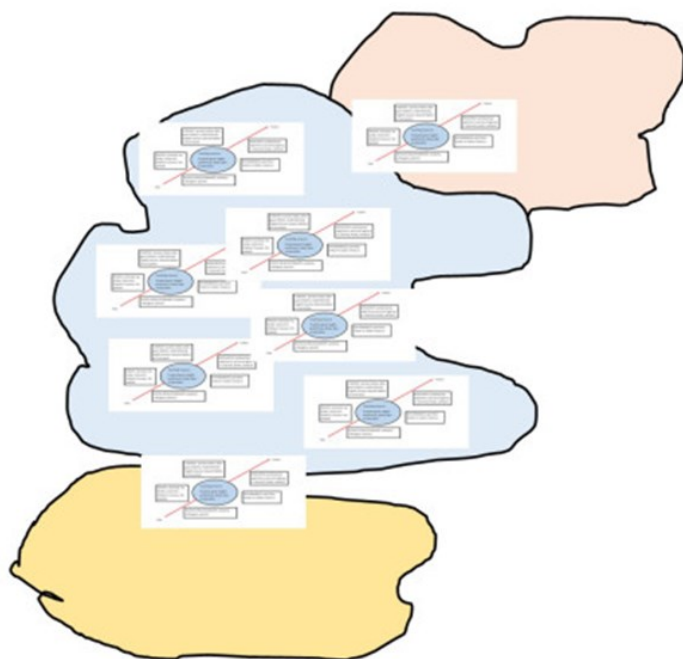
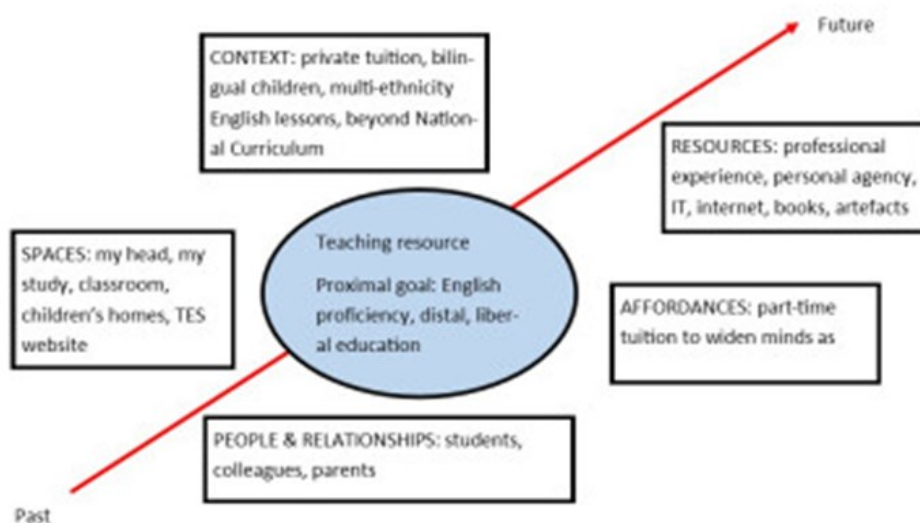
However, each micro-ecology is part of my ongoing macro-ecology of creativity, and hopefully feeds into the ecology of others. I have attempted to represent this process in the adjacent image.

### Acknowledgement

This article is a lightly modified/edited version of an original post I made in the #creativeHE conversation.

### Reference

- 1 Willis J (2016) TITLE Lifewide Magazine issue 17
- 2 Jackson, N. J. (2016) Exploring Learning Ecologies <http://www.lulu.com/home>



# Complex Ecologies and Creativity

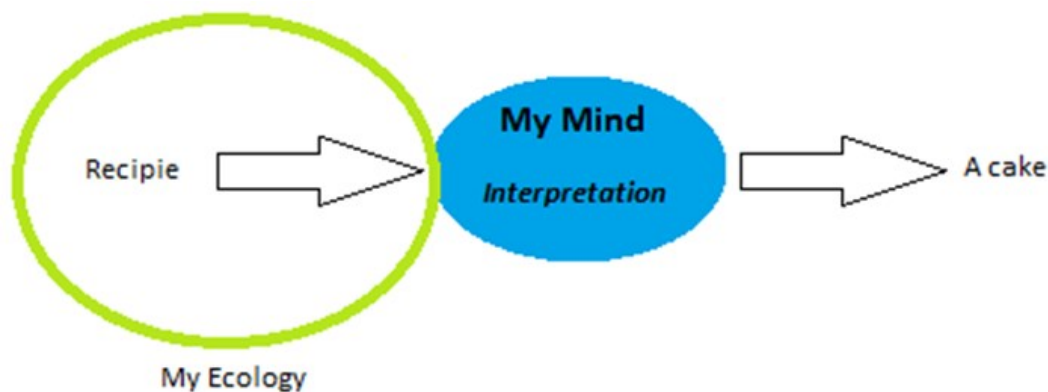
Michael Tomlinson

The #creativeHE discussions about creativity have got me thinking about how we might view creativity from the perspective of varying levels of complexity, and consider how the complexity of our ecologies has a significant impact on the complexity of our creativity.

There are many ways of viewing the creative process, however in this article I hope to provide not only my view of how we can view the creative process, but also how we view creativity in terms of varying levels of complexity, and how the complexity of the ecologies we create in order to achieve something impacts on the complexity of creativity that is associated with the achievement.

I view creativity as the creation of something new to the creator. That can be a new way of looking at the world, a new idea, a new cake, a new book or even a new argument about why we should have stayed in the EU (a personal gripe, but let's not go there!!!). If creativity is simply creating something new then it cannot be more or less creative, creativity is an absolute. I want to consider creativity from the perspective of more or less complex creative outputs!

Let's say I want to make a cake for a friend, I've not made a cake before so I start by trying to get some ideas for what sort of cake I might make by looking at some pictures of cakes on-line. I decide on a Victoria sponge cake, find out what ingredients I need from the recipe, buy them, and then using my oven I follow the instructions as best I can, perhaps improvising where I didn't have the exact ingredients and decorating it in an interesting and original way. The cake I make is something that is new to me, sure, so I've been creative up to a point, but it isn't a complex creation, I've used minimal resources, followed a set of instructions and there's not been a great deal of complex thought or action, this would be a simple creative output from a simple, fairly linear and predictable process. If I followed the same path again I could be confident of achieving a similar result.



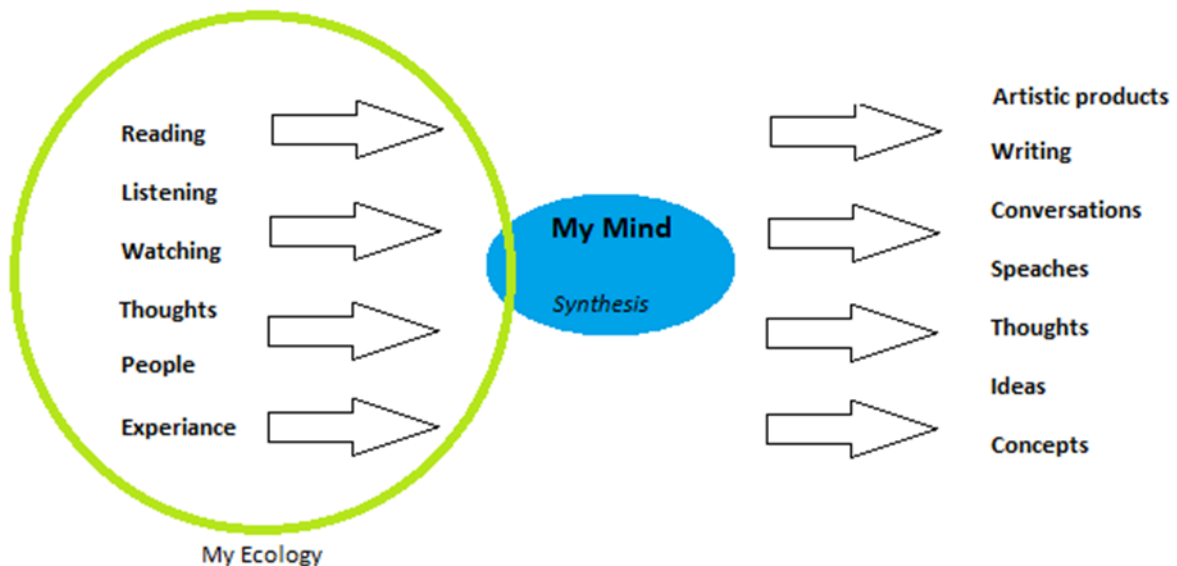
*A simplified model of a 'simple' ecology with a simple creative output*

Conversely, let's say I've read 1984 by George Orwell, and this gets me thinking about the concepts of political freedom, freedom of the press and the political environment in post WWII Europe. In this chain of thought I review sources, including YouTube, I talk to people I engage on a wider scale and, in time, come up with a new, nuanced way of viewing the importance of free press and political engagement. I see this as a complex creative output, I have synthesised multiple sources, thought about and grappled with complex ideas, to produce a complex mental product that is my change in understanding.

It seems to be there is a direct correlation between the complexity of our ecology for learning and achieving and the complexity of our creative products, something I feel is borne out in historical examples. Look at the Romantics of the early 1800s, or the fact that so many scientific breakthroughs come from specific 'schools'. The history of science, it has been said, is not the history of individuals, but the history of collectives. Similarly many of the great renaissance artists, considered some of the most traditionally creative people to have lived, worked in the same era amongst one another, and today Silicon Valley forms the hub for so many creative individuals, indeed there are countless examples one could name.

Perhaps we should see complex ecologies for learning and achieving something as the means to enable us to produce complex creative outputs. Complexity may be reflected in such things as the scale and scope of our learning ecology, the amount and level of knowledge and skill we need to develop in order to achieve something, the number and quality of relationships we need to form, the number of people who are directly involved who influence and help co-create the ecology, the time scale over which the ecology is developed and its connectivity to other learning ecologies, the resources that we need and the tools we use to achieve our goal.

Understanding that complex creativity is, at least in part, a product of a complex ecology, provides a new perspective on how educators can inspire and enable students to be creative by encouraging them to develop their own complex ecologies to learn and achieve something they value.



*A simplified model of a 'complex' creative ecology with a complex creative output*

This is of course not to say that all minds are equal at synthesising complexly, and nor is it to say all complex creative outputs require complex inputs. Famously, Albert Einstein postulated  $E = mc^2$ , perhaps the most important physics law known to man, with only the sparsest of sources in the original paper, and to all observers he simply deduced it from the simplest of data. It seems to me that a person's creativity becomes more understandable if we recognise it as the product of thinking with complexity - of seeing patterns and new meanings, combining thoughts and ideas in new ways and inventing new syntheses. Does this make sense to you?

This article is based on my post: Complex Ecologies and Creativity.

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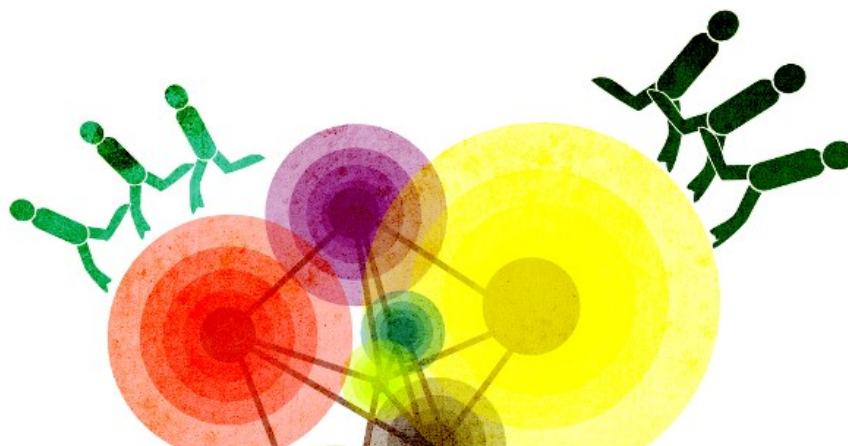


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# A Complexity Perspective on Ecologies for Learning, Achieving and Creating

Norman Jackson

I learnt many things from my involvement with the #creativeHE conversation but in this article I want to build on Michael Tomlinson's idea of linking creativity and complexity<sup>1</sup>.

*'If creativity is simply creating something new then it cannot be more or less creative, creativity is an absolute, instead I wish to talk about more and less complex creative outputs!...It seems to be there is a direct correlation between the complexity of our ecology and the complexity of our creative products.'*

The idea is implicit in the narratives of learning ecologies I offered in my book<sup>2</sup> but the idea warrants further exploration.

## Complexity of creative people

We might begin by recognising that people themselves embody different levels of complexity in their personalities, behaviours, cognitive and imaginary abilities and psychologies. The social psychologist Mihaly Csikszentmihalyi, author of *Creativity: Flow and the Psychology of Discovery and Invention*, studied the lives of 91 eminent creators, what he terms "big C" creatives who changed their domains, in search of what they might have in common. He concluded that these people are more complex than most people.

*'I have devoted 30 years of research to how creative people live and work, to make more understandable the mysterious process by which they come up with new ideas and new things. Creative individuals are remarkable for their ability to adapt to almost any situation and to make do with whatever is at hand to reach their goals. If I had to express in one word what makes their personalities different from others, it's complexity. They show tendencies of thought and action that in most people are segregated. They contain contradictory extremes; instead of being an "individual," each of them is a "multitude."'*<sup>3</sup>

Csikszentmihalyi believes that we all can become more creative by consciously becoming more complex<sup>4</sup>. By "complexity" he meant having personalities of "contradictory extremes," such as being both extremely smart and naïve, or traditional and rebellious, or objective and passionate. There is little middle ground. Creatively complex people are nearly impossible to "peg" as this or that. Their capacity to tap into a fuller range of what life has to offer is what allows them a broader response to life's problems and questions, whether practical or artistic. This is in line with findings that openness to experience is an important part of creativity.

## Complexity in situations, problems and opportunities

The human condition is to try to understand situations in order to make good decisions about how to act (or not to act). Some situations are easy to comprehend: they are familiar and we have dealt with them or something like them before and we are confident that we know what to do. Others are more difficult to understand and some are impossible to understand until we have engaged in them.

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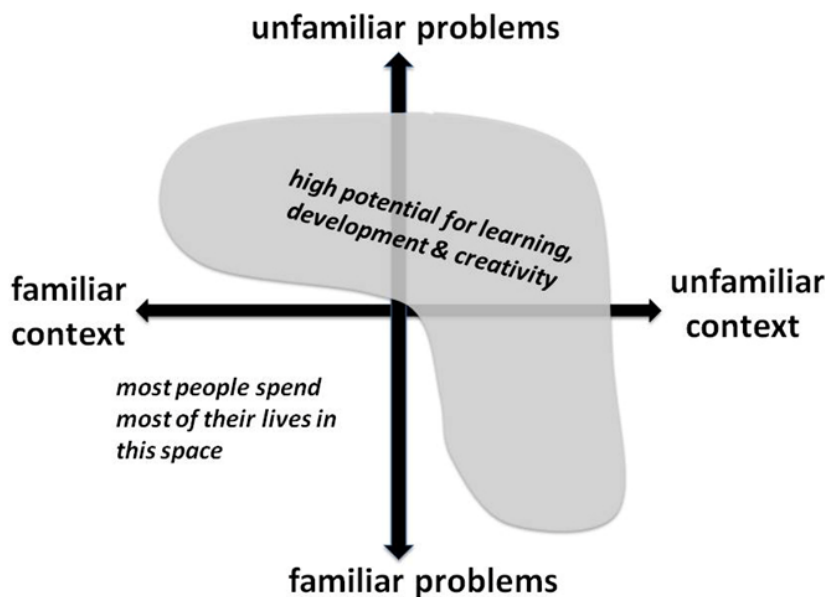
### Classical Complexity Theory

In complexity theory, we study how much time or memory space *any* algorithm needs to solve instances of size  $n$  of a decision or optimization problem. Results are obtained either for the hardest of all instances of a given size (worst-case complexity) or for the average running time or memory usage of an algorithm, where the average is taken over all instances of size  $n$ . Worst-case complexity is the more extensively developed branch of complexity theory, but even in this branch the really big questions remain open (e.g., Is  $P = NP$ ?). A common feature of all branches of *classical* complexity theory is that the algorithm is allowed to make use of the *complete* information about the problem instance.

## Complexity in unfamiliarity

Situations can be categorised according to whether the context is familiar or unfamiliar and whether the problem (challenge or opportunity) is familiar or unfamiliar. John Stevenson<sup>5</sup> developed a simple 2x2 matrix (Figure 1) to explain how we utilise our capability (including our creativity) within these conceptual spaces. Unfamiliarity, is one aspect of complexity.

**Figure 1** Stephenson's conceptual framework for imagining the challenge and affordances of different conceptual spaces.



