

Reflections on #creativeHE Exploring Creative Ecologies: My Personal Learning Ecology

Norman Jackson

Background - the past

It's the final day of the 7 day conversation to explore the idea of *creative ecologies* and in my morning post I invited participants to reflect on their own journey through this conversation so I'm taking this opportunity to reflect on my own process which began in March when I proposed the idea to Chrissi Nerantzi, the #creativeHE platform owner.

For me it's been such an interesting, enlightening, rejuvenating and rewarding experience and the feedback I have received tells me that participants believe it was valuable. What more could a teacher ask for? #creativeHE is special because it supports a very human experience replete with deep and meaningful conversations founded on shared experiences, caring, compassion, empathy, humour, insights and inspirations, creativity and commitment. In this post I want to share my understanding of my own ecology for learning and creativity which I am unashamedly proud of because of the way 'it helps me become a better version of myself' - one of the insights emerging from the conversation.

I believe that we need to keep exploring whatever it is we care about and commit to in life. Understanding something is not a one off event although our assessment systems often act as if it is.

I committed to exploring and developing my understandings of creativity over 15 years ago and so this current exploration is just one point on a continuum of many explorations over the years. In the last 18 months I have set up and used Creative Academic as my platform for engaging with the problem of creativity and it has increased the affordance in my life for working with the problem. I have formed working relationships with many people who are also care about creativity including Chrissi Nerantzi on a number of projects including facilitating several discussions on the #creativeHE platform which she created.

I have been working with the idea of learning ecologies since 2013 and through a succession of learning ecologies formed around particular events and projects I developed and codified my knowledge in a book in March 2016. Within the book I touch on the idea that ecologies for learning development and achievement are also the vehicles for our creativity. Creativity is not separate from the things we want to achieve and from the ongoing development of ourselves as the person we want to be. I had the idea of trying to form a developmental conversation around the idea of creative ecologies on the #creativeHE platform and Chrissi readily agreed.

Near past

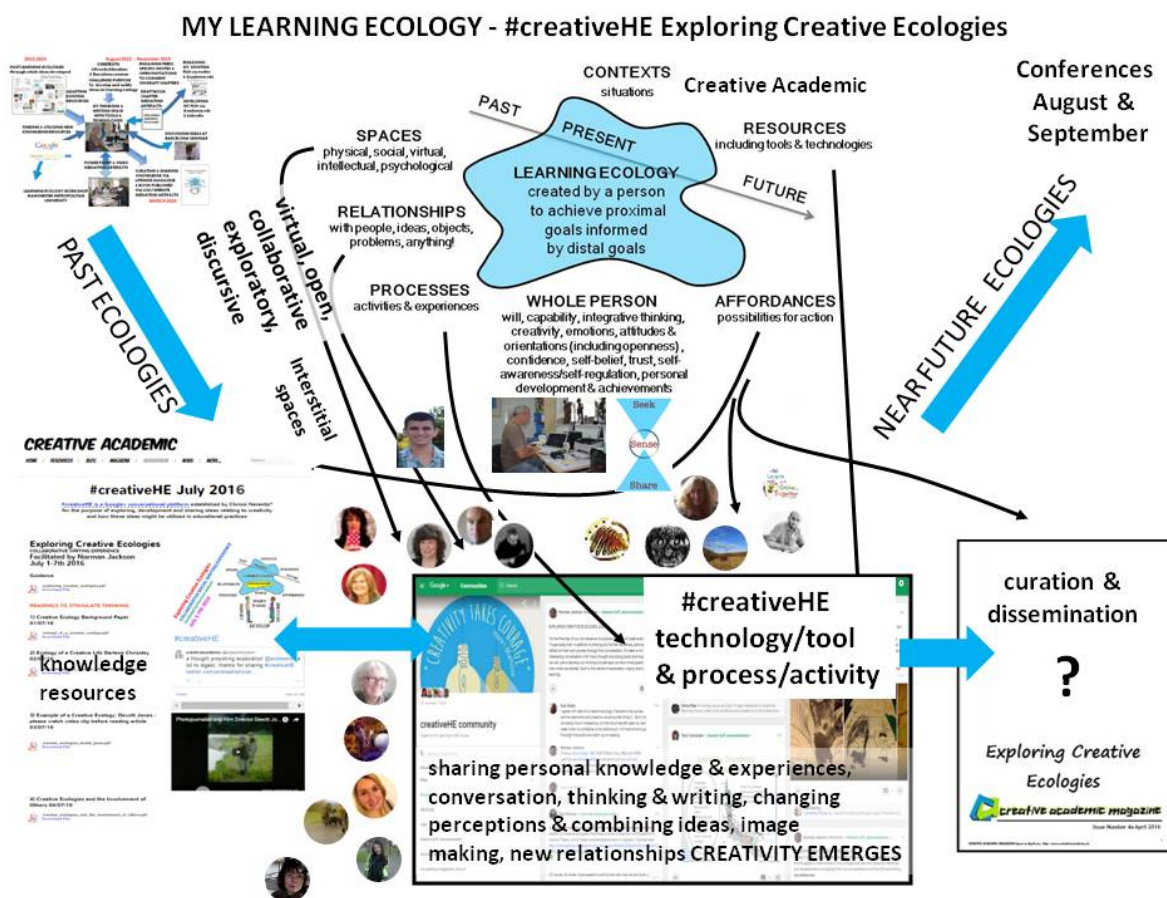
Prior to the event I thought about the way I might support a seven day conversational process. I prepared four background articles (resources) to stimulate discussion 1) an article that set out the basic idea of what a creative ecology was based on the ideas I had developed through my book 2) my interpretations of how my model of a creative ecology could be applied to the creative processes and practices of two people who had provided insights to their processes in blog posts and videos 3)

