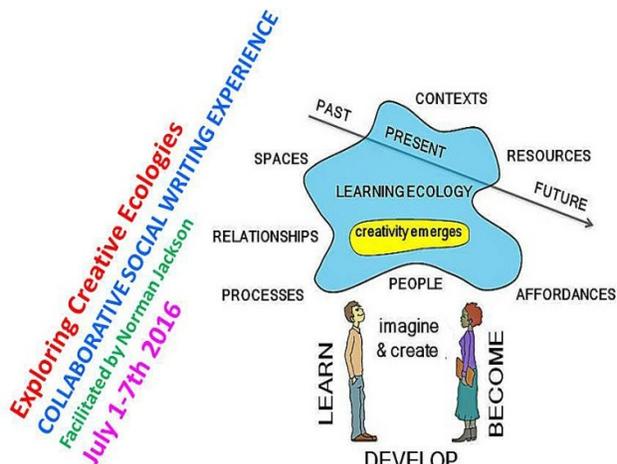


Background Paper 'Exploring Creative Ecologies' #creativeHE

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The purpose of this #creativeHE inquiry is to explore the idea that creativity emerges from the ecologies we create to learn, develop and achieve something we value. During the process participants are encouraged to create a narrative describing an experience when they were creative and use the framework of a learning ecology (figure 1 &2) to test the idea that creativity is an ecological phenomenon - *'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).

The narratives, discussions and conversations shared in the #creativeHE forum will be used to produce a special issue of Creative Academic Magazine.

RESEARCH QUESTION:

1 Does the model for a learning ecology summarised in this paper provide an adequate framework for understanding the way creativity emerges from the circumstances of our life? How might the model be improved?

Concept of a Learning Ecology

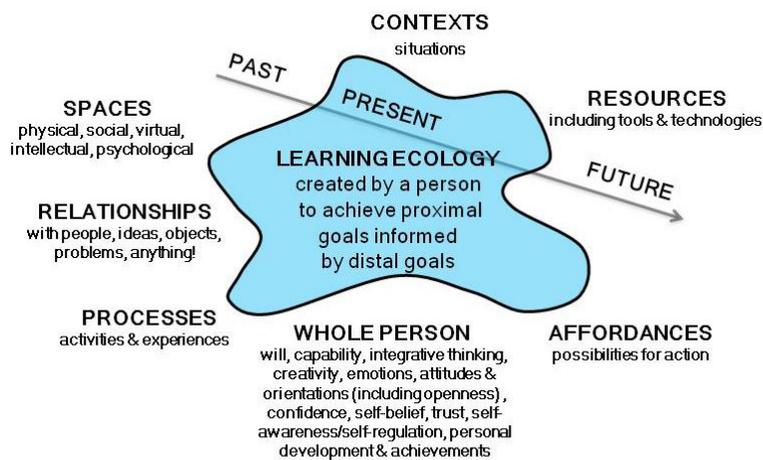
In nature an ecosystem comprises the complex set of relationships and interactions among the resources, habitats, and residents of an area for the purpose of living. Each organism within an ecosystem has its own unique ecology within the ecosystem through which it lives its daily life, so the whole ecosystem 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 (Jackson 2016a). While all ecosystems are complex adaptive systems that learn to live with, and when necessary adapt to, their environment, the making of meanings and sharing of understandings (learning) are a primary interest and purpose of human ecosocial systems together with their continuous development and improvement (Lemke 2000).

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 (Ingold 2000). 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.