Much of our life is spent in familiar situations where we don't have to pay too much attention to what we are doing and we can reproduce our responses without really thinking deeply about our actions. Stephenson considered this space to be one in which we practised dependent capability and he related this to traditional teaching approaches adopted in higher education. We can, if we choose, adopt and perform the routines we have learnt in these situations with little or no need to invent. Consequently, our ecologies for learning tend to be stable with little variation. Our personal creativity in this domain is not focused on mastering new contexts and difficult problems, rather the challenge is to use our creativity to transform the

ordinary into something which has extraordinary meaning for ourselves and possibly others. Artists and photographers are particularly good at doing this.

Moving to the other domains we can appreciate that if we are confronted with a problem, challenge or opportunity, or we enter a context (including a change of culture) that is unfamiliar, we have to develop new contextual understandings and / or invent and try out new practices and ways of behaving. Through this process we are creating new understandings and new ways of performing or producing. These are the situations in which we develop (invent) new knowledge and capability. The challenges they present also demand or stimulate our creativity.

### Levels of complexity

Michael Tomlinson suggests that any creative outcome is product of people involving themselves in different levels of complexity. We might speculate that the increasing complexity of situations will demand increasingly complex learning ecologies to deal with them. We might also anticipate that highly complex situations and problems cannot be resolved by individuals but require teams of people working together, with individuals offering different perspectives, ideas and skills over considerable periods of time.



We might visualise different levels of complexity in social situations using the Cynefin framework (Figure 2) developed by Dave Snowden<sup>6,7</sup> and described by Callaghan<sup>8</sup>. The framework was originally developed to aid understanding of situations and how to deal with them in organisations, but the concept can also be used to evaluate personal situations. There are four domains within the framework.

**Figure 2** The Cynefin tool to facilitate thinking about situations of differing complexity <sup>6,7, 8</sup>

In the *simple* domain things have a simple cause and effect - you do X and you are very likely to get Y. The environment is familiar and understood. You will probably have had many similar experiences that can be directly related to the situation. You know that 'what you do' is likely to have a particular result. And if you do the same thing in a similar situation the same result will happen. At the other extreme is the *chaotic* domain where there is no perceivable relationship between cause and effect. If this situation happens in your life, you feel totally out of control and overwhelmed. In these situations your natural response is to act, sense what happens and then act again until you get yourself into a more understandable and comfortable situation. Between these two extremes there are two other types of situation.



*Complicated* situations are not single events but involve a stream of interconnected situations (many of which may be simple) linked to achieving a goal (like solving a difficult problem or bringing about a significant innovation or corporate performance). They can be difficult to understand: their cause-and-effect relationships might not be obvious but you have to put some effort into working out the relationships by gathering information about the situation and analysing it to see the patterns and look for possible explanations of what is happening. Engaging in these sorts of challenges is the way you become more expert in achieving difficult things and a lot of professional work is like this.

*Complex* situations are the most difficult to understand. They are not single events but involve multiple streams of variably connected situations linked to achieving a significant change in the pattern of beliefs and behaviours (culture) in a society or organisation. In such situations the cause-and-effect relationships are so intertwined that things only make sense in hindsight and sometimes well after the events have taken place. In the complex space, it's all about the inter-connectivity of people and their evolving behaviours and patterns of participation that are being encouraged or nurtured through the actions of key agents. The results of action will be unique to the particular situation and cannot be directly repeated. In these situations relationships are not straightforward and things are unpredictable in detail. People involved may not know the cause of the change that they have been involved in or ascribe the source of change to something that is quite removed from the trigger for change. The sort of factors being dealt with in the complex space are things like culture, trust and leadership, and the way you make progress in understanding what is happening is to sense the patterns of change and respond accordingly.

## Levels of complexity in ecologies for learning, achieving and creating

In developing capability for dealing effectively with situations we are developing the ability to comprehend and appraise situations, and perform appropriately and effectively in situations of different levels of complexity. The idea of learning ecologies has been proposed to help explain the relationships of people to their environment / contexts / resources, their problems and perceived affordances and the pattern of interactions and outcomes, as people pursue learning and achievement goals<sup>2</sup>. When considering the complexity of an ecology for learning, achieving and creating perhaps we can make use of the Cynefin tool to evaluate the situations, problems and opportunities our ecologies are engaging with and in this way also gain a sense of the complexity of the outcomes, including creative outcomes, from the process. I will illustrate this using a selection of personal narratives from my book<sup>2</sup>.

### *Simple learning ecologies for simple situations, problems and achievements*

In the simple conceptual space - things have a simple cause and effect - you do X and you are very likely to get Y. Nadia's story reflects this level of complexity.



we have a music block and sometimes we go in there at lunchtime because it's warm and no teachers kick you out especially if you've got someone actually playing an instrument. One of my friends, Ellie she's amazing at playing the piano. She is grade seven. She was playing the piano. I was sitting there feeling slightly bored, because I couldn't play the piano and even if I could she was hogging it. So I thought, "Well I might as well do something with this time," and so I went and I sat next to her, and when she finished the piece I was like, "Can you teach me something on the piano?" Just because I wanted to be able to play the piano just so I could come home [and play it], because we've got a piano just sitting there. Even if I just sat there and played a scale over and over again, at least I had something to play.....because I had done the flute before I know what scales are. So she taught me the C major scale, which is just going from C to C. So yes I learned that and then I came home and I wasn't really in the mood to do any [home]work...I came into the sitting room and just sat down at the piano and I started practicing the scale. I saw my sister's [piano] book just sitting there on its own, looking all lonely. So I was like, "Well if that's got any instructions, I might as well see if I can do anything else because I know where C is now on the keyboard. Even if I just press that over and over again, maybe there is a song for that." I read the book and I just started teaching myself how to play the piano, just for fun, which is probably the weirdest thing I've ever done, especially for fun.

Nadia's personal learning project grew out of the circumstances of her life. It wasn't planned, and she didn't have a distal goal. Her proximal goal was simply to learn a tune, which emerged through social interaction with her friend when she saw affordance in the situation and then realised the opportunity through her actions. Her personal learning ecology comprises the *contexts* of school and home, the material *resources* of two piano's, one at school and one at home, a book of music at home, a significant *relationship* with her friend who provided the inspiration and essential knowledge/skill resource (her expertise). Learning occurred when Nadia recognised the potential in the situation to achieve something worthwhile and she had the will to act on this potential by creating a *process* to make use of the resources that were readily to hand. She set aside the time to practice and master the musical notation and made use of the book of piano music that had been sitting on the piano ever since her sister gave up playing the piano.



Nadia's creative achievement was to play a simple tune which she had not played before. Her learning ecology was simple as she might have predicted at the start that if she did the things she did she would be able to play a tune. In a similar way to Michael's story of making a cake, in making a tune she was following a recipe - she did not invent the tune for herself. She might have persisted and created a more complicated and long lived learning ecology but she did not continue to learn the piano - she lacked the distal goal that would have given her the will to persist and develop herself for further creative achievement.

### *Complicated learning ecologies for complicated situations, problems & achievements*

In the *Complicated* conceptual space situations are not single events but involve a stream of interconnected situations (many of which may be simple) linked to achieving a goal (like solving a difficult problem or as in the next example, learning a difficult dance). In this story of a creative ecology, Paul, who was interested in Morris dancing (a form of English folk dance) wanted to develop his expertise and master a particular dance which he did not know.

I have taken it upon myself to develop an expert understanding of the Morris dancing and related folk music tradition....I've committed myself to this journey and for me it's about getting to mastery, not the rate in which I get to mastery. I purposefully put myself in positions to learn more...I have been focused on learning a jig called "I'll go and enlist for a sailor". Some of the steps were eluding me. Over this last weekend I attended the Marlboro Morris Ale and was fortunate enough to meet John Dexter, who could teach me the jig. I was shown the steps in detail by a master of the dance, much of the mystery of the steps were demonstrated, they are no longer a mystery. All my reading of the dance, and watching videos had prepared me well for this master / apprentice type session. I was ready to learn and the correct situation presented itself as I was on my learning journey, often it is important to hold the faith that the right learning is available at the right time. The Morris Ale became a part of my learning ecology.



Paul had a distal goal - to develop his knowledge and expertise in a field that he was interested in. He also set himself a proximal goal to 'master' a particular dance. Paul makes the point that in order to learn you have to put yourself into an environment (*context and situations*) in which you are more likely to find the *resources* and *opportunities* you need to learn. He saw the *affordance* for developing himself in the Morris dancing event. By reading about the dance and watching videos (*resources*) he prepared himself so that he was ready to learn. His most important opportunity for learning came about when he put himself into a situation where Morris dancers came

together to perform and share their tradition. By building a *new relationship* with an expert he was able to gain access to the knowledge and help he needed to enable him to complete his learning project and his creative achievement was to dance this particular dance.

This example illustrates the importance in personal learning ecologies of particular spaces, places and times (contexts) in which specific social practices occur and the resources and relationships for learning are more likely to be available. It also illustrates the importance of creating a learning process that will increase the chance of accessing resources and relationships necessary for learning. His learning ecology was complicated because it involved connecting and integrating the learning from a number of situations and resources over a period of time. Although he might have been determined to master the particular dance he could not have predicted exactly how it would be achieved. It was only afterward that he could reconstruct his learning trajectory and appreciate his creative outcome - being able to perform a dance that he had not invented but was able to replicate for himself with others.

#### *Complex learning ecologies for complex situations, problems & achievements*

A few projects in our life that extend over long time scales are likely to be visualised, formed and enacted in the complex conceptual domain. They will contain ecologies that are in themselves dealing with complicated situations but overall, the project and packages of ecologies are best envisaged as in the complex domain.

Complex ecologies to tackle complex problems and produce complex achievements necessarily involve complex inputs and relationships. Complexity may be reflected in such things as the scale and scope of our learning ecology, the amount and level of knowledge and skill we need to develop the number and quality of relationships we need to form, the number of people who are directly involved who influence and co-create the ecology, the long time scale over which the ecology is developed and its connectivity to other learning ecologies, the scale and nature of resources that are need to support it.

*Complex* situations and problems are the most difficult to understand and the most difficult to tackle. They are not single events but involve multiple streams of variably connected situations linked to achieving significant goals over an extended time scale. Tackling complexity involves daisy chains of ecologies through which different dimensions of problems are explored and progressively understood.

Complex change will subsume all other types of change within it. Cause-and-effect relationships are difficult to recognise and things are unpredictable in detail. Often the outcomes only make sense in hindsight and sometimes well after the events have taken place. The results of action will be unique to the particular situation and cannot be directly repeated. Complex learning ecologies will involve more people and relationships than simple and complicated ecologies.

In my final background paper for #creativeHE<sup>9</sup> I describe the learning ecology through which I developed the idea of learning ecologies to the point where I made these ideas explicit - through writing and illustration in a book. Although there were a sequence of learning ecologies they were connected by a common purpose - to explore the idea and development new knowledge and when viewed as a whole it comprised a complex learning ecology out of which emerged a creative product - the book<sup>2</sup>. Bringing the book into existence was consistent with the concepts of creativity proposed by Dellas and Gaier<sup>10</sup> and Rogers<sup>11</sup>

#### **Concepts of creativity**

Creativity is the desire and ability to use imagination, insight, intellect, feeling and emotion to move an idea from one state to an alternative, previously unexplored state (Dellas and Gaier 1970)

[creativity is] the emergence in action of a novel relational product growing out of the uniqueness of the individual on the one hand, and the materials, events, people, or circumstances of his life (Rogers 1961).

## Combining the complexity of individuals with the complexity of situations

Every organism exists in an environment: the organism shapes its environment and the environment shapes the organism. So it helps to think of an indivisible totality of 'organism plus environment' - best seen as an ongoing process of growth and development<sup>12</sup>. It does not make sense to me to talk about the environment in which we are learning and creating without reference to ourselves as the organism that is perceiving and interacting with the environment we inhabit in order to learn, develop, perform and achieve. The philosopher Gregory Bateson<sup>13</sup> talks about our need to think with ecological complexity to solve the world's complex problems. I think we need to apply the same type of ecological thinking to the way we learn and develop in order to understand how we create.

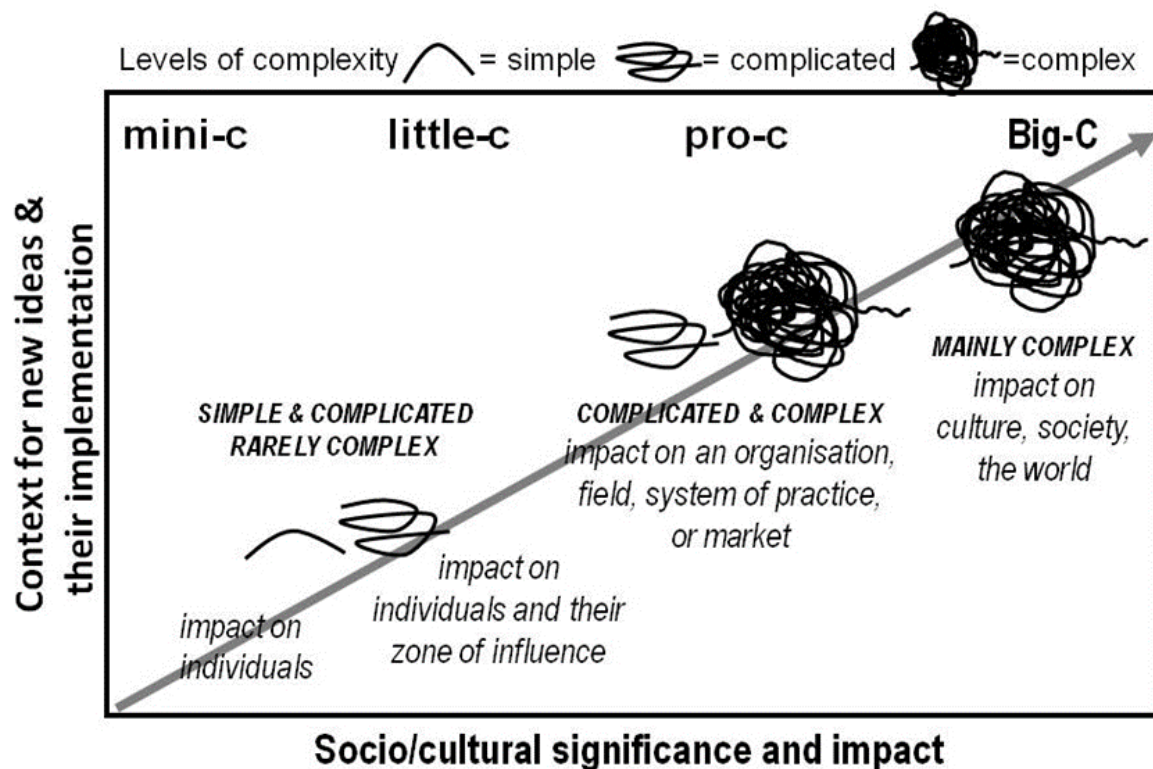
Applying the idea of ecology to learning, personal development and achievement, including our creative achievements, is an attempt to view a person, their purposes, ambitions, goals, interests, needs and circumstances, and their unique set of personal qualities, capabilities, beliefs and values, and their relationships with the social, physical and virtual world they inhabit, as inseparable and interdependent. It is not just about an environment, or about us as beings with capacity and agency to learn. It's about us sensing, perceiving, inhabiting and performing in our environment and responding to whatever whenever it emerges.

The ideas outlined in this article suggest that we cannot separate the complexity of the person from the complexity of the situations the person is inhabiting. Perhaps creativity is no more than an inevitable consequence of our unique complexity interacting with the complexity of our unique environment and circumstances.

## Combining the complexity of situations/problems and affordances with Kaufman and Beghetto's 4C model of creativity

Some people believe that they are just not creative: a belief that stems from comparing themselves with people they perceive as being highly creative (ie 'compared to her/him I am not very creative'). An individual's creative development will be hindered unless they believe that they have potential to be creative in their own ways and circumstances. One approach to explaining that we all have potential to be creative is to use Kaufman and Beghetto's model of creativity<sup>14</sup> to explain the nature, scope and influence of an individual's creativity.

*Figure 3 The 4C model of creativity proposed by Kaufman and Beghetto<sup>14</sup> combined with Snowden's<sup>6</sup> complexity perspective*





Kaufman and Beghetto suggest that human creativity can be categorised into 'Big-C' creativity that brings about significant change in a domain; 'pro-c' creativity associated with the creative acts of experts or people who have mastered a field, including but not only people involved in professional activity; 'little-c' creativity - the everyday creative acts of individuals who are not particularly expert in a situation and 'mini-c' the novel and personally meaningful interpretation of experiences, actions and events made by individuals. Central to the definition of mini-c creativity is the dynamic, interpretative process of constructing personal knowledge and understanding within a particular socio-cultural context. Because all creativity must involve new thoughts and changes in understanding it must also be present in little-c, pro-c and Big-C creations.