an example of how I applied the model to my own learning and development process which led to my book. I left myself space within the process to produce two more articles that were responses to some of the posts that were made. I set up a page on the Creative Academic website to enable participants to access these resources should they wish to do so.

My ecology for learning, development and creativity

It became clear during the conversation that people have to create their own meanings to the idea and make their own interpretations and visualisations. The way I make sense of my own ecology is to *create* a picture of it using powerpoint. In this picture I try to identify the elements that I have in my model within the experience I have had. Figure 1 attempts to represent the experience and the way in which the elements of the experience relate to my model. An ecology for learning involves everything in a person's life that directly or indirectly relates to their learning project. This I think explains some of the difficulty in grappling with the concept. If something seems to be important to someone and does not appear in the model then there is a problem with the model. In creating the model I tried to create high level categories that could embrace everything that is likely to be involved. So for example, there was discussion as to whether resilience and courage should be included in the model as they did not appear in the words used to describe the model. Yet they are in the model as these are qualities/attributes that the person brings to the situation.

Figure 1 A representation of my learning ecology. The picture is part of my learning ecology and is an artefact I can use to explain the idea to other people.



Through the process of creating a picture of my learning ecology I can demonstrate to myself that the model works for me and in this way I develop more confidence in the model. At the same time the process of creating the picture is an aid to reflection as it helps me think about the process.

My picture can also be used as a mediating artefact which I can share to help me convey my understandings. By sharing it and inviting feedback, I can be open to other interpretations and suggestions for improving my understanding and the model. In this way my visual representation and my reflective writing are an integral part of my learning ecology.

The picture shows me as the architect of my own ecology but lots of other people are involved in it through their participation in the #creative discussion. My ecology is therefore owned by me but co-constructed with others. A key person in my ecology is my son Navid. During the week we had many face to face conversations about ideas as they became important to us. In fact he is an ideal companion because he is always asking questions and challenging assumptions. He made some significant contributions to the discussion as a result of our conversations.