Both mini-c and little-c forms of creativity are relevant to higher education learning and curriculum designs, teaching and learning strategies could usefully encourage and facilitate these. One might speculate that participation in these forms of creativity are pre-requisite for pro-c and Big-C creativity in later life: if we want creative professionals then we should be encouraging our students to be creative. It is however important to note that 'everyday creativity can extend from mini-c to little-c through pro-c. It is only Big-C that remains *eminent* creativity (ibid:6) beyond the reach of most of us. From an educational perspective it might be reasoned that by encouraging and empowering students to use, develop and make claims for mini-c and little-c forms of creativity, we are better preparing them not only for using these forms of creativity in later life but for engaging in more expert-based forms of creativity that emerges through sustained engagement with a particular domain or field of activity.

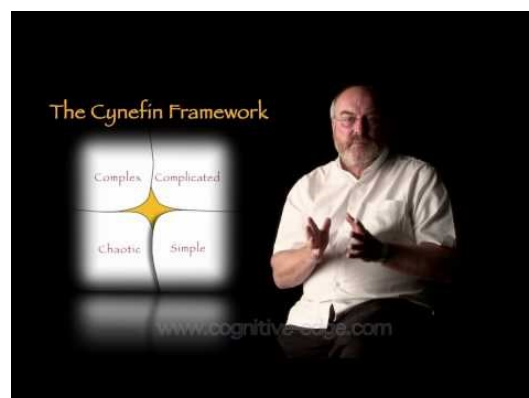
The synthesis in Figure 3 attempts to integrate a complexity perspective into the 4C model of creativity. We might speculate that little-c creativity involves relatively simple and complicated situations and problems pro-c creativity involves complicated and complex situations and Big-C creativity would be mainly concerned with situations and problems that are complex but would also subsume simple and complicated situations within complexity.

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## 'Integrating #creativeHE into My Creative Learning Ecology'

Teryl Cartwright

I joined the week long #creativeHE social learning project on Creative Learning Ecologies to temporarily disconnect from my current supporting structures and theories of creative thinking. I was worried that my three year involvement with the graduate Critical and Creative Thinking community at UMass Boston might soon draw me into "group think" routines, no matter how creative my cohort. I received an email invitation from Norman Jackson and Chrissi Nerantz at the exact time I was looking for another group to explore ideas of creativity. I chose to take part in the #creativeHE community to practice "unlearning" my own creative processes to test whether this would make me more creative. Although I didn't isolate myself from my collegiate friends completely, it was serendipitous that I accidentally signed up with my work email to create an implicit barrier.

To me, other past MOOCs have resembled deserts after a rainstorm. There are the first contributors that "bloom quickly" like most online courses, but MOOCs wither and lose "life" unless new ideas are introduced or a second wave of lurkers contributes to the conversation. This MOOC had some of these expected characteristics and so much more.

The participants created a very active and sustained "life" for the MOOC's week-long cycle which I attribute to an undergirding of emotional and experiential connections. In studying a creative learning ecology, the group actually formed one. Due to the complexity and quality of the comment threads, several posts elicited double digit responses. Responders even circled back to continue adding to the quantity. Almost every post received more than one comment and the authorship was generally spread out among the participants. While I wouldn't name these comments below each post "roots," they were nurturing and didn't stop "growing" in the second half of the MOOC. Looking back at the interactions and relationships, I feel the participants equally shared their responsibility for the success of the overall conversation and group learning through these displays of generosity and trust.

As a newcomer, the first assignment was the most uncomfortable. I had to share what I had done recently that I found creative. I wasn't alone in the struggle though as others shared their insecurities. One of the best facilitative comments that encouraged my risk taking in the course was given to another participant (right).

Because I didn't feel some of my work experiences would be as helpful to the group, I shared my puzzle making story as my creative endeavor. I had recently developed a Schrodinger crossword puzzle (one set of clues for two completely different crossword puzzles) in order to study problem making strategies and the frames of reference needed to "solve" creating puzzles. The duality in thinking up a two-in-one puzzle was related to my hope for developing two equally authentic and useful personal theories of creativity. Bilingualism and multiple perspectives enhance creativity so I want to explore if bi-creativity (being fluent in two 'creativity languages') increases creativity even more dramatically.

Although I chose to disengage from my CCT group, my former advisor Peter Taylor and his work on critical thinking as "holding alternatives in tension with each other" especially influenced my dualistic ideas for creativity. While I worked through what a creative ecology looked and felt like, "unlearning" also came in part from another mentor, Jeremy Szteiter, who had offered the idea of leaping to a new area that isn't connected to one's prior knowledge base. This leap can be a reflective practice, i.e. doing an intentional act to observe and analyze your experience for continuous self-learning. Taking the MOOC was the first leap I made.

*"Perhaps the problem is not so much when/ how am I creative but what story am I willing to disclose that others would find interesting, useful or significant. All too often the everyday small acts of creativity go unnoticed or are not categorised as being creative. On top of this we have the fear that perhaps our story will not seem creative to others as we all hold different perceptions of what being creative means."*  
Norman Jackson July 1

Sharing a creative product in this MOOC implied that we already were creative. It also assumed sharing a past creative act with an unknown group of participants would be useful for our current creative learning study. Yet as part of this newly emerging ecosystem I felt the fear and freedom of memorylessness. The definition of the Markov property states past events do not predict the future outcome of an event. This, for me, meant there was no guarantee I would be creative in this forum. While there might be some self-fulfilling prophecy in judging my own creativity, my new group's perceptions would impact my evaluation.

Another participant teaching creativity to business administrators talked about giving up some of his past too:

*"As far as my creativity is concerned, I had to form a challenging framework in order [for] their creativity to flourish. In order to do so, my experiences and the prior knowledge of the specific context proved to be inadequate and needed to be supplemented." Nikos Mouratoglou speaking of his Lego Serious Play workshop for the First Assignment, July 1*

To take the next leap in my thinking, I brought together items that were never part of my original schema for creativity. Starting with the smaller scale of an ecosystem, I played with the idea of juggling internal and external factors while creativity comes in waves that move the individual even when trying to stay still.

After I had tackled the personal element, I still had to see how my individual piece would fit into the interconnected and changing environment of others. Jennifer Willis had shared her story of making a memory book for her father's 90<sup>th</sup> birthday and her reflections inspired some of my ideas (right).

Some of her thinking corresponded with my image of the integrations of individual and collaborative creativity that develop to mutually benefit each other. I wondered if this empathy also explained some of the deeper connections being made in this online community. Perhaps some members gave up the opportunity to post their own creative expressions to facilitate others through their comments and questions, fostering a symbiotic collective to enhance everyone's creative life.

This ideal of voluntary interdependence and shared space became key features in my creative ecological system. I chose to model my picture after an intertidal habitat. It demonstrates responsiveness to varying conditions and allows many occupants to inhabit different levels of creative thinking. I suggested that Big "C" and little "c" creativity could be renamed "High C" and "low c" so that the height of the waves of creativity affect varying levels of the system. Tying "High C" and "low c" to music emphasized all "c"s were necessary for the harmony of the whole. Building this ecological model to be appreciative of every niche of creativity expressed some of what I saw as the group's larger vision for social creativity.

*"Every stage of the creative process required decisions: which events? Who to include? Had I unintentionally omitted someone, who might be upset? This decision stage called for sensitivity to the feelings of others and forced me to confront some of my own values..."*  
*"So, I pose another question: who should creation be for? And another: does the quality of the creative process have to be greater if the outcome is for public consumption? Jennifer Willis July 1 and 2 respectively*

One of the other participants summed up the need for creativity in learning by stating,

*"In a sense I think that Creativity should not be a specific part of any curriculum. As Numeracy is currently to the sciences, or Literacy is currently to the humanities so should Creativity be TO ALL SUBJECTS. As everyone is creative (I believe), Creativity should be the very air that we breathe... Simon Rae July 7*

Moving forward from this empowering experience, I have some interestingly future paths. To test my progress unlearning my old habits of creative thinking, I am retaking a CCT Design for Living Complexities course. I originally completed this in a small group Collaboration Exploration and now participate in its MOOC so I can use qualitative analysis to compare similarities and differences within assignments that are two years apart.

I also interviewed Carol Zaru, an Arabic language instructor at McDaniel College, to discuss how to facilitate learning when no initial knowledge base exists to connect concepts. Her insights into teaching confidence and excitement complemented what I had already integrated into my learning from this MOOC. The benefit is that I have already practiced developing and now connecting this new learning.

Creativity outside the arts setting grows quite well in an unfolding and mutual ecological world; in fact, it seems





No no... I've got  
all the right words —  
but not necessarily in the  
right places...  
Mind you... I'm not sure about  
43 across.

@simonrae

with thanks to  
Morecambe and Wise

and excitement complemented what I had already integrated into my learning from this MOOC. The benefit is that I have already practiced developing and now connecting this new learning.

Creativity outside the arts setting grows quite well in an unfolding and mutual ecological world; in fact, it seems to thrive in a science-inspired system. I appreciate how I was engaged in collaborative learning processes within a new community of interconnected researchers. I am also indebted to the welcoming conversations and inquiries. Our group's overlapping ecologies have expanded my understanding of the nature of creativity and nurtured my pursuit to discover more relationships. I had expected it to be easy to disconnect from a mere week-long MOOC, but what I have found is that some great connections with the people and the topics have taken root and I am grateful for the space to grow.

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Picture of Zipf's Law Using NBA Twitter Followers

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Picture of Intertidal Zone from the website of the Capital Region District in B.C. Canada

# Personal Notes on a Creative Ecology

Simon Rae



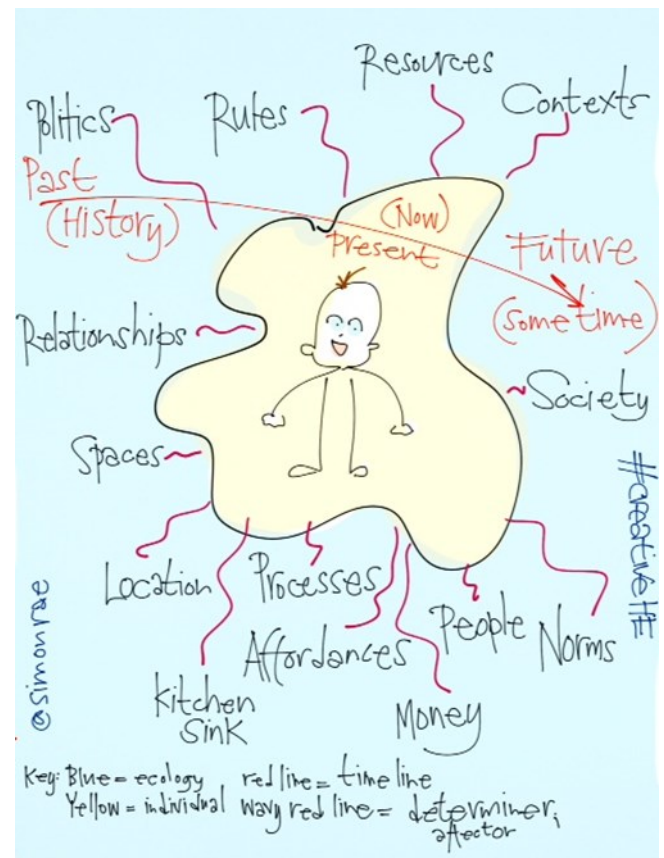
*Simon retired after a lifetime of working in education including many years as a Lecturer in Professional Development at the Open University. We are fortunate to have him as the illustrator of our magazine.*

Throughout our #creativeHE conversation *affordance* seemed to be a key idea in the creative ecology concept so here are some personal notes and reflections on the affordances in my own creative ecologies - shown in **bold**.

I think that we are all born with the potential to be creative. We are all born into different circumstances and for a few years we develop naturally - learning a HUGE amount as we go: language, science, maths, art, doing and making, but especially language, communication and relationships. Learning is a creative act, taking stuff in, making sense of it and acting on it.

Babies, pre-school and primary age children play and learn their way through the basics of gravity, number theory, fluid dynamics, social relationships and language.

But many seem to have creativity schooled out of them as they grow up - too much creativity is divisive, it's dangerous, it's anti-social, it pushes against barriers, it breaks the rules, and it upsets the status-quo. But people are naturally creative. Cooking, gardening, knitting, driving safely, doodling, writing emails, managing the office (or family), learning, teaching, interacting with people - these are all creative acts. Unfortunately, when people get put on the spot and are asked to talk about their creativity they often tie up. Almost as if they are ashamed of it. Is it because creativity is ultimately about doing something different and people don't want to appear different? Is it because creativity is an expression of individuality and standing out in a crowd can be difficult for some people to cope with? We have to learn to own, take responsibility for and be comfortable with our creativity.



Part of a creative ecology should afford **safety** and **acceptance**.

'CREATIVITY TAKES **COURAGE**' said Henri Matisse. But it's not only courage on the part of the individual. It's also courage on the part of the group, institution or society that the person belongs to because creativity means asking questions and questions sometimes means challenging the status quo, changing what exists and bringing a new order into existence. The group, institution or society have to be brave enough to allow creativity to happen.

Everyone has creative potential. How we teach it (or develop it, or encourage it, or afford it) depends on lots of things - some of which we have any say in, some of which are controlled or regulated by others.

### A bit about me...

I've always had a pencil in my hand, scribbling pictures and doodling and from childhood have identified with a favourite uncle who painted fabulous pictures in oils - I've been expected to be creative.

Home, School and Art College provided me with an ultimately creative ecology: **tools, facilities, tutoring, space, encouragement, and collaboration**—everything except (unfortunately) **confidence, self-awareness and self-determination**.

I've retired to a comfortable Leisure/Amateur creative ecology in which acceptance plays a large part. I still have wildly creative flights of fancy but I've accepted that I need to curtail my output to match the affordances that I'm offered or can find.

I sketch whenever I can (although restricted by embarrassment - I don't do it obviously in public) and I'm quite happy to publish cartoons via Twitter and Creative Academic magazine which offers another affordance.

**My creative ecology** provides acceptance of my limitations, a **sense of reality**, I have tempered my creativity to suit my situation and constraints.

### Affordances for a creative ecology...

A useful affordance in a creative ecology would be **archiving facilities**. Keep everything! One never knows when one can make use of an old idea!

Another useful affordance would provide **security**.

The creative ecology should provide the **luck** and the **helping hand** that many seem to need.

An affordance for '**Coping with disappointment**' should also be included in the creative ecology.

A professional creative ecology will, in part, be afforded by employers providing facilities, space, **creative environment** and **money** etc. Motivation comes from within, to do a good job, and partly from getting paid to do it.

A creative ecology is nurtured by the cultures we live and work in. By the relationships we have with colleagues and friends who provide encouragement rather than discouragement and feedback that does not dismiss our is overly critical of our efforts to be creative.

Everybody needs a personal Leisure/Amateur creative ecology to enable them to be creative. Remember, cooking, gardening, knitting, driving safely, doodling, writing emails, managing the family, interacting with people - are all creative acts. Motivation comes from within and will afford different creative outputs - from doing the best for your children to repairing a broken fence to growing flowers in the allotment.

The affordances for **perseverance, practice and permission** are important.

Is there a technique for creating the best creative ecology? When we teach creativity should we really be teaching how to build the best creative ecology we can in a particular situation? And does such an ecology require discipline and mastery before it can be created? I am of the generation that learnt their multiplication tables and am quite happy playing with numbers and maths and stats because I don't have to think what 7x8 is, I just know it's 56. Any creativity in my stats work is based on a lot of background practice and work. Similarly I can draw confidently because the years that I have spent scribbling have given me a measure of pencil control. Part of the problem with teaching students to be creative in any context is that they really do need to do a lot of practice of the basics.

### A final comment...

I always think that anyone who can write with a pen or pencil can also draw (and thus be creative in an artistic sense). If you have the control to form understandable, readable words then you have the control to draw a face or whatever it is you want to draw. But there is a magic affordance that is needed namely confidence or permission or **validation** or **self-assurance**, or **support** or **praise** or **self-belief**- something that is probably different for all of us that affords us the **chutzpah** to claim or accept that what we've drawn is creative. Is it all a matter of our own perception? Perhaps our perceptions are the key regulator of affordance for our own creativity.