In addition to my relationship with the people in this process I also have a strong relationship with my ideas which is what actually motivates me to invest time in exploring them. The spaces in my ecology are primarily spaces for conversation and inquiry, they are mainly virtual/ asynchronous and collaborative. They are spaces where imagination, critical thinking and reflection can be used. They are spaces in which people can share their ideas and where ideas can be built upon, it's a space where people are allowed to plagiarise or piggy back on the ideas and experiences of others, where ideas can be played with, combined and synthesised. It's a space where we can share our uncertainties.

The space is rich in knowledge resources in the form of personal knowledge shared in posts, articles and artefacts, and the links that are incorporated into posts. The #creative platform itself is a resource - a tool to support conversation and the exchange of information and artefacts as is the Creative Academic site used to provide stimulus papers.

I see affordance to learn in the platforms, in the people who are participating and the unfolding conversations and through my actions I try to realise the affordance not just for myself but for others. I hold the idea that we can increase the affordances we have to explore the idea by involving those participants who want to be involved, in the production (co-creation) of a magazine which would provide a vehicle for curating the conversation and vehicle for disseminating what we have learnt. I hold more distal goals in my head - to present the idea of creative ecologies at two creativity conferences in August and September.

Prior to and during the event I did my best to promote the #creativeHE event using mail lists, twitter, linked-in and facebook. There is always a lot of uncertainty and anxiety as to whether enough people will participate as these sorts of conversations rarely work without a critical mass of participation. You need diversity of perspectives and opinions to develop new understandings. These anxiety's are relieved a little by knowing that there is a dedicated group of people who regularly support discussions through their contributions and facilitation. I am indebted to Chrissi, Jenny, Sandra, Sue, Navid, Paul, Simon and Nikos for their contributions and involvement in ways that enabled the conversation to develop.

I believe that the ecology I created to achieve the goal of leading and facilitating the #creativeHE conversation is unique to me. Using the affordances available to me in the #creativeHE platform, the knowledge and relationships I have, and my understandings of these sorts of processes and practices I enabled the conversation to be brought into existence. This was fundamentally my creative contribution. I don't believe that anyone in the world could have created in the way I did. That is not to say that others could not have done a better job but that no one could have thought about it, performed the actions and selected the knowledge to support it in the way I did. The idea of learning ecology is consistent with our uniqueness as a human being interacting with our environment that is uniquely perceived and experienced by us in a unique way and it's my belief that this is the source of human creativity.

Some new perspectives on creativity and creative ecologies I gained through the conversation

It's been a rich and interesting conversation with many thought provoking posts and insights that we can use to develop our understanding. Much of the conversation has been about exploring perceptions of creativity rather than the idea of creative ecologies. I realise that this was necessary in order to try to create a foundation of shared perceptions on which to base discussion. We all take away different things from a conversation - which is another way of saying that our unique complexity sees different value in the meanings that are shared. I will just pull out a few perspectives that caused me to progress my own understanding.

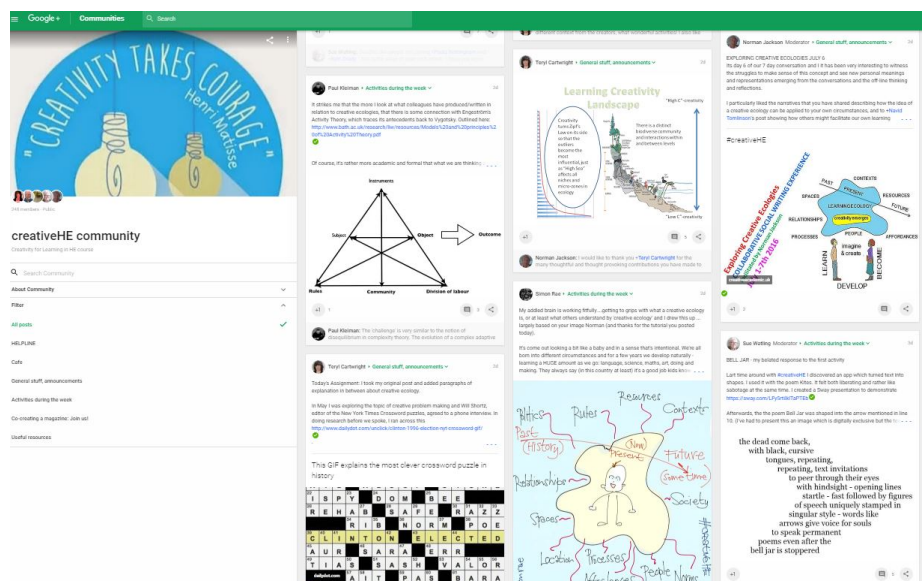
Co-creation of many meanings and selection of meanings that have meaning

Social learning is all about the individual and collective creation of meaning. During the week long conversation it was clear that many participants were trying to make their own sense of learning ecologies which they tried to express in the language and visual symbols that made sense to them. In the creation of meaning there is no right answer only lots of possibilities. This struggle to comprehend and create meaning was one of the most creative aspects of the conversation and there were many

illustrations of what a creative ecology might mean. They are all valid if the person who invented them feels that it embodies and represents their creative experiences and self-expression.

Figure 2 the #creativeHE platform for sharing and co-creating meaning.

This open sharing of personally constructed meanings is a sign of a healthy conversation. But it takes confidence and courage to publicly share



ideas, thoughts and feelings, and the meanings you have created in the #creativeHE space and I suspect that many participants monitor the conversation but do not post because of this. I hope through our consistent behaviour in the #creativeHE conversational space we are creating a culture of encouragement, trust and respect whereby most people feel empowered to contribute. At the end of the day is for us as individuals to take those meanings that have been shared and assimilate them into their own framework of knowledge and understanding. I didn't fundamentally change my understanding of my model of a learning ecology as a result of the conversation but I did develop my understandings of some aspects of the model and more importantly I did see how other people tried to make their own sense of the ideas and create their own meanings.

Learning to appreciate the creativity of others

Teryl Cartwright asked 'Do we look at things with the wrong lens (too close or too far) when we are trying to identify creativity?' and provided a link to an exhibition of photos taken at the micro and macro scale inviting viewers to guess which scale <http://www.smithsonianmag.com/science-nature/macro-or-micro-test-your-sense-of-scale-2208824/>

It triggered an interesting line of thought. I studied geology at university and later became a professional geologist for nearly 20 years. One of the reasons I loved studying geology and working as a geologist was that we were always working from the micro to the macro scales and everything in between. From the trapped fluids in minerals in 10 micron cavities or the x-ray diffraction patterns a mineral makes on photographic film to a satellite image of an area several hundred miles across. Beauty, as an emotional experience is everywhere. But the things I observed only made sense if I understood the technique and had the relevant knowledge. Without the specialist knowledge I could at best, only guess at the meaning and how what I was looking at was brought into existence - I have only just realised as I am writing this that geology is all about understanding how things formed how they were created naturally without human intervention. It's so obvious that I guess it was just assumed in everything I did. But seeing geology as the study of how the earth was and is being perpetually created is a nice connection to make in the context of my current interest. But even if I did not know what something was or how it formed I could still marvel at its beauty.

We do not need specialist knowledge to be emotionally engaged by what we see, feel, hear or experience in other ways. But we may need specialist knowledge to understand its meaning and significance. Perhaps that is also true of the products of creativity. While we have the knowledge to understand our own creativity we often lack the knowledge to fully comprehend and appreciate the creativity of others. We can appreciate at an emotional or general cognitive level someone's creativity but not necessarily understand its meaning or significance unless someone with appropriate knowledge can explain it to us. This raises the issue of mediators or agents who can help us understand the meaning and significance of creative acts, products or performances. Do such people and acts of mediation, appear in our creative ecologies, or more importantly provide agency that enables me to connect in a deeper way to the creative ideas and products of others? I thought this was worth thinking about some more but I have to admit I had not connected up my thoughts in this way before - again showing the value in the conversation we were having.