# The War of Words: Uncovering connections between poetics and research, gaining new insights through the #creativeHE conversation

Sue Watling

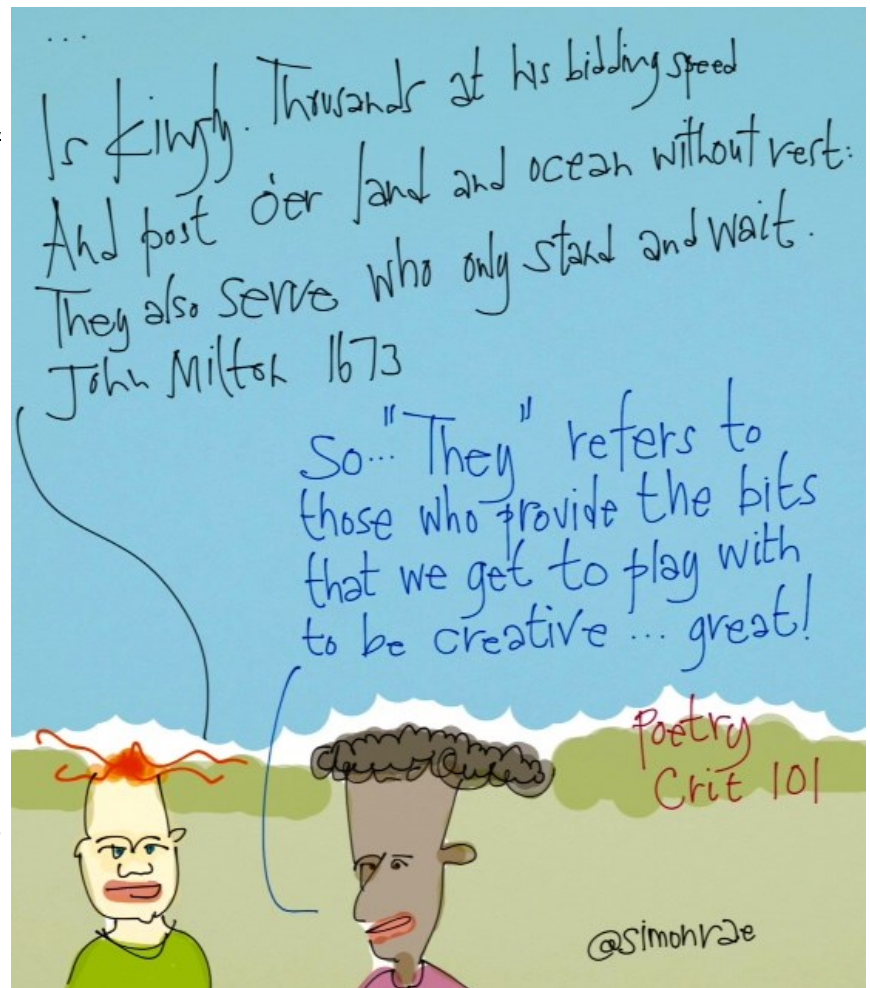
A creative ecology has to include opportunities; those circumstances which make thinking and action possible. The Creative HE community provides such opportunity for me. In July, participants in the #creativeHE conversation on creative ecologies were encouraged to reflect on ecological frameworks for supporting creativity. Contributions were inspiring and for me the week resulted in the discovery of an unexpected link between poetry and educational research, reinforcing the view that gaining new insights emerge from the taking of an opportunity.

My own research lies within the field of qualitative social science. It studies the relationships between academics and their development of their digital capabilities. Making sense of knowledge and truth are essential components of all PhDs and like other doctoral candidates I've been working on the development of my own ontological, epistemological and methodological frameworks. For me, #creative HE is always welcome opportunity to engage with something different and during July I took the time and space to consider ecological frameworks for creativity through the lens of poetry. The ensuring connections this uncovered between poetics and qualitative social science were at first surprising but then seemed so obvious I couldn't believe I hadn't spotted them before.

Let me explain further. The poetic voice is critical and concise, focusing on what the person believes needs to be said. It strips out excess words and uses rhythm and form to create structure while often adopting the use of metaphor to help 'make known' what can be difficult to otherwise convey. For me, poetry describes the human condition and the writing of poems requires observation and knowledge of the world, in particular those personal insights derived from seeing and experiencing the world in a uniquely individual way both intellectually and emotionally.

Qualitative social science is also concerned with being human and with the origin and veracity of knowledge. Researchers within social science are likely to accept meaning as being tied to the historical, social and cultural context in which action takes place and that a critical lens is required for examining the values and assumptions hidden beneath attitudes and behaviours. Qualitative research often explores the influence of culture on individual identity and highlights the tensions between societal expectations versus individual autonomy.

It could also be claimed the structure and agency, which often divide social scientists, can also be found at the heart of poetic motivation while the poet's cognitive attention to layout, grammar, punctuation, and above all clarity, are essential requirements for the research dissertation and thesis. Poetry is not only an analytical description of the world in which we live, poets also pay attention to how their final versions are presented on the page. To be able to write clearly and concisely is an essential requirement of research findings and



publications yet the skills of writing-up can be woefully neglected. Many of us will have struggled through paragraphs of turgid text, with dozens of unnecessary words and often needing a dictionary, where a few carefully chosen ones would have conveyed the message in half the time and with greater understanding. Some will argue academia is a serious business not given to dumbing down through deliberate oversimplification of complex ideas but there is no pleasure in obscurity. The ability to write readable prose is an art which all researchers should be proud to claim as their own.

There are further links between poetry and research other than shared inquiry and interest in the world and the ability to write well. I found a poetry lens was particularly helpful with the subject of conceptual frameworks. My leanings towards a critical realist paradigm were unexpectedly clarified when members of my writing class were analysing a poem and sharing their vast differences of opinion. Cultural location was clearly dividing opinions and this diversity could be attributed to a number of social categories including gender and age. The varying degrees of resonance were functioning at an unconscious level initially but the influence of positionality was being revealed through taking time out for critical analysis. I could see how similar non-critical approaches to the world might also be influencing broader attitudes and behaviours. For me the interpretations of the poem reinforced how meaning can be seen as an emergent and distributed property. This is typical of a critical realist approach where features of the social world can appear powerfully solid and real but the ways in which people can know and experience them will always be contested and fallible.

### **Opportunity: an essential ingredient for a creative ecology**

To return to the theme of creative ecologies where this piece began, it is clear how seeing and making use of opportunities for creative thought and action are essential to an ecological framework. Looking back, the journey of connections between poetry and research were cumulative. Once begun it developed exponentially but, without the time, space and circumstances to consider poetry as an example of creativity in the first place, the insights into the similarities between writing a poem and constructing a dissertation or thesis might not have emerged. The process is continuing as I write this article and I am now reflecting on the use of poetry for understanding how perceptions and beliefs not only manifest themselves within our consciousness but are historically, socially and culturally produced and reproduced.



The process can be demonstrated through the Iliad; the epic poem from Ancient Greece which tells the story of the Trojan Wars. Many parts of the narrative have become culturally embedded, for example Helen with the face that launched a thousand ships, a wooden horse as a metaphor for trickery and Achilles heel as representative of weakness or vulnerability. The poem has become central to western literature and been recreated many times in books and films. Yet the Iliad has a dubious provenance. When or where the original text was written cannot be verified and it isn't known if the alleged author Homer even existed or if there are contributions from a

number of different people. Unless you can read ancient Greek you are dependent on the translations of scholars who, it can be argued, may have themselves been influenced by their location within specific cultural paradigms. The many translations include Alexander Pope (1726) and Samuel Butler (1888), the 20<sup>th</sup> century versions by Richard Lattimore (1951) and Robert Fagles (1990), followed by Stephen Mitchell (2011) and the first to be published by a female scholar, Caroline Alexander (2015). Our experience of the Iliad can be many times removed from any authentic source with scholars suggesting the poem may be dated from the mid-eighth century BCE while the oldest existing fragments date from the third century BCE. The earliest full length copies date from the eleventh and twelfth centuries CE with each manuscript including notes from earlier copies which display variations in interpretation. As the original source cannot be definitively known, all that is left are speculations based on alternative possibilities. At any time a new discovery might change what is believed to be known. Social Science researchers who are trying to pin down the philosophical essence of truth and meaning may be familiar with this example of a crisis in representation where the only solution is to accept the contestation of reality and select whatever appears to have the most authenticity and resonance for their particular time, place and context. In this way truth and meaning are firmly located in a relationship with the ecology in which they were created.

*Turning a challenge into an opportunity for a creative outcome: As I was writing this article I was challenged by the Commissioning Editor to try to write a couple of versus synthesizing in a poetic way the meanings I have discovered. I used the opportunity and here is the result!*

### War of the Words

Now Barthes once said 'The author is dead' so I have to let go of my prose, however redeeming, whatever the meaning, it's only the reader who knows

how words which are read (like things that are said) can take on a whole different meaning, as issues of who (and knowledge and truth) depend on who's doing the reading.

All writers will find, below each bottom line, there's a host of mixed interpretations, with lots to be learned from the postmodern turn and its crisis in representations.

As we start to unravel the roads we have travelled which bring us to our destinations we see how the 'asks' in our research-based tasks are linked to our social locations;

but what matters more are the battles and wars which are fought between structure and agency, where so much depends how we manage this blend between selfhood and who self might want to be.

It's the same for the poet and life as they know it, reflected in all their renditions, where words try to strive, to catch and describe all the quirks of the human conditions,

so I'm sure you'll agree that it's not hard to see how research and poetry blend, how issues of seeing, of truth and believing, are similar things in the end, and the skillset to write what is clear and concise is all part of the art of creation, whether PhD thesis or poetry treatise they both have the same motivation.

For wordsmiths and seers and text engineers and dabblers in quests and hypothesis, for teams of reformers or lonely explorers of credence and theories of consciousness,

what your words mean (and how they are seen) is based on the world we're all living in, and this knowing in turn depends how we've learned to interpret our social conditioning.

At the end of the day whatever you say or do to express creativity, people will moan, and grumble and groan, for you can't control their subjectivity.

So I have to conclude all meaning is skewed as we all possess unique philosophies, and what we receive and what we believe helps build our creative ecologies.

Our epistemology and our ontology all affect our observations, so you might write the words but it's clearly absurd to expect to rule interpretations.

Researcher or poet it's not how you know it, it's all about setting it free, because Barthes spoke true and whatever you do the meaning is all down to me!

### Creating new meaning: an important creative outcome

My experience of the #creative HE creative ecologies conversation and subsequent reflections and writing has been an informative one. It enabled me to gaining new insights and create new meanings. For me a creative ecology must reflect an individual's internal psychological and perceptual world while opening doors to other worlds not yet known to them. In this context these have included the connections between poetry and research which I hadn't previously uncovered. They both involve empirical observations of the world and analysis of lived experience. Both are concerned with collecting data, analysing and making sense of it, and then making decisions about presenting their conclusions. Both involve the search for deeper and or more complete meanings and both deal with the textual matter of translating experiences and insights into words in order to share this knowledge. And both involve their own ways and means for disseminating that knowledge.

The similarities between process and outcomes for researcher and poet may well be worthy of further investigation but in the meantime maybe researchers should read more poetry and take time to study the presentation of poetic ideas and narrative. Not only was the recent #creativeHE course an opportunity to explore ecological frameworks for creativity, it opened new connections with regard to my research and poetry which I will continue to explore.

If anyone reading this has similar ideas or experiences, and would like to

discuss them in any more detail, please do feel free to get in touch.

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# How might Higher Education Teachers help Students develop their own Complex Learning Ecologies? A personal experience

Michael Tomlinson

In my earlier article<sup>1</sup> I explored the idea that we can view creativity from the perspective of complexity - complexity of the ecologies through which it emerges and complexity of the resultant creative outcome. In this article I want to build on this idea and pose the question, 'how can higher education teachers help students develop their own ecologies in ways that will encourage their creativity to flourish?'

I'd like to share an ecology that I was involved in when I was a university student to help illustrate the idea of a learning ecology and perhaps more importantly show how I was encouraged and helped to create this ecology for myself by my lecturers. My hope is that this will help others to think about how we can bring the concept of creative ecologies into the practical world of higher education learning and teaching, and encourage students to think about their own creative ecologies through the lens of complexity.

I studied archaeology at university and attended several conferences during the three years of my course. I thought it would be great if we could organise our own conference so during my final year me and two other students set about organising one. This was a conference organised and run by students, with talks given by students for an audience of students. It was not part of our course but something we undertook in our own time outside the course. The conference was a great success and we managed to organise it without a great deal of input from university staff. This was a great benefit and a powerful motivator in my view as it gave us complete control over the form, content and organisation of the event.



Our goal was to attract over a hundred students from various universities across the UK and encourage students undertaking original Archaeological and Historical research to come together to share their work. More than that, we wanted this event to be sustained after we had left university so we were trying to create an infrastructure and a culture that would enable responsibility for organising the conference it to be passed on to another group of willing student volunteers in a different university each year. It's now three years since we ran our conference and it continues to this day. Our legacy is for other students to get their first true taste of how academic discourse works, and encourage students to see themselves as the next generation of researchers contributing to their field.

Organising the event involved much thinking and discussion, many decisions and a lot of effort and action - a complex collaborative ecology for learning and achieving. However, what I wish to focus on is what the university did to allow us to explore and create this complex ecology. I am of the opinion that complex ecologies must happen organically and be self-determined, as educational facilitators cannot tell someone to create an ecology, nor can they tell students how to do it. In simply informing someone of what to do takes away ownership and responsibility for the ecology. When students are told or advised what to do they are not creating their own ecology, rather they are creating the ecology of the educator by proxy. What educators can do is two things, firstly *afford* students the space and *potential* to create their own ecology and secondly help them reflect on their ecology, so that they are helped to develop the essential reflective, meaning and decision making capacity of an effective professional. What this means in practice, I hope to illuminate with reference to my own experiences.

When I first pitched my concept for a national conference to the head of our Archaeology Department in York, it is to his eternal credit that he didn't reject the idea out of hand and throw at me all the potential problems and issues that he might expect me to overcome. He simply allowed me to suggest what it was that I hoped to achieve, and encouraged me to think critically about my plan. It was this encouragement, not only for the concept, but also the self criticism that ensured I identified and anticipated the likely issues and thought about possible solutions to them.



It was this process of conversation and self-critical evaluation that allowed me to shape the actions in my ecology, I was able to map out the targets, possible pitfalls and areas of least resistance, and find sources and resources to help me overcome any issues. There were times, of course, where I was met with a challenge and needed outside assistance, and again here the department was ever facilitating. During a conference I had previously attended, I was struck by the idea of live streaming our own conference. When I brought this to the department they allowed me to speak with the visual media team and make this into a reality. This is a wonderful example of the ecology being student lead (the idea originated with myself) and yet its implementation being facilitated by the department's help and generosity.

I hope this illustrates my primary point, that in a university setting students' self-determined learning ecologies can be encouraged and prompted by educators, but not created or instructed by them. Fundamentally it's up to students to invent them and for teachers to help them work through and reflect on the complexity they encounter.

At the time of the conference I had little concept of the notion of a learning ecology and I feel this was to my detriment. While I don't think I would have done anything in the process itself differently, I do believe that an understanding of what a 'learning ecology' is, and how it can help creativity flourish would have stood me in great stead for my future endeavours. To demonstrate this we have to fast forward to my first job after leaving university, working for a Financial Services IT software company. Within my role I was required, on numerous occasions, to create educational programmes for clients, develop reports for senior managers and generally create a great number of things. Despite, as I look back now, my experience of working creatively, I often didn't have a clue where to start! Mostly because I felt there was some mystical difference between the creative

learning project I had done before and the creative learning project I was being asked to do now. And it is here I see the value of using the lens of a complex creative ecology to better understand how to approach a complex learning project! I now realise that the idea of a complex learning ecology is transferable. A higher education helps us develop the capacity to work with complex information and this perhaps provides us with a foundation for working with complexity in entirely different contexts - like organising and running a conference or achieving a complex work role.

Understanding that the creation of a complex product or achievement is, at least in part, a result of a complex ecology, I can see that the creation process need not be so different, that despite the knowledge and targets being different, I can still create my own complex ecology to help improve my output. This understanding only comes with familiarity of these concepts, and reflecting on personal practice. By teaching students what it is to create an ecology, and how these ecologies can impact on their creative achievements, we encourage students to reuse and/or adapt the process, in their own image, in the future.

One final element that is worthy of consideration is that of motivation. I have spoken about what I feel are a couple of the key elements in enabling a student's ecology to flourish, but how can it be prompted, or inspired if you will. This I would suggest is a much more complex question. Some students may well be intrinsically motivated to develop an ecology to create something, some most certainly are not. I'm afraid I do not have any simple suggestion as to what can be done to promote the independent creation of learning ecologies but I can say why I created my own.

Some suggest creativity comes out of a love of what you are doing, or one's ability to immerse oneself, I admit I am less than convinced by these arguments. For me, I was prompted to create, as I think I am throughout my life, because I feel it will take me closer to a version of myself that I want to be. It is hard, if not impossible, to clearly articulate what this version of me is, but I have an abstract concept of the me I want to be and I engage in my creative endeavours as they take me closer to that goal. Perhaps this idea connects to what Abraham Maslow called self-actualisation - trying to achieve more of what we perceive as our own potential.

I have written all of this, of course, from my own perspective as a former student, I would be interested to hear the views of educators on how feasible, and indeed how useful, they feel these ideas are!