Interstitial spaces - are not always inconsequential spaces for learning

Jonathan Purdy talked about *how Different spaces afford me different things. They alter my mind set. In my garage I'm looking to use something old, often something with its own history that will live on in whatever I create with it and that I will get satisfaction from using up. In the store I'm being afforded the solutions to problems that others have designed, and I sometimes have to re-cast my problem to fit their solution. And in the drawing space - well, anything goes!* Similarly Andrew Middleton also talked about spaces particularly informal and non-formal spaces and the creation of a map showing the diversity of spaces/places that a group of people attending his workshop believed they learnt.

In my representations of learning ecologies I pay attention to the big obvious spaces but not so much the little ones. The reality is our life is full of little spaces often transitional between bigger seemingly more important spaces Andrew Middleton's idea of interstitial spaces struck me as being important to an ecological perspective of learning.

Figure 3 My understanding of interstitial spaces learnt from being a geologist many years ago illustrating how we connect up ideas sometimes learnt over 45 years ago.

As a geologist in the past I know that when an igneous rock crystallizes you end up with the last vestiges of the liquid magma occupying the interstitial spaces that are left between the crystals (see adjacent image).



The residual liquid is often enriched in particular elements. Perhaps the same is true of our spaces in life. Perhaps these interstitial spaces are enriched in different sorts of affordance for the creation of ideas?

Image credit <http://www.alexstrekeisen.it/english/pluto/orthocumulates.php>

Jonathan and Andrew's posts made me think of all the incidental and interstitial spaces and moments that flow through our ecologies for learning which help us connect up the dots of our imagination, critical thinking, reflective, associative and integrative (synthetic) thinking to make the whole of what it is we are trying to do and achieve. All these seemingly insignificant spaces offer us affordance to think. In particular they offer affordances for creativity because we may not be thinking in a conscious deliberative way about a problem or situation they provide us with affordance for the associative and synthetic types of thinking when ideas come into our head seemingly from nowhere.

So in future I will view the interstitial spaces in my learning ecologies with more respect and ask how did these spaces contribute to my learning. In this ecology my interstitial spaces were restricted as I'm mainly around the house recovering from a knee operation, so they are mainly in my garden eg chatting to my son Navid as we cut the hedge and chatting in the kitchen over lunch. Both of these homely interstitial spaces were important in this ecology.

Creativity and synthesis

Navid Tomlinson made an interesting point that in his view people are *'human synthesizers, we are all continuously taking little bits of information and combining them in different ways to create different outputs, outputs which can be anything from the way we conduct ourselves in conversation to books we may write or even the way we play games. Under this definition we are all being continuously creative but to differing levels of complexity.'*

This suggests that at the heart of our learning ecology is a synthesizing process through which we create new meaning. I like the idea that our creativity reflects the fact that we all have the innate

capacity to be inspired and take information in through all our senses, across all the different parts of our life, and throughout our whole life span. We are able to filter and make use of this information at particular times, either by accident or design, by connecting and combining it with



HUMANS AS SYNTHESIZERS the 'synthesizing mind' takes information from disparate sources, understands and evaluates that information objectively, and puts it together in ways that make sense to the synthesizer and also to other persons.

[Imagine: How Creativity Works](#) Jonah Lehrer

other thoughts to create new thoughts and feelings that mean something to us.

Figure 4 A wonderful depiction of the way integrative thinking and synthesis works.

I realise that I try to do this all the time and perhaps it is the main creative process for most academics. When I am interested in something I take lots of ideas and try to connect them in ways that make sense to me to make a more complex idea that I try to

apply and justify. It happened with the ideas of lifewide learning and learning ecologies and my attempt to embed the idea of creativity within the affordance provided by a learning ecology is another example that we have been grappling with. Going back to my days as a geologist I engaged in synthesis all the time in my research and practice as a field geologist - making a map is a way of synthesising and presenting geological information and creating a mediating artefact. I suspect that the tendency to synthesise is programmed into us so that we can transfer the tendency from one domain or context to another.

I think this perspective freshens and reinforces a belief I already hold about my learning ecology. At the heart of my learning ecology is the seek (information) sense (filter, process, create meaning from information), share (synthesised meanings) model that has been developed by Harold Jarche.

Figure 5 Seek, sense share model of information processing Jarch (2014)

Irene Stella Vassilakopouou made the important point that although we may create and share the meanings we create through synthesis, *'the way we understand things doesn't [necessarily] make sense to others, so sometimes [the results of] our creativity may frustrate the other people.'* Simply sharing the meanings we have created and share does not mean that someone else will accept these meaning in the same way. I read somewhere that once you have shared a meaning with an audience you no longer control it. It becomes whatever each person in the audience feels it means and this is the likely process within our conversation and the likely outcome of the conversation. Perhaps our creativity only becomes recognised when enough people in the field accept the meanings we have created



Creativity through synthesis with different levels of complexity

Navid Tomlinson argued that *'If creativity is simply creating something new then it cannot be more or less creative, creativity is an absolute'*. In order to distinguish between creative acts he uses the idea of complexity. At the heart of his concept is the idea that creativity can be differentiated by the levels of complexity involved in the synthesis. *[If] I have synthesised multiple sources, thought about and grappled with [multiple and] complex ideas, [I have] produced a complex product - my change in understanding.It seems to be there is a direct correlation between the complexity of our ecology and the complexity of our creative products,*

I would suggest that we should see complex ecologies as a method to help us produce complex creative outputs. Complexity may be reflected 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 time scale over which the ecology is developed and its connectivity to other learning ecologies, the resources that we need to support it.

<https://docs.google.com/document/d/1v6SpLGknfG0zRJ5KEat7LM3PFXp0FJUhBaN-u2L9Px8/edit>

I thought there was a lot of interesting ideas in Navid's article so I sat down and wrote my own article to work out my own understandings.

Complexity and 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 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 *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."* (Csikszentmihalyi 1996).

By "complexity" he meant (Rivero 2015) 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.

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. Situations can be categorised according to whether the context is familiar or unfamiliar and whether the problem (challenge or opportunity) is familiar or unfamiliar. Unfamiliarity, is one aspect 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 over considerable periods of time. We might visualise different levels of complexity in social situations using the Cynefin framework developed by Snowden (Snowden 2000). There are four domains within the framework.

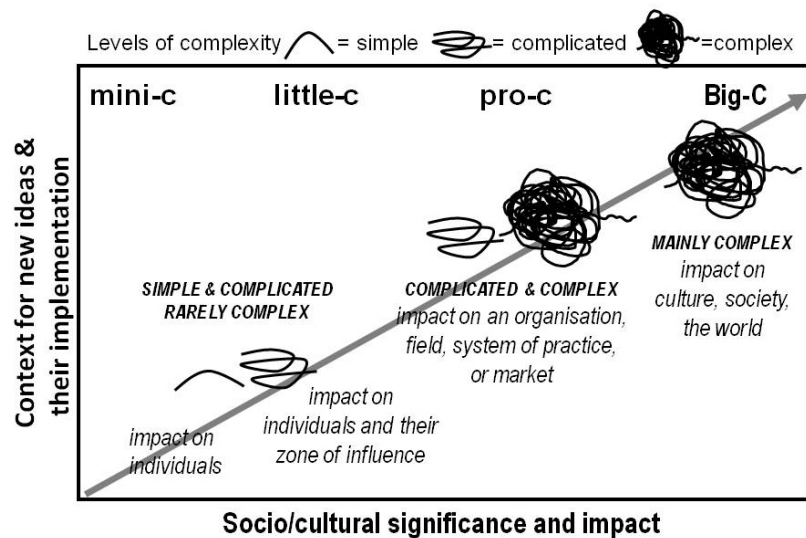
In the *simple* domain things have a simple cause and effect. *Complicated* situations are not single events but involve a stream of interconnected situations (many of which may be simple) linked to achieving a goal (like solving a difficult problem or bringing about a significant innovation or corporate 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

Levels of complexity in learning ecologies

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 (Jackson 2016). We might make use of the Cynefin tool to evaluate the situations, problems and opportunities our ecologies for learning and creativity are engaging with. I illustrated the idea with examples of simple, complicated and complex learning ecologies. Kaufman and Beghetto (2000) 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

Figure 6 My own synthesis combining the 4C model of creativity Kaufman and Beghetto (2000) with the complexity model of Snowden (2000). An adaptive creative product of the conversation.