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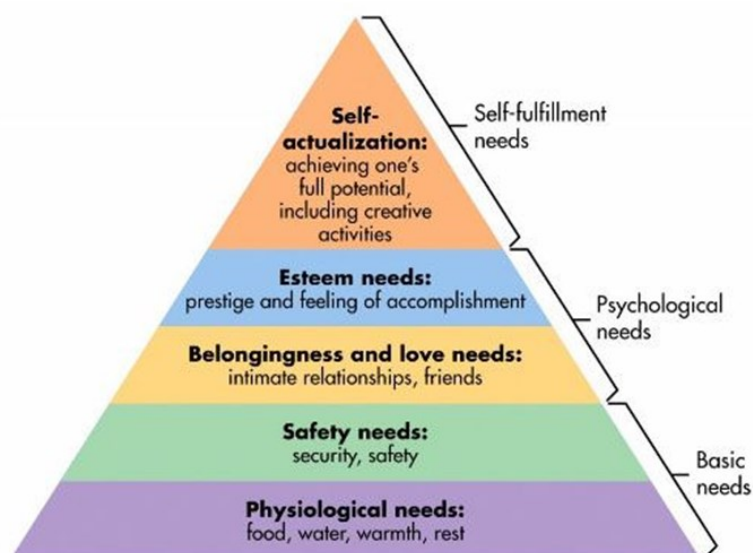


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# Using Ecological Metaphors to Represent Professional Growth: Our extraordinary 'Greenhouse', its creative academic gardeners and the growing of pedagogical ideas

Chrissi Nerantzi



*Chrissi is a Principal Lecturer in Academic CPD in the Centre for Excellence in Learning and Teaching at Manchester Metropolitan University and Co-Founder/Co-Chair of Creative Academic and Founder of the #creativeHE platform.*

*She is well known for her approach to professional learning and development which is typically playful and experimental and she specialises in creative and open learning & teaching. She developed the [FLEX initiative](#) and leads the development of the Good Practice Exchange at Manchester Metropolitan as well as the Greenhouse she describes below. She also teaches on the Postgraduate Certificate in Learning and Teaching in Higher Education (PgCert LTHE) and the MA in Higher Education and initiated a number of open cross-institutional professional development activities such as TLC, FDOL, BYOD4L, LTHechat and FOS. To find out more about Chrissi, please visit her [LinkedIn](#) page or her personal [blog](#). You can also connect with her via [Twitter](#) @chrissinerantzi*

## Gardening and greenhouses ecological metaphors

This #creative conversation set out to explore this idea of creative ecologies. One of the questions underlying this exploration was how can we use the ecological metaphor in the context of developing higher education professionals. The etymological roots of the word 'ecology' are in Greek *oikos* (household) and *logos* (knowledge). *Oikos* suggests notions of dwelling or habitat (Ingold 2000). Our learning ecology is therefore the particular habitat in which we think, do, learn and become, it includes ourselves and our purposeful interactions with our environment. At a larger scale we think of a healthy ecosystem as an environment in which many organisms interact with each other and their environment are flourishing. Similarly, our learning and development is more likely to flourish when individuals with shared interests and complementary skills interact in effective and creative ways with each other and with their environment.

I am attracted to the idea that our development or growth as a professional in an institutional environment is an ecological phenomenon in which our environment and the way in which we interact with it can enable or conversely inhibit people's flourishing. So when I searched for a metaphor to describe an approach to professional development I was pioneering in my institution I chose the idea of a greenhouse as it captures in one word a story and a set of values and beliefs about how people learn and develop together. A greenhouse comprises a secure and protected space within which the gardeners who use it help create an ecosystem within which plants can flourish. Using this analogy I wanted to create something similar to enable my professional colleagues to develop themselves and flourish.

The greenhouse metaphor has helped me articulate and share my recent explorations into the world of individual and collective creativity in the context of professional development and, I hope, it will help the reader visualise it with me. Most of us are familiar with the greenhouse in gardens, back yards, and sometimes seen on terraces or balconies. Many people have the desire to grow plants that wouldn't survive outside the greenhouse. Often their aim is to nurture the plant from a seed, seedling or cutting so that it can grow strong to the point where the plant can survive and thrive in the garden. Of course some plants can't survive in our climate, they are more needy and can only thrive in the greenhouse.

*"There are seeds that lie in the desert for years, waiting. It is only under the right conditions that they will grow and flourish. When the rain comes, the temperature is right, or the seed is carried to fertile earth, then its potential is unleashed and it grows." 1:23*

As humans we can interfere with nature and *create* entirely new environments, like a greenhouse, through which we can, with the right knowledge and skill, *create* the conditions for such seeds to grow. My emphasis on *creation* is deliberate and relevant to the idea of ecologies for professional development. People who specialise in educational and professional development commit time, energy and intellectual effort to developing knowledge and skill to *create* and *be creative*, with the support of their institution, the fruitful conditions to nurture professional growth. Creativity is nurtured in the greenhouse and allows pedagogic seeds to grow into healthy plants and shared with the wider community.

## Our Greenhouse: a space for cultivating ideas and confidence

Giving ideas a life is the essence of creativity. James and Brookfield<sup>3:3</sup> remind us that “the capacity to imagine is part of what makes us human.” Through my imagination, I have imagined and given meaning to the greenhouse metaphor, and it has been useful for me for some years now. It helps me explain who I am as an academic developer, how I work and learn with people and what I value, but also show where my heart is. There is this saying “home is where the heart is”, where you can be yourself. The more I think about it the more I come to realise that my professional and spiritual home resembles or is in fact a greenhouse. My greenhouse, our greenhouse, as I see it is a shared creation, a place where many creative gardeners (the colleagues I work with in my institution) come together to share their love for growing plants, literally or metaphorically in the form of ideas and new practices. We, seed, feed and weed, our imaginations, our practices. After all, “imagination is what sets human beings apart from every other species on earth.”<sup>4:57</sup> In the greenhouse gardeners connect in magical ways, with each other and their plants. A gardener may also grow plants with other gardeners, wandering, wondering and imagining together. They trust each other, are open and accept and respect each other. Gardeners externalise their curiosity through their greenhouse activities. This sets them free! They push the boundaries and experiment with seeds and plants. Gardeners love nurturing their plants, their ideas become extensions of themselves. Not all plants will make it, as mentioned already, but some will. Others will thrive in the greenhouse. The same happens with ideas. Curiosity and playfulness but also the hunger for adventure are essential characteristics of being human and brought us to where we are today. This is why we need greenhouses and gardeners, but also more than one gardener per greenhouse. One gardener per greenhouse is just not enough. It leads to silo cultures and isolation. The real value of a greenhouse is when it is shared. Then it becomes fertile ground for sharing of ideas, feelings and emotions, concerns and troubles. Were gardeners care for and support each other and our ideas. We know that collectively we can achieve so much more than individually.



### Co-creating a greenhouse for professional development

In October 2013 I moved institutions. Initial feelings of loneliness and disorientation filled my days. Suddenly I was on my own in a massive institution. I didn't know anybody and nobody knew me. This is particularly hard for academic developers as relationships are vital in our work. Beyond feeling lost, I also lost my voice. This is not uncommon as noted by Debowski <sup>5</sup> as it takes time to build relationships... often years. Many developers have experienced similar feelings <sup>6</sup> and often this makes us reach out to find allies in other institutions<sup>7</sup>. However, I think this situation is not unique to academic development. In the contrary it is common in all jobs and every human activity. It is perhaps particularly challenging when we join established communities and groups. Especially closed groups can lead to polarisation and exclusion<sup>6</sup>. On the other hand, it takes time to be accepted and become a member of any community but it also requires the community to accept the newcomer and there are often obstacles there. Trying to understand the complexities and managing these can be challenging but also rewarding when things start to change for the better.

While I was reaching out to colleagues in other institutions, I also saw value in finding ways to connect with colleagues in my own new institution as my primary role is to be there for them. Starting from scratch is hard... However, investing time and energy to build new relationships is a vital part of this process and I was prepared to do this. It always amazes me how we humans find the strength and determination to start fresh, to change and make change happen, to adapt and move forwards. Some don't! However, new links can be made and connections grow and flourish... if we want to, if there is a purpose, and if there is mutual commitment. Relationships have to be co-created they can't happen otherwise.

So, when I arrived in the Centre for Excellence for Learning and Teaching (CELT) at Manchester Metropolitan University, I was a bit like Little Red Riding Hood in the big dark wood. My curiosity and love for working with other like-minded individuals put me on an adventure to search for them. Some of the seeds grew almost instantly, other ones took a bit longer to germinate, and some, I have to admit ended up in the bin. Rejection is hard but it is part of life and we need to deal with it in a positive way so that we can move on. I started looking after the seeds that grew and started watering them. I knew I could make it happen and that there were others out there who were also looking for a community. This was the moment when the greenhouse idea I had nurtured in my mind became new social practice.

The Greenhouse became a reality in January 2014. It is a communal space and a community, in fact an ecosystem, that brings like-minded individuals together - 'academic gardeners'. Creative academic 'gardeners' who enjoy thinking and acting creatively in their practice as teachers but also as learners in higher education as well as more widely in their lives. Academic gardeners who bring their own ideas and practices, share them openly with others, who respect the ideas of others and help them to grow them and flourish in a professional sense. Creative people can't just switch the creativity tap off when not working. For them it is a habit, that fills their days and often nights with excitement and anticipation but also curiosity and passion to come up and join up ideas and make them happen. Creative gardeners plant seeds that can grow into exotic plants. Not all will survive or thrive. Out in the wilderness there are often less chances... new seeds and ideas are fragile and often hostile elements block their growth and trample on them before even they have the chance to flower.

### Cultivating ideas, practices, relationships and experiences

The Greenhouse we co-created helped me to find my voice again through conversations and other interactions with like-minded and like-spirited colleagues. I felt I was accepted for who I am and what I stand for. It also enabled me to be myself and experience professional freedom<sup>7</sup>. In its creation I found a new purpose, a new direction and made new relationships with like-minded people in my own institution. Together we are developing creative ideas linked to learning and teaching through sharing and experimentation. Our monthly gatherings, I am avoiding to call them meetings, evolved over time and while the first ones perhaps resembled more a support network similar to AA (Alcoholics Anonymous) we gradually found ourselves and became more like a collaborative community. We enjoy each other's company and are open with each other. We make things and we make things happen.



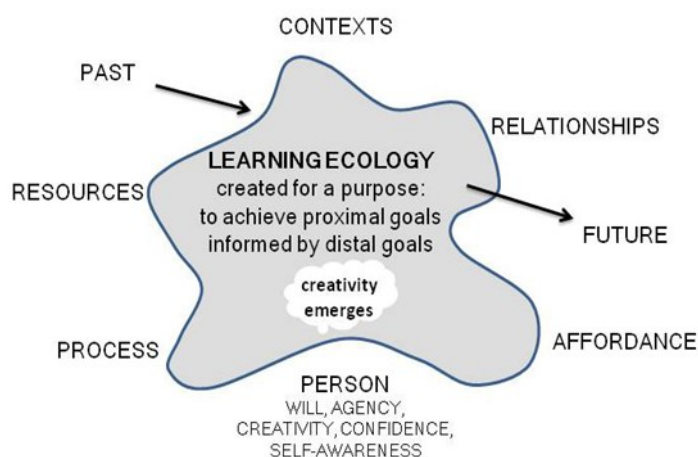
Some of the activities we have undertaken together include creative walks in the park, debates about values in education, conversations about how to 'sell' creative ideas, play activities to explore how we can visualise our inner thoughts, creative making workshops and a Christmas picnic. No two Greenhouse gatherings are the same. In the two and half years our collaborative ecology has existed colleagues from around the university have joined us. All voluntarily and based on a need to connect and be with like-minded people. Among us are lecturers from different disciplines, professors, developers, colleagues from professional services. We all come together in one community. About 50 colleagues have become members and there have been 243 participations in 28 monthly events (averaging about 9 individuals per gathering). As a result of the Greenhouse cross-disciplinary relationships among Greenhouse members have been developed. Some of them led to collaborative working and pedagogical projects. Examples include the "I love learning" campaign which received funding from CELT, co-facilitation at learning and teaching conferences, locally, nationally and internationally, joined-up research among Greenhouse members, supporting each other to prepare for conferences and publications and the development of resources. Among the recent success stories are three members of the Greenhouse (David Roberts, Dr Helena Kettleborough and Haleh Moravej) who won Student Union Teaching Awards in 2016.

### Reflections on our co-created ecology of professional development

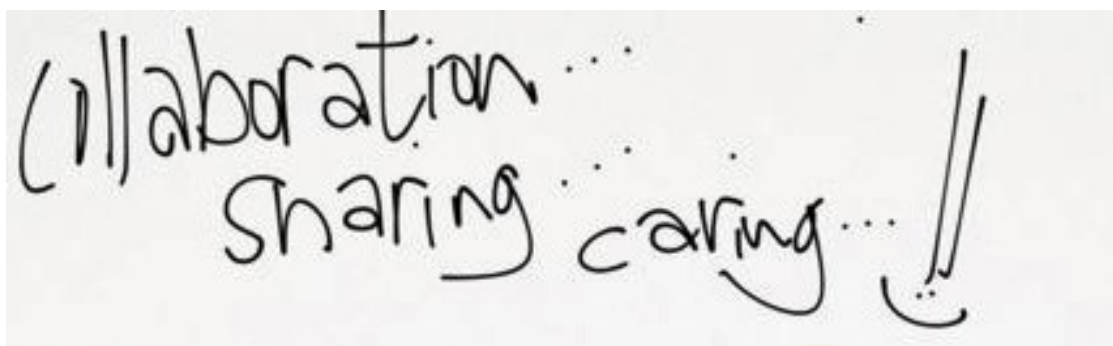
The branding of this co-created ecology for professional development as a greenhouse - provided a suitable metaphor for conveying to participants the values and purposes that underlay the idea and communicated my expectations as the developer, of how I hoped people would behave. Time has shown that this model of an ecology for professional learning and development works. While the greenhouse project was created out of a personal need to connect and share, understand and be understood, it seems that there were other gardeners out there who also missed such a place, such a community. Wenger et al.<sup>8</sup> remind us "Being more interconnected often increases the sense of community, and a desire to learn about a shared concern often motivates people to seek connections." This is definitely how I feel.

Figure 1. Creative ecology<sup>10</sup>

Jackson's model of creative ecology<sup>10</sup> (Figure 1) which was shared and discussed during a special iteration of #creativeHE provides a useful tool to reflect on the elements of the co-created Greenhouse ecology for professional growth. The model was proposed to explain the main components of a creative ecology. We can use this model as a prompt to reflect on the ecologies we create or co-create.



At the heart of our ecology was a set of *purposes* - as I explained I chose the idea of a greenhouse for the collaborative professional development initiative as it captures in one word a concept that encapsulates a story, a set of values and the beliefs that I wanted to convey to the people who were participating in the co-created ecology. Our proximal goal was to recreate an environment in which we could all develop and flourish within the more distal goal of becoming a better version of ourselves. There was also a personal purpose - my need to learn about my institution, build relationships and fulfil my role as a developer of educational practices.





*Persons* - The co-created ecology was given life and meaning by the involvement and participation of people connected by shared interests, commitment and values. The collective and diverse interests, experiences and talents of the individuals enabled us to create a dynamic environment that energised us all and facilitated the exchange of ideas and practices carried by and shared by participants. Each of the people who participated in the ecology brought with them an interesting past through which they had become the person they were, and each was involved in an unfolding professional present in

their own institutional role. Together we helped imagine and create different futures for ourselves and each other. While the Greenhouse sits within Manchester Metropolitan University, it is open to anybody who would like to be involved from outside the university.

*Context(s)* - we shared a common context - our university, but each participant worked within particular practice contexts within the institution - together we were a constellation of experiences working in a range of institutional contexts, which meant that we shared a common organisational language and culture. This shared contextual understanding greatly facilitated our ability to communicate and empathise with each other but it also enabled us to develop a deeper understanding about the workings and culture of our own institution. But perhaps the most interesting phenomenon associated with our ecology was the context and culture we co-created for ourselves. A context and culture that was different to any other we experienced in our institution.



*Affordances* - Creative educators are pedagogical activists. The reality is that no change happens without disruption. Creative educators have the energy and can turn things upside down, inside out driven by their endless curiosity and passion to play, experiment and innovate through taking risks, falling down and standing up again and continuing with determination. Play is still not properly understood in higher education<sup>9</sup> but for me experimentation and research are interwoven with play and make up vital ingredient to recover, uncover and discover new and exciting things. Our greenhouse offered important affordance for imagining, exploring and play<sup>9</sup> affordance that is often difficult to find in the everyday pressure of academic life.

*Spaces* - The space provided by our greenhouse is flexible, elastic and expansive. It accommodates everybody who wants to join and take part. The Greenhouse is a space for imagining and sharing, experimenting and playing, exploring and making, inquiring and creating. Our Greenhouse enables us to imagine and utilise all these different sorts of spaces and more.





Our Greenhouse ecosystem takes full advantage of all the spaces available to us. We have organised gatherings in a wide range of physical locations across the institution, indoors and outdoors, in communal and public spaces as well as online. We have interacted and held conversations in cafe's, art studios, kitchens, woodlands and parks, in the streets and markets of Manchester and art gallery's as well as more conventional teaching rooms.

In higher education institutions there is a widespread pressure to conform<sup>6</sup>. This also happens in professional development. Di Napoli<sup>7</sup> has written about this phenomenon and claims that the pressure academic developers are under to standardise and conform could stifle creativity and innovative practices. The creation of our greenhouse provided precious spaces and permissions for participants to think in ways that did not conform to standard practices and opened up possibility spaces for creative thinking and actions.

*Relationships* - I think we found each other because we need each other: in coming together we are fulfilling a need for meaningful and supportive relationships. We also recognise the importance of connections and sharing for personal and collective growth. Often creative people are misunderstood... marginalised, kicked to the corner, out-of-sight, bruised, as they are seen as trouble-makers as they can be unconventional and often rock the boat.



Fryer<sup>11:84</sup> found that highly creative people “forge ahead” even when feeling constrained and isolated. They don’t let constraints or disapproval by others stop them questioning typical practices and from innovating. But the reality is that often high achievers are marginalised and socially excluded from their peers<sup>12</sup>. Slavin<sup>13</sup> suggests that cooperative learning, and I would extend this notion to collaborations and communities, reduce the risk of social ridicule and exclusion of high performers, which often does happen in highly competitive environments. Within cooperative, collaborative groups but also genuine communities, competition is pushed into the corner and cooperation and collaboration for the common good is what shines through and enables

individuals and the collective to grow. Within an institutional environment a collaborative ecology for learning and professional development is thus a vehicle for fostering relationships that enable people who want to innovate and take risks to connect to people who want to do the same and gain confidence and support through this set of relationships.

The driving force for the Greenhouse and its members seems to be the will to connect and be together and to do things together. The real value seems to come from this *togetherness* which is as much emotional as it is physical and it often boosts individual and collective creative confidence so that action and change emerge. Such relational ties are strong enough to overcome many of the challenges and limitations we face working in a university and help us keep going and keep experimenting with creative pedagogic ideas and practices.



**Resources** - The Greenhouse has been functioning from the outset without any financial support. We meet in our own time usually within the institution's spaces. The most important resource is the knowledge and experience provided by participants. Some of the activities we have funded ourselves for example the celebrations and picnics we have organised. We generally use low-tech resources to express our ideas like flip chart paper, marker pens, paint and post-its and occasionally more exotic materials like felt, clay, food and LEGO. As the photographs show we are resourceful in finding the resources we need to express ourselves. Sometimes we make use of our smart phones and tablets as tools to record and share what we are experiencing.

**Processes and activities** - All colleagues and students are welcome to the Greenhouse and there are no specific joining requirements, beyond a passion to experiment and a willingness to try to be creative in learning and teaching or the will and determination to become more experimental and creative in their teaching. The formation of the Greenhouse itself has been organic and evolved since its birth in January 2014 and its shape and textures reflect the community it serves. The Greenhouse gatherings are discursive and democratic and the academic gardeners themselves take ownership of these, and organise and facilitate them. There is no hidden agenda. The driving force of the Greenhouse are its members and their gifts of experience and special interests for example we have had sessions involving poetry, and the use of clay, paint and textiles, walks through the city and picnics in the park. A number of sessions have involved making artefacts that mean something to the maker.



We curate our Greenhouse activities in our visual diary using flickr also use the #greenhouse hashtag on Twitter.

### Our Visual Diary

<https://www.flickr.com/photos/21614692@N02/albums/72157642314666495>

**Culture** - I wanted to encourage the creation of a culture that supported the creative wellbeing of creative practitioners, somewhere they could call home and feel as their spiritual home. But cultures are created by all the people who are involved in the social situation. The net effect of people coming together regularly to participate in activities, form relationships, share experiences and challenges, ideas and practices, and co-create new meanings, is to develop our own culture which is open, trusting, respectful, encouraging caring, empathetic and emotionally supportive. There is acceptance of individuality and diversity. We recognise that we are all different but we also have many things in common. These things hold us together and give us strength to be brave and move forward both as individuals in our own cultural contexts and as a collective.

'organisational culture is the emergent result of the continuing negotiations about values, meanings and proprieties between the members of that organisation and with its environment - in other words culture is the *result* of all the daily conversations and negotiations between the members of an organisation about the way we do things [or perhaps would like to do things!] here'.  
Richard Seel <sup>(14)</sup>

### Participants' voices

But what are the magical ingredients that bind us together in our co-created ecology for learning, development and creativity? Robinson <sup>4:94</sup> notes that "When we connect with our own energy, we're more open to the energy of other people. The more alive we feel, the more we can contribute to the lives of others." Could the Greenhouse be the space that helps us to kick-start this process?

Authentic voices of our creative academic gardeners have been collected via a short survey instrument and a selection is included in the box to illuminate the value the Greenhouse has for them. The themes that come up consistently are:

- meeting colleagues from across the university
- growing as practitioners
- openness and sharing ideas
- being brave to be creative

Exploring Deutsch's<sup>15</sup> social interdependence theory enabled me to better understand the dynamic of our greenhouse group and identify some of the key features that bring and keep us together. I would like to believe that we practise positive interdependence and recognise that we can achieve our own personal goals through respecting and supporting each other. We have created positive conditions to promote interaction, where individuals develop caring relationships, are emotionally connected, are open, share and support each other, but also trust each other, resolve issues constructively and are committed to the group goal and contribute effectively to achieve this. These might be represented as a culture within our Greenhouse ecology.

Sullivan<sup>16</sup> wrote about professional education saying that it can flourish when it affects the head, hand and heart. But how often does this actually happen? My experience of the professionals who participated in our greenhouse community developed their intellect, practical skills but also behaviours, attitudes and values that foster cooperation, collaboration but also their personal and collective growth.

Creating the conditions for us to open up can lead to great discoveries. But it also free our minds and our hearts and we become more playful and experimental especially with the people we trust. We take risks and worry less, or not at all about the consequences when or if it goes wrong. We also worry less or not at all about what others will think and say about us. We truly get wings and fly. We explore our ideas, we combine and develop them further and we are more likely to implement them. When I was asked what creative teaching meant to me I said: Using curiosity to help others develop a wide-open mind, creative habits and making the impossible, possible" - The greenhouse is a space and a community that encourages and enables this and helps us bring "our subjects alive" as James & Brookfield<sup>3</sup> would say.

*"It's a very relaxed forum, which is valuable for colleagues who may feel a little tentative about exploring original ideas. Drawing colleagues from different faculties together is important - it's a shame that there aren't always more people from more faculties. A valuable initiative!"*

*"Greenhouse has been a fantastic opportunity to meet like-minded and not-so-like-minded (both equally good!) people from across the University, and has helped to develop my networks and promote interdisciplinary collaboration."*

*"Meeting like minded people and collaborating with exciting colleagues from across university. Greenhouse has broken the barriers of disciplines down and have made it easier to connect to colleagues and share good creative practice."*

*"As an early career researcher Greenhouse has been invaluable in introducing me to new concepts in Learning and Teaching, and has boosted my confidence as a researcher. Delivering a session prior to attending an international conference helped me to develop my skills and took away (some of) my nerves about presenting. Greenhouse has also been a great way for me to meet other researchers and academics from faculties across the university who are using creative and innovative ideas in their teaching."*

*"The Greenhouse gave me the opportunity to try out ideas with a group of willing participants. This gave me a confidence boost and a willingness to try creative things in the classroom. I really enjoyed running a session. I also attend as often as I can and I like the community it builds. It has definitely introduced me to new and fresh teaching ideas and there is a real sense of openness in the Greenhouse."*

### What might happen next?

Emergence is an important property of complex ecosystems so it is worth considering the question of what is emerging from our co-created ecology. While the Greenhouse has been a valuable community for colleagues who have joined us since January 2015, it still is a fringe initiative within Manchester Metropolitan University as a whole. There are opportunities to further develop the Greenhouse and create the conditions for greater institutional support to nurture pedagogic innovators and creative practitioners and through this demonstrate greater commitment to creative practitioners and the vital role they play to drive the institution forward. To develop and truly recognise the talent we have across the institution and inspire our students and further colleagues and seed the bug for creative practice. Furthermore, creating a physical home for the Greenhouse at the heart of the university and identifying innovative ways to showcase, disseminate and connect what emerges from our

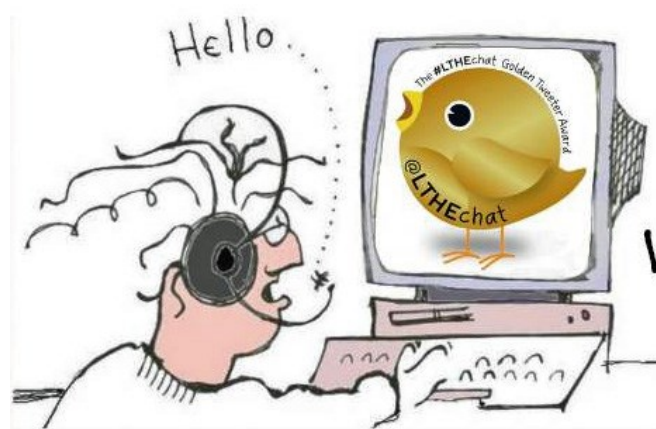
I am excited about the opportunities we as community have identified for the Greenhouse and I hope to be able to discuss and implement some of our ideas in the near future.

### Acknowledgements

I would like to take this opportunity to thank Prof. Norman Jackson for his valuable suggestions to this article, his wise words and all his support he has given me through our regular interactions and connected working which enables me to grow further as a creative practitioner. A special thank you also goes to all academic gardeners who have embraced the idea of the Greenhouse and have made it a valued and valuable community for creative spirits and pedagogical innovators.

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# Creativity in Higher Education Project

## *Creative Pedagogies & Creative Learning Ecologies*

### September 2016 - 2017

We can achieve so much more when we collaborate and we inspire and energise each other with our ideas, behaviours and actions. During 2015-16 Creative Academic worked closely and productively with the #creativeHE enterprise and both enterprises benefited enormously.

In the social world of educational practice, learning networks, and communities of interest and collectives that CARE about students' learning and their experiences of learning constitute the driving force for bottom-up systemic development and change. These beneficial forces that energise and sustain the higher education ecosystem can be amplified if we connect and engage networks and communities in educational projects that are of mutual interest and relevance. In this way we can change the ecosystem for learning, development and change in ways that education professionals can own while adapting to the agendas of high level agents and the top down imposition of ideas and structures that they think are necessary for managing the ecosystem and the society it serves.

As an independent agent in the higher education ecosystem championing the need to pay attention to students' creative development Creative Academic is trying to facilitate new conversations about the importance of creativity in higher education teaching, learning and students' development and achievements. In the coming year we are trying to bring together and connect educational practitioners and researchers, educational development teams, networks, communities, universities and colleges who share this interest and concern for students' and teachers' creative development, through a partly planned / partly emergent programme of activities relating to *creative pedagogies and creative learning ecologies*. The *planned* element of our project involves connecting and integrating the activities of Creative Academic, #creativeHE(b), the Greenhouse(c), the National Teaching Fellowship #pin project focused on Pedagogic Innovators(d) and Lifewide Education(e) which is developing the idea of learning ecologies. The emergent element of the project involves a combination of open invitation to individuals and organisations to join us, together with the opportunistic strategy of contacting individuals or organisations whose work we would like to connect to our own. We are particularly interested in attracting and collaborating researchers who have an interest in this field of knowledge and practice.

In 2016 we began to develop the idea of *creative ecologies* and our intention is to explore and develop the idea further by linking it to *creative pedagogies* - the imaginative ecologies that teachers create within which students learn and are able to use and develop their creativities. Our intention is to combine and integrate these two ideas through a programme of work over the coming year involving all our partners. Our aspiration is to encourage and facilitate the exchange of ideas and practices through social interaction (both face to face and on-line discursive events), a book, magazines and a range of open educational and learning resources.

We hope that our exploration of ideas and practices will be of interest and value to our communities and to anyone else who is involved and interested in designing and facilitating learning processes and practices that encourage and support the creativity of others ie teachers and others involved in educational and learning development. The main elements of our strategy are outlined below. They include:

- six #creativeHE google+conversations and courses
- three issues of Creative Academic Magazine (CAM 5, 6 & 7)
- participation in institutional workshops/conferences (by invitation)
- on-line surveys and the production of a database of educational practices relating to creative pedagogies
- 101 Creative Ideas Project aimed at creating an open educational resource - a card set of activities used by higher education teachers to encourage students' creative development
- opportunities for students to share their perspectives on the ways in which teachers encourage them to use and develop their creativity
- at least one face to face event of our own to bring interested people together to consider the knowledge that has emerged through this process
- a book 'Exploring Creative Pedagogies and Ecologies' to consolidate and disseminate the results of our explorations.

## OUR OPEN INVITATION

We believe in collaboration and cooperation and we welcome your involvement and participation in any and all of our activities. We believe in collegiality, openness and sharing and the knowledge we develop will be treated as open learning/ open educational resources. We would also like to connect to your activities so that we can show that our interest and concern is shared by many people working in higher education. The ecology we are creating to explore these ideas is open to new ideas and to people and institutions who want to contribute. If you would like to be involved in any aspect of this programme or share with us your own events and activities, please do get in touch. During the coming year we also aim to provide a professional development service for universities and colleges wishing to develop their teaching and learning practices to provide more opportunity for students' creative development

**Norman Jackson & Chrissi Nerantzi (Creativity in Higher Education Project Leaders)**

[normanjjackson@btinternet.com](mailto:normanjjackson@btinternet.com) and [chrissinerantzi@googlemail.com](mailto:chrissinerantzi@googlemail.com)

### References

a) Exploring Creative Ecologies Creative Academic Magazine CAM5 September 2016

<http://www.creativeacademic.uk/magazine.html>

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c ) Nerantzi C (2016) Using Ecological Metaphors to Represent Professional Growth: Our extraordinary 'Greenhouse', its creative academic gardeners and the growing of pedagogical ideas. Creative Academic Magazine CAM5 September 2016

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d) Nerantzi C (2015) The Pedagogic Innovators #pin National Teaching Fellowship

<https://chrissinerantzi.wordpress.com/2015/10/31/the-pedagogic-innovators-pin-project-is-born/>

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## Collaborative Programme of Activities

October 2016-17

Visit [http://](http://w.creativeacademic.uk/2016-17-programme.html)

[w.creativeacademic.uk/2016-17-programme.html](http://w.creativeacademic.uk/2016-17-programme.html)

to see updates

July 2016	<ul style="list-style-type: none"> <li>#creativeHE conversation 'Exploring Creative Ecologies'</li> </ul>	INSTITUTIONAL PROFESSIONAL DEVELOPMENT ACTIVITIES
September 2016	<ul style="list-style-type: none"> <li>Launch of Creative Pedagogies &amp; Learning Ecologies Project</li> <li>Publication CAM 5 'Exploring Creative Ecologies'</li> <li>Launch of #101creativeideas project</li> </ul>	
October 2016 November 2016	<ul style="list-style-type: none"> <li>'Developing the idea of ecologies for learning &amp; creativity' presentation</li> <li>BERA Creativity SIG seminar at the University of Cambridge: Advancing Creativities Research: Making connections across diverse settings.</li> <li>#creativeHE conversation 'Creative Pedagogies' 30/10 to 04/11</li> <li>Launch of Creative Pedagogies Online Survey aimed at identifying past and present practices and building an on-line resource. Survey to continue to the conference. Information to be synthesised for the conference proceedings.</li> <li>Launch of Exploring Creative Pedagogies &amp; Ecologies book project</li> </ul>	
January 2017	<ul style="list-style-type: none"> <li>#creative Creativity Course (open course Creativity for Learning in HE) 16 - 20 January 17</li> <li>Launch of Student Challenge 'Stories of Creativity in Higher Education'. The aim is to discover examples of teachers who have encouraged and supported students' creative development in any subject or pedagogic context. 10 prizes of £100. Winners to be announced in World Creativity and Innovation Week.</li> </ul>	
March 2017 Contribution to 'Open Education Week' March 27-31	<ul style="list-style-type: none"> <li>#creativeHE conversation 'Disciplinary Perspectives on Creative Pedagogies' 26-31st March</li> <li>#LTHEchat Twitter conversation</li> </ul>	
April 2017 Contributions to World Creativity & Innovation Week April 15-21	<ul style="list-style-type: none"> <li>Publication CAM 6 'Exploring the Role of the Body in the Process of Creation/Re-creation' - particular reference to teaching and learning processes. Edited by Lisa Clugan.</li> <li>#creativeHE conversation also exploring the role of body in creativity during World Creativity and Innovation Week</li> <li>Publication of #101creativeideas project - 1 idea of an activity to encourage students' creativity will be posted on Twitter each day prior to WCIW</li> </ul>	
May 2017	<ul style="list-style-type: none"> <li>#creative Creativity Course (open course Creativity for Learning in HE) 22-26 May 17</li> </ul>	
September 2017 & beyond	<p>SYNTHESIS</p> <ul style="list-style-type: none"> <li>Face to face event 'Exploring Creative Pedagogies &amp; Learning Ecologies'</li> <li>Publication of 'Exploring Creative Pedagogies &amp; Learning Ecologies' book</li> <li>Publication CAM 7 'Exploring Creative Pedagogies &amp; Ecologies'</li> </ul>	

**ADDITIONAL ARTICLES**

**&**

**NEWS**



## What Participants Think

Jenny Willis

### The roots of WCIW

“What if people celebrated their potential to contribute to making significant differences in their lives and the lives of others? It was this way of thinking that drove me to imagining then creating World Creativity and Innovation Week - April 15-21 (WCIW).” (Segal 2016)



These were the words chosen by Marci Segal to describe the origins of what has become an annual event, World Creativity and Innovation Week April 15-21. The first event was her response to a headline in 2001 suggesting that her homeland, Canada, was in ‘creativity crisis’. She took April 21<sup>st</sup> as World Creativity and Innovation Day, and extended the celebration of new ideas, new decisions and new actions to a week a few years later. As of 2006 Leonardo da Vinci’s birthday, April 15<sup>th</sup> marks the first day of this now annual observance of which over 50 countries world-wide take part.