I attempted my own synthesis to integrate a complexity perspective into the 4C model of creativity (Figure 6). 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.

New appreciation of the relationship between creativity, complexity and creative ecologies

Synthesis has been a recurrent theme in the #creativeHE conversation and my new understandings are of this nature. I like the idea that ultimately our motivation to be creative reflects both circumstances and affordances we perceive in our environment, our highly individual qualities and capabilities as a person and our intrinsic need or desire to do things for ourselves that help us become 'a newer [and better] version of oneself' (Paula Nottingham) in the manner Navid Tomlinson describes and Rogers (1961) equates with self-actualisation. I think it's this combination of a person interacting with themselves (their complexity) and their environment (affordance and complexity) that shapes the way a person's creativity emerges. It is not surprising to me that the combination of an individual's unique complexity (personality, orientations, passions and other emotions, capabilities, experiences/past history, values, beliefs and ambitions), perceiving an environment in which there are affordances - potential for acting in certain ways to achieve particular things, should choose to act in ways that leads to outcomes that the individual would believe were creative (in an absolute rather than qualitative way), if they held a concept of creativity that accommodated these outcomes. It does not mean that other people will perceive these outcomes as being creative as they may lack the knowledge to make a judgment and/or hold different understandings of what being creative means.

Looking back over the week I can see my own creativity in action in the way I played with and develop ideas that were shared and combined and synthesised them in real time with ideas I already owned. Once again I am reminded of two concepts of creativity that seem to explain what was happening in me as I interacted with my complex world with my unique complexities that make me who I am and who I want to become namely:

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's 1970)

'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', (Rogers 1961/2004:350).

References

- Csikszentmihalyi M (1996) *Creativity: The Work and Lives of 91 Eminent People*, by, published by Dellas, M., & Gaier, E. L. (1970) Identification of creativity: The individual. *Psychol. Bull.* 73:55– 73 HarperCollins, 1996. <https://www.psychologytoday.com/articles/199607/the-creative-personality>
- Jackson, N J (2016) *Exploring Learning Ecologies* Lulu publishing
- Jarche, H. (2014) The Seek > Sense > Share Framework *Inside Learning Technologies* January 2014, *Posted Monday, 10 February 22 014* <http://jarche.com/2014/02/the-see-sense-share-framework/>
- Kaufman, J.C., and Beghetto, R.A. (2009) Beyond Big and Little: The Four C Model of Creativity. *Review of General Psychology* 13, 1, 1-12.
- Rivero L (2015) Creativity's Monsters: Making Friends with Complexity *Psychology Today* <https://www.psychologytoday.com/blog/creative-synthesis/201502/creativity-s-monsters-making-friends-complexity>
- Rogers, C.R., (1961) *On becoming a person*. Boston: Houghton Mifflin
- Snowden, D. (2000) *Cynefin, A Sense of Time and Place: An Ecological Approach to Sense Making and Learning in Formal and Informal Communities*. Conference proceedings of KMAC at the University of Aston, July 2000 and Snowden, D. (2000) *Cynefin: A Sense of Time and Space, the Social Ecology of Knowledge Management*. In C. Despres and D. Chauvel (eds) *Knowledge Horizons: The Present and the Promise of Knowledge Management*, Bost on: Butterworth Heinemann.
- Stephenson, J. (1998) The Concept of Capability and Its Importance in Higher Education. In J. Stephenson and M. Yorke (eds) *Capability and Quality in Higher Education*, London: Kogan Page.
- Tomlinson N (2016) *Complex ecologies and creativity* <https://docs.google.com/document/d/1v6SplGknfG0zRJ5KEat7LM3PFXp0FJUhbAN-u2L9Px8/edit#>