### Creative Academic Involvement

In January 2015, Norman Jackson, Chrissi Nerantzi and Alison James founded Creative Academic (CA), a not-for-profit social enterprise whose aims were summarised thus:

Our purpose is to champion creativity, in all its manifestations, in higher education in the UK and the wider world.

Our goal is to become a global HUB for the production and curation of resources that are of value to the members of our community.

(Creative Academic 2015)

In addition to these objectives, CA publishes a magazine, Creative Academic Magazine (CAM), of which I am executive editor.

In the course of curating ideas and articles, we came upon publicity for WCIW 2016. After discussion, the team decided to put forward the following proposal for our involvement:

Creative Academic will participate in this global event in 2016. Our contributions include:

- 1) Establishing a new conversational space. From December 2015 we will encourage the sharing of stories about personal creativity and innovation in everyday life through a new Google+ Community ‘Our Creative Life’.  
<https://plus.google.com/communities/106367720977059375674>
- 2) During April 2016 we will facilitate a Google+ community discussion on the theme of ‘Creativity & Innovation in Higher Education’. As well as exploring the theme the forum will provide participants with a means of sharing personal and institutional contributions to WCIW
- 3) In April 2016 we will publish Creative Academic Magazine #4 on the theme of ‘Creativity in Development & Innovation’  
<http://www.creativeacademic.uk/magazine.html>
- 4) We are also publishing a ‘Guide to Encouraging Creativity in Higher Education Teaching and Learning’  
Website: <http://www.creativeacademic.uk/>

As I researched WCIW for CAM, I was surprised to see how long the event had been taking place and was interested to know who was participating and what their experiences were. I contacted Marci Segal and established that no research had yet been conducted on this, and was delighted to find her not only receptive to my surveying participants, but very supportive. So it was that, to complement the other activities of WCIW 2016, I carried out a short survey.



Marci Segal, Founder WICW

## The survey of WCIW participants

In order to maintain absolute confidentiality, my initial plan to have a questionnaire in Word format which participants could complete and return to me was revised. Instead, we used an on-line Survey Monkey design, which Marci alone could access. She then sent me the anonymous responses. One person replied using the Word document, and 17 replied on-line. We are most grateful to everyone who took the time to take part in this survey.

The rest of this article summarises the responses given to a series of open-ended questions.

## Q1 Please outline your contribution to WCIW 2016

Four broad, and sometimes overlapping forms of contribution emerged:

### 1 Workshops and talks in the workplace

This first activity involved presenting ideas and events to colleagues, which, as the second bullet point below indicates, is not a normal part of the organisation's practice. It seems that WCIW offered an opportunity to do something different.

- We made a week in Colombia of Creativity and Innovation of 6 days with sponsor talks, workshops and Innovation tours.
- Organisation of an Open Day in our company's installation (Mindshake House in Porto) to celebrate Leonardo's birthday with a full program of creative activities, such as 2 expositions, drink and food experiences, creative thinking exercises, a Mindshake game, a collective mind map, etc. During the following week the house also had the door open to visit the expositions and to do the games. We also offered for a special price some workshops in Design Thinking and Service Design. Normally we don't do public events in our installations, as we work only for companies.
- Presentation on Creative Thinking using Lego Serious Play at Learnography's - Brunchology event.
- At Creativity Salon used a variety of singing bowls as a healing meditation. Watched and discussed two live videos on creativity. Discovered ideas based on all 3 activities.

### 2 Public engagement activities

A second set of activities related to events held outside the organisation itself. As the examples demonstrate, these ranged from local to national, educational to social.

- We held various initiatives aimed at different levels of society - schools and university students. The general public was engaged through a nation-wide challenge
- My college level Drug Use & Abuse class wrote inspirational messages and the addiction treatment hotline # on suckers. They walked through out campus and Silent Flash Mobbed classes to distribute the suckers.
- Dinner & Drawing 20th April - a creative supper club. Additionally, spreading the word about WCIW16 via Your Art Life 18th April @ Camberwell Library in partnership with Camberwell Arts and Empowering artist network.
- Locally, organized April 15 event, Living Like Leonardo, with birthday cake, arts activities and science demonstrations for the Community; facilitated a community idea swap using the Angels Advocate; designed and organized a 4.5 hour workshop for the community called, Admit it. You're Creative. All these were free.

- Globally, maintained social networking through website, Twitter, Facebook, LinkedIn; wrote articles for blog posts, was interviewed by groups of students.

### **3 Use of on-line media**

Some of the above activities mention the medium for delivery of events. On-line media appear to be particularly effective, as illustrated here:

- My organisation's contribution involved: 1) producing an online/downloadable magazine of the theme of Creativity in Development & Innovation, 2) establishing a new on-line forum for ongoing conversations about creativity 3) hosting/facilitating a week long online conversation called Imagineering in Higher Education
- Social media and podcasts
- Increased social media messaging on innovation and included #wciw hashtag

### **4 Formal teaching**

As implied in some of the activities in the above groups, formal teaching was an important medium.

- Will be teaching facilitation skills @ upcoming state convention, and available to do individual coaching sessions for those who might be 'stuck'
- Students presented two Community Problem Solving Days to area participants.
- Creating an Innovative Leadership Symposium for a Community College. 6 local organizational leaders from large organizations sat on a panel describing and explaining creative leadership and breakout sessions for participants to experience their creativity.
- My Psychology of Creativity class created games in preparation. On the day, we invited some folks to come and play our games.
- Adult learning class used CPS (creative problem solving) system to plan a celebration. Settled on cup-cake decorating and games played in a common area for others to join in.
- TEDx-talk about "Creativity Without Borders" at Stenden University in Holland; and also program leader at CREA conference in Italy, mentioning the importance of creativity and the WCIW...

## **Q2 Have you participated in WCIW before? Q3 If yes, please give brief details.**

59% of participants had taken part previously, showing a strong loyalty to the event. Nevertheless, recruiting 41% new participants in 2016 is an encouraging achievement.

Ten respondents gave an explanation of their response, which can be grouped under the following headings

### **1 Repeating the same activity as before**

This suggests that creativity may be limited, but by going out to different audiences, dissemination of ideas can be effected.

- 2015 in Bogotá we make the same event.
- In past have done the week through training others @ jobsites
- Same
- We hold similar events each year
- Dinner & Drawing - creative supper club 2015



Logo 2002-2012



- Local school celebrating Earth Day
- Been involved since its beginning in 2001

## **2 Different activities each year**

Contrary to the last sub-group, some participants create a different activity each year.

- Always an adult learning group, use CPS, come up with different celebrations.
- Other events - changes every year.

## **3 Cultural focus**

One respondent explained how the same principles were applied each year, but with a different context:

- Invited a Native American Shaman to teach us holy dancing and chanting

## **Q4 How did you learn of World Creativity and Innovation Week April 15-21?**

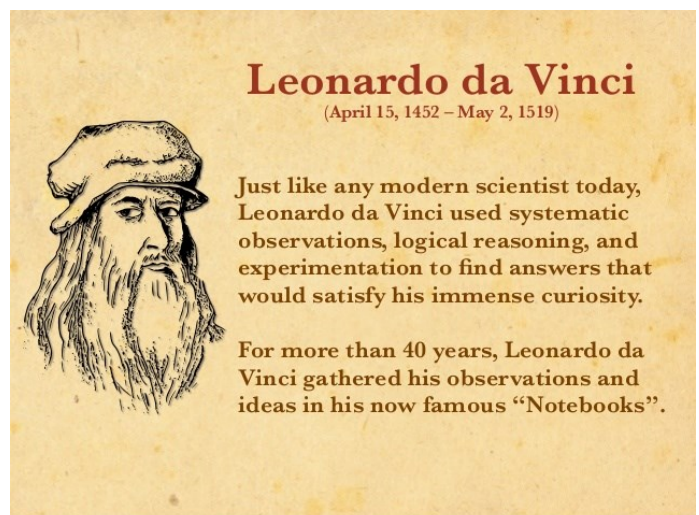
Again, emergent themes are overlapping, and are helpful in indicating which form of publicity to use for future events.

### **1 Via social media, including Marci**

The most common answer was that respondents had learnt through social media, often directly from Marci herself.

- From a post on Twitter
- From Marci's communication in FB and Linked In
- Online
- ICSC (International Center for Studies in Creativity)
- On your mailing list
- Marci's emails
- From Marci
- I know Marci S. :-)
- Through Marci Segal
- CPSI, Marci Segal, Facebook
- Created it!

WCIW commemorates the birthday of  
Leonardo da Vinci



### **2 Through workplace**

A few respondents learnt through their places of work or study:

- Upon joining my place of work.
- SUNY Buff State, ICSC
- At MSc in Creativity, Buffalo 2010-2012

### **3 From previous involvement**

It seems that those who have been involved previously may watch out for the next year's event:

- Through being involved in 2015

### **4 By chance**

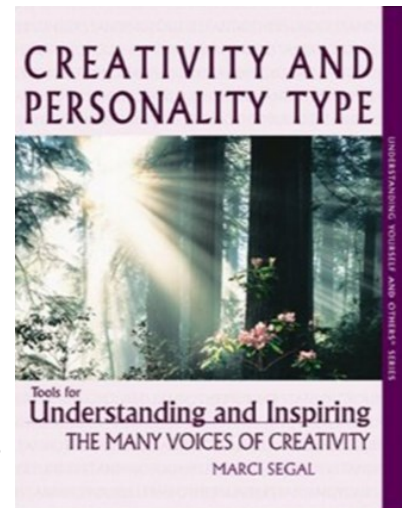
One respondent just chanced upon news of WCIW:

- Searching for creative activities for the class

### **5 Consistent with everyday organisational practice**

This final comment indicates that the organisation is trying to apply the principles of creativity to its normal practice:

- We try to adapt the essence of the WCIW in our country making activities of sharing, ideas, experience and knowledge



## **Q5 How is WCIW related to your own work/area of interest?**

One person replied simply that it is 'connected greatly.' Amongst the other responses, a number of common areas were found, which can be grouped as:

### **1 Work in an innovation/creative industry**

The respondent works in a creative field:

- We are an Innovation consulting firm with experts in Creativity and Innovation. Also we work with a foundation to help social Innovation.
- My company Mindshake centres its work in training creative thinking in companies.
- I run a creative company that seeks to inspire everyday creativity in artists, creatives and those who work in the creative industries who think they are not creative.

### **2 Mission**

Creativity is central to the individual or company's values:

- The idea of promoting awareness of the importance of creativity in education is an important part of our mission.
- Passion area, academic discipline, consultant who frees people's thinking to create new futures.

### **3 Teaching context**

Creativity is felt to be essential to the respondents' teaching, which is across sectors:

- Creativity and innovation are key to leadership classes I teach.
- I incorporate creativity into my lesson plans
- Problem solving now more critical than ever for conflict resolution, getting others to have more than just 'one idea' and thinking it's 'done'
- I teach creativity, leadership, and other topics
- I lecture in the area of creativity and innovation
- Not only do students learn about engaged to take part in their own creative activities
- Teach CPS at a community college.

#### **4 Consultant in area**

The respondent is a consultant in the field of creativity or innovation:

- I am a fulltime creativity professional: trainer, facilitator, consultant, coach and speaker
- Innovation acceleration in organisations
- I do work as an innovation consultant with Innovation Culture Group
- I use creativity and innovation in my private therapy practice and my facilitation of small groups

#### **Q6 Why did you choose to participate in WCIW 2016?**

Responses to this question reveal a mix of idealistic and practical reasons.

##### **1 To fill a perceived gap or spread awareness**

- Because there was anyone doing nothing in Colombia
- It is in my blood. Living in a new community, want to bring it here.
- I was asked to deliver a TEDx-talk; the team was not aware of the date of April 21 (sic), so I told them!
- To give my students a creative experience

##### **2 Valuable, altruistic**

Related to the former sub-group, shared values are an important factor:

- We thought it was a worthwhile thing to do and also that we would be able to communicate with and connect to people that our work does not normally reach.
- I love creativity and want to share it
- The values behind WCIW are at heart as we strongly believe in the internal creative potential of each individual.
- To be involved in global series of events seeking to raise the profile of creativity and innovation
- Because it is important to recognize opportunities that value this work.
- Promote creative thinking and innovation
- Why not! It stimulates me and my community to create something different fun and exciting

##### **3 Marketing value**

I had anticipated from my review of submissions that many participants would be using the opportunity offered by WCIW to publicise themselves. In fact, only one cited this reason.

- To give a wider approach to our work and to offer something new to our clients. To spread the concept and principles of creativity in Porto, Portugal.

##### **4 Accessible**

One respondent took advantage of the accessibility of the event:

- Easy to access. Well done. Good communications.

##### **5 Loyalty to Marci**

Personal loyalty was significant for one participant who said:

I like Marci

##### **6 Why not?**

Finally, one respondent quipped:

- Because it was there. ;-)





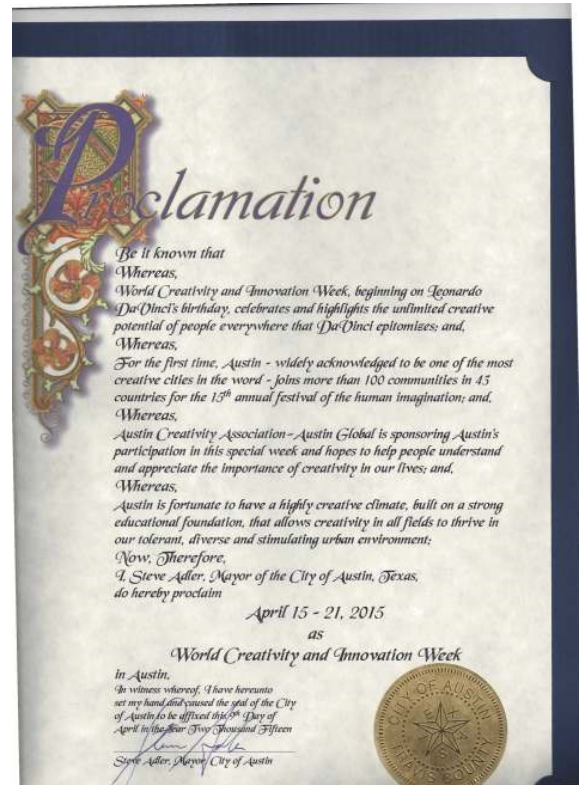
## Q7 To date, what have been the most important outcomes of taking part in WCIW 2016?

15 of the 17 on-line respondents replied to this, despite my anticipation that it might be too soon for them to be aware of outcomes. There was a surprisingly wide range of perceived outcomes, and these generally correspond with objectives. One respondent observed that the event was 'not outcome-dependent.' Dominant themes were:

### 1 Spreading awareness

This included awareness both of the importance of creativity and innovation, and of the individual or the group's work.

- Taking Creativity and Innovation to regions where nothing happens
- Exposure to a wider audience and raising awareness of WCIW of the existence of our organisation. Possibly new followers on social media and through our networks. We certainly attracted new people to our networks but it's hard to say whether these came via WCIW or our enhanced activity on social media during our online event.
- Increased awareness of what creativity can be in my students' lives.
- Publicity about the TEDx-talk, great part of my network have noticed my contribution
- Got to do an interactive workshop that helped people understand how they think
- Reawakening our creative spirits and increasing awareness of importance of innovation



### 2 Client reaction

One respondent records that there has already been positive feedback from others:

- The positive perception of the Open Day by our clients and friends.

### 3 Sense of community

WCIW was seen as bringing people together and creating a sense of unity:

- Our students felt part of a large community.
- Reminds me that we are part of a bigger picture of taking creativity to the world
- We learn a lot each year. We learn from different audiences and through the process in setting up the events.
- Being part of the network
- Other than the initiatives celebrating the week, don't believe others appreciated the essence as I. Not important in an area where creative is not encouraged.

### 4 Personal satisfaction

A sense of personal satisfaction was expressed by one respondent:

- Tremendous satisfaction at people engaging in promoting, encouraging and enabling others to unleash their natural creative urge.

### 5 Concrete outcome

In one case, there appears to have been creation of a new product:

- The students worked in two teams to create pretty innovative games

## Q8 Please add any further comments you may have on WCIW and/or suggestions for future events

Twelve respondents added comments or suggestions, as detailed below. They reinforce previous answers.

### Comments

- Maybe it will Organization can Make more press of different events around the world (sic)
- By committing our resources to making a contribution to WCIW we created a purpose that enabled us to pursue our own goals within the time frame required by the dates of WCIW
- This is a great program. Very well executed. Thank you.
- Students all took part in this activity

### Suggestions

The suggestions give ideas for improving the WCIW website information and sharing individual action, financing of the event and increasing participation.

- Introduce in the website of WCIW a map with a signal of all places/partners who participate in the WCIW.
- I'd like better sets of promo to be designed that reflect the wide nature of the annual programme I find the graphic quite corporate and fairly limiting. I'd also like to have more of a sense of community being built through and by WCIW I.e. Intros to other country specific organisations or a planned global Skype conference/webinar to build links to the global community
- Looking for ways to make it easier to participate and report.
- I would have like easy/straightforward options for adding images of our project to the site
- Ask people at conferences for contributions; send them emails in an early phase
- Great if we could get a MAJOR sponsor to increase visibility
- More ideas of other things that can be done
- Keep it up. Share online diverse ways others celebrate.

## Q9 Organisers and email contact(s)

Although the survey was anonymous, respondents were able to add their contact details if they wished to be sent a copy of the survey report. This will be sent to them individually, as well as offered to Marci Segal for inclusion on the WCIW website. Once again, we are most grateful to all for their insights and suggestions.

JW May 2016

### References

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[www.creativeacademic.uk](http://www.creativeacademic.uk)

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Image source: [https://www.google.co.uk/search?q=leonardo+da+vinci&hl=en-GB&rlz=1T4RVEB\\_enGB622GB622&source=lnms&tbm=isch&sa=X&ved=0ahUKEwiKkOa915vPAhXIL8AKHZsqDcEQ\\_AUICCGb&biw=1366&bih=612#imgsrc=v6867Gwidome6M%3A](https://www.google.co.uk/search?q=leonardo+da+vinci&hl=en-GB&rlz=1T4RVEB_enGB622GB622&source=lnms&tbm=isch&sa=X&ved=0ahUKEwiKkOa915vPAhXIL8AKHZsqDcEQ_AUICCGb&biw=1366&bih=612#imgsrc=v6867Gwidome6M%3A)



# Meet the Editorial Team

Jenny Willis

Executive Editor

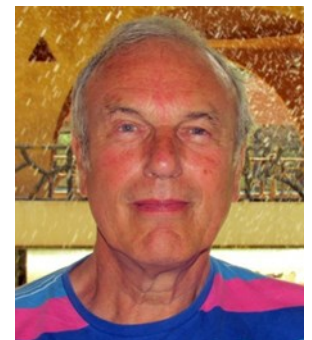
Jenny is a founding member of Lifewide Education and editor of its magazine. She has been involved in education throughout her life and refuses to give up in retirement. In addition to editing the magazines for LWE and CA, she is an ambassador for a mental health charity, careif.org, is still actively involved in research in diverse areas, including creativity, and even finds time for the odd bit of teaching!



Norman Jackson

Commissioning Editor

Norman is co-founder of Creative Academic and Commissioning Editor for the magazine. He has a long standing interest and involvement in trying to encourage higher education practitioners to share their understandings and practices in order to make higher education a better place for students' creative development. He enjoys the process of exploring and visualising new ideas and forming collaborations that enable ideas to be given substance and meaning. The magazine provides great affordance for both of these things.



Simon Rae

Illustrator

As the illustrations show Simon has a unique style that brings the written word to life with insight and humour. Simon is retired after a lifetime of working in education including many years as a Lecturer in Professional Development at the Open University.



He was recently awarded the prestigious #LTHEchat Golden Tweeter badge for his contributions to the weekly twitter chats. On receiving the award he said " I've spent my working life giving to and taking part in education and #LTHEchats have afforded me the opportunity, now I'm retired, for continuing contact and a sense of involvement with HE - plus I like to think that sometimes I can contribute helpfully to the discussions. Plus I enjoy doing the cartoons and seeing them retweeted! " Well I hope we can add to your joy Simon as you see your cartoons distributed through Creative Academic magazine.



# Reflections on a TILT/HEA event, JULY 8<sup>th</sup>, 2016: THE CENTRALITY OF THE BODY IN LEARNING AND TEACHING: 'THE BEST WAY TO SPEND A FRIDAY!'

Lisa Clughen, Nottingham Trent University

If you had to teach students the molecular structure of soap, would you invite them to dance? How about supporting students with their academic writing by using your eyes? On July 8<sup>th</sup> 2016, I ran an event sponsored by the Higher Education Academy, UK and supported by the Trent Institute for Teaching and Learning (TILT) at Nottingham Trent university that explored such 'embodied' approaches to teaching and learning. Across the globe, tutors are developing all sorts of exciting, creative ways to ensure that academic ideas are not 'merely academic', but fully meaningful to students, that is, that they embody them. After all, it is when ideas run deeply that education can be truly transformative and students empowered to own their learning for themselves.

The event was inspired by calls from critics across the globe to recognise that whilst Cartesian mind/body dualisms might have been devastated intellectually, in practice they were still very much alive in the academy. Robyn Barnacle, for instance, urges educators to re-think mind/body relations to challenge 'the rationalistic tendencies of contemporary educational discourse and practice'.

## Embodied Learning Manifesto Kieron Devlin

Yet colleagues from a wealth of disciplines are using approaches that endeavour to overcome mind/body dualisms and embrace the body for all it has to offer learning and teaching. This event brought some of them together. Participants from across the academy - science, literature and creative writing, dance, dyslexia support, academic support, art and design and creative academic practice, learning enhancement, history and heritage, modern languages, programme administration, education and educational research development - gathered together to explore how the body is central to learning and teaching. A remarkable day ensued:

Rachel Jackson from De Montfort university started the day off with a morning mindfulness meditation and ended it with a paper on how meditation can help learning.

I then opened the event with a discussion of my own work on what I call 'embodied writing support.' Inspired by scholars from medieval history to anthropology, by writers such as David Almond and Virginia Woolf, I described how I use focussed and peripheral vision to help students to generate their writing. Literacy development was an important consideration of the day. Amanda French (Birmingham City University) explored her research into the embodied aspects of writing, describing students' anxieties and the pain often surrounding the act. Alke Groppe-Wegener (Staffordshire university) showed how reading can be turned into action in her paper 'Turning textbooks into workbooks'.

The body's relationship to thinking and learning was the theme of other papers: Abbey Plumb, a postgraduate research student from Nottingham Trent university showed us a video of her students dancing the molecular



structure of soap. Simon Cauvain (Nottingham Trent university) discussed how he used sweets in his teaching of Social Work to help students to embody their learning about anti-discriminatory practice and Lindsay Davies (Nottingham Trent university) demonstrated how the body can be used to learn concepts in general.

The effect of the physical environment on perception was another theme of the day: Lucy Brown (Staffordshire university) took us out of the classroom and discussed how placing students in different physical environments can have a remarkable effect on their learning; and Kieron Devlin (London College of Fashion) offered a way of nurturing student resilience through breathing, especially in different places (including the floor).

Some sessions focussed on the issue of embodiment and lecturing - what it means to have a body and teach. Here, debates over the politics of the body arose in response to Robert Nelson's (Monash university) talk on bodily presence in teaching. Stuart Burch from Nottingham Trent university detailed his experience of foregrounding his body as he taught a history class on Antony Gormley's fourth plinth project in Trafalgar square. And Lyndsey Davies presented on personality types, intuition and sensation through the use of the Myers-Briggs type indicator.

Participant feedback was animated and alive with possibilities - there is much to explore with regards to embodiment in teaching and learning in Higher Education, it seems:

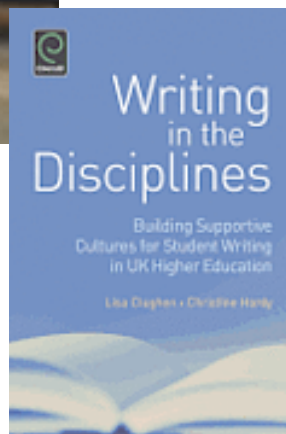
'The best way to spend a Friday! (...) It's been such a healthy experience - to be in the moment, thinking about how the mind and body are one, how we learn and teach, how we need to look after ourselves within our daily lives. It's re-opened a creative path for me; one I'm excited to explore'.

If you would like to explore this creative path too, the April issue of Creative Academic Magazine will be devoted to the 'The relationship of the body and creativity'. Publication will be followed by an on-line conversation on the #creativeHE platform on the same theme during WCIW April 15-21 2017. I am also setting up a blog to keep our conversations going - watch this space...

#### **Lisa Clughen, Nottingham Trent University**

Lisa studied at Oxford and Newcastle universities. She is a principal lecturer in Spanish, and Learning, Teaching and Academic Support Co-ordinator in the School of Arts and Humanities at Nottingham Trent University. She has worked in the field of literacy development for over 25 years, supporting students and staff in the teaching and development of academic writing, and is co-editor of *Writing in the Disciplines: Building Supportive Cultures for Student Writing in UK HE* (Emerald 2012).

Find out more about the event here: <https://www.heacademy.ac.uk/event/body-learning-and-teaching> and here: <https://wp.me/p6XeH1-7L>



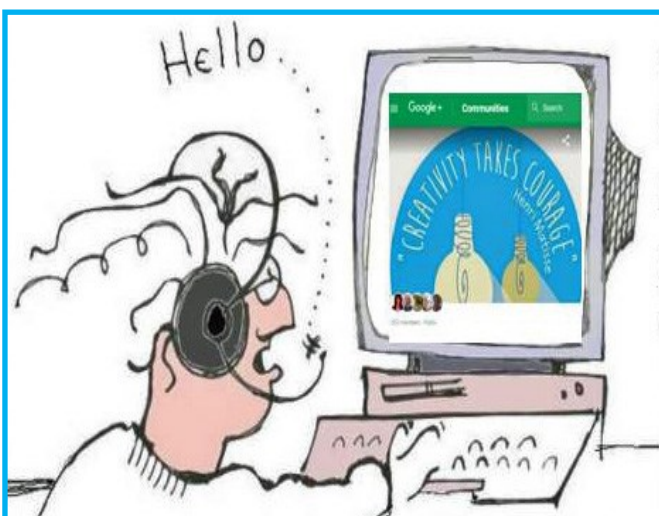


## Chrissi is Runner Up in Annual ALT Learning Technologist Awards

Congratulations to Creative Academic Co-Founder Chrissi Nerantzi who came runner up in the recent Association for Learning Technologists, Learning Technologist of the Year Awards. Chrissi has done ground breaking work in creating and facilitating several on-line communities including the #creativeHE Google+ community and platform that we have made good use of. Well done Chrissi.



<https://altc.alt.ac.uk/2016/awards/awards-finalists-and-community-choice-voting/>.



next #creativeHE conversation will explore 'Creative Pedagogies' everyday between 30/10 to 04/11 please join the conversation and share your own practices.

<https://plus.google.com/communities/110898703741307769041>



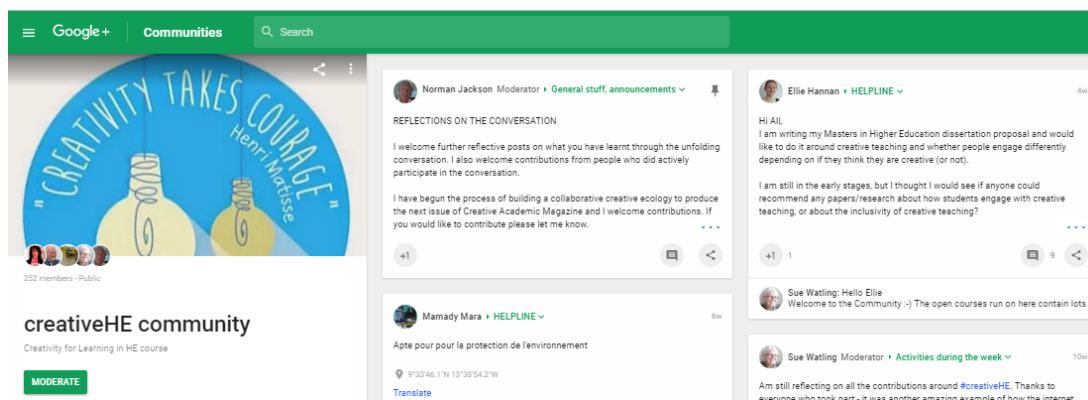


Creative Academic champions creativity in all its manifestations in higher education in the UK and the wider world. Our goal is to support a global network of people interested in creativity in higher education and committed to enabling students' creative development. Our aim is to encourage educational professionals to share practices that facilitate students' creative development in all disciplines and pedagogic contexts, and to connect researchers and their research to practitioners and their practice. Our ambition is to

become a global HUB for the production and curation of resources that are of value to the higher education community. We value 'openness' and most of our resources are published under a creative commons licence. We value collaboration and the partnerships we have formed with individuals and organisations. Membership is free and open to anyone who shares our interests and values. Our resources and activities are provided and supported by a great team of volunteers and we welcome new volunteers to the team.

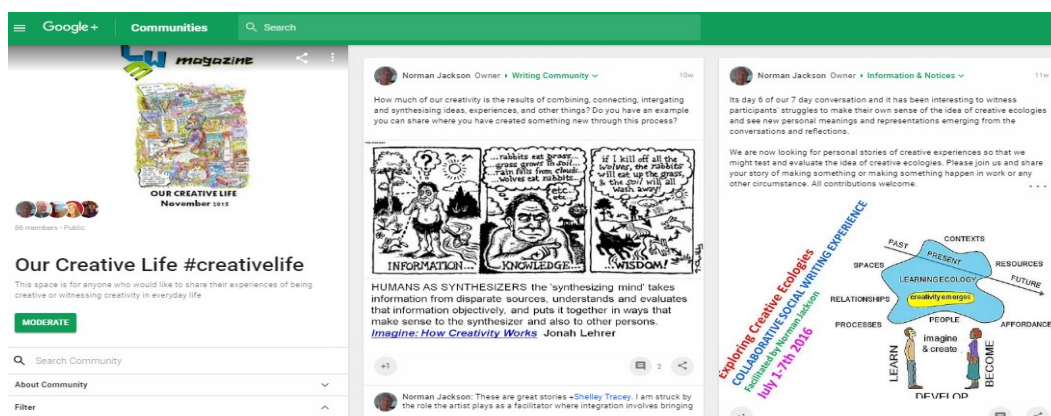
## #creativeHE

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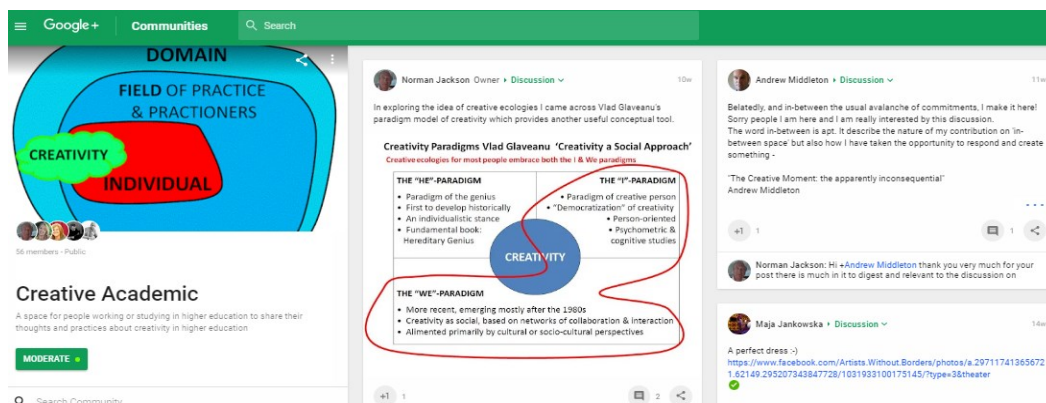
## Our Creative Life

<https://plus.google.com/communities/106367720977059375674>



## Creative Academic

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## An open invitation to join our creativity in higher education project

<http://www.creativeacademic.uk/2016-17-programme.html>