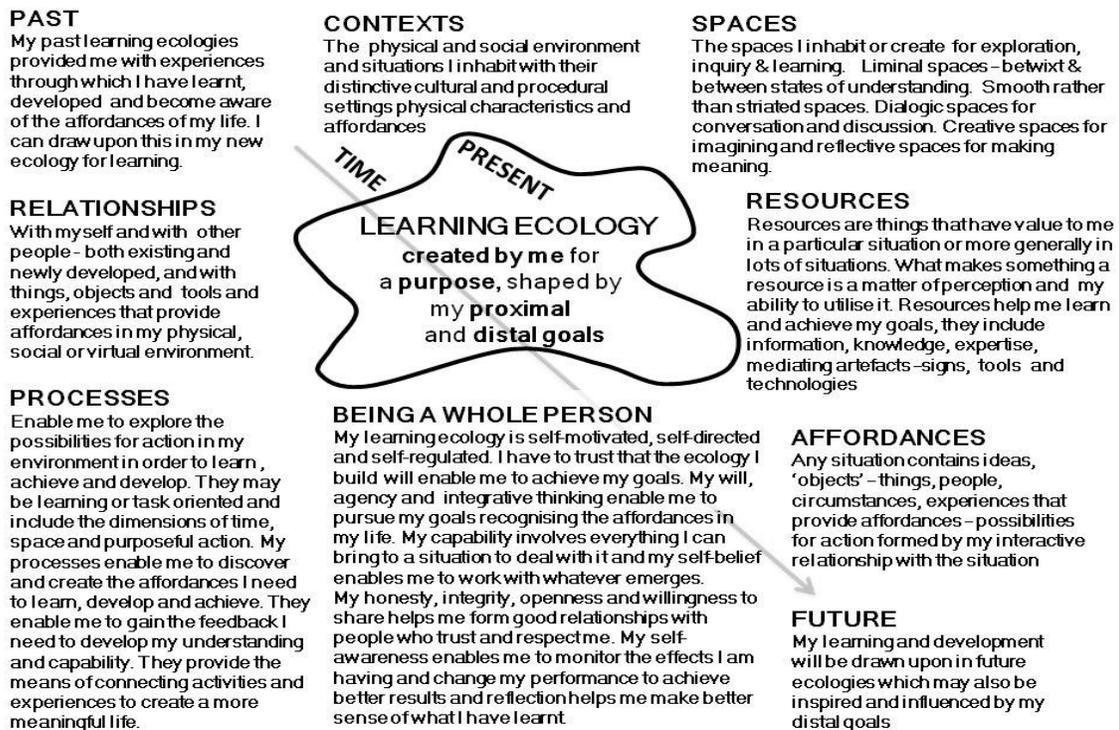
Exploring Learning Ecologies <https://www.lulu.com/>

Model of a Learning Ecology

To help explore, apply and evaluate the idea of a learning ecology I have developed a model to explain the elements it contains (Figure 1 & 2)

Figure 1 Components of a learning ecology (Jackson 2016)

Figure 2 Explanation of the components of a learning ecology (Jackson 2016)



Growing out of the exploration of this idea is a belief that our ecologies for learning embrace all the physical and virtual places and spaces we inhabit in our everyday lives and the learning and the meaning we gain from the contexts and situations that constitute our lives. They are the product of both imagination and reason and they are enacted using all our capability and ingenuity. They are therefore one of 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 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 higher education curriculum or teaching and learning practices.

Ecological Perspective on Personal Creativity

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

Rogers' view of personal creativity 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. In fact, I believe that our creativity lies in seeing affordance in an idea, thing or situation and then doing something useful and novel (at least to ourselves) with what is afforded. (I have illustrated this idea in a blog post Jackson 2016b).

A learning ecology contains not only the physical, virtual and social spaces that form the circumstances of our lives, but also the mental / psychological spaces that enable us to think about ideas and situations in a variety of ways. At the neurological level creative insights can arise in two processing modes—spontaneous and deliberate (Dietrich 2004:1015). A number of researchers have pointed out that creative insights are marked by sudden realizations that tend to occur in a relaxed mental state that is characterized by defocused attention (eg Martindale, 1999). Other researchers have argued the opposite view— that is, creativity is the result of deliberate and methodical problem solving (e.g. Sternberg & Lubart, 1999). From Watson and Crick's discovery of DNA to Edison's inventions and Bach's Brandenburg Concertos, it is abundantly clear that creative work is often the result of laborious trial and error. An energetic ecology for learning and achievement creates a mental environment within which both of these modes of gaining creative insights are possible.

The mental / psychological spaces we create within an ecology for learning, development and achievement are rich and varied. They include (Jackson 2016a):

Space 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) 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' (Cook and Brown 1999:62).

Space 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. 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 imagine, to ask 'what if' and generate entirely new possibilities from situations we have experienced. This enables us to create mental models that help us make good decisions and plans about what to do. Through our imagination space we can generate ideas, connect them to all sorts of things, select and synthesise particular thoughts and create entirely new perspectives and possibilities.

Spaces for conversation & discussion - our learning ecology spaces are also 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 creating, finding/using our voice - all the spaces in our ecologies for learning provide affordance for seeing the world as we experience it and as we imagine it. Providing us with new sorts of information and knowledge with which to make better or different senses of what it means. 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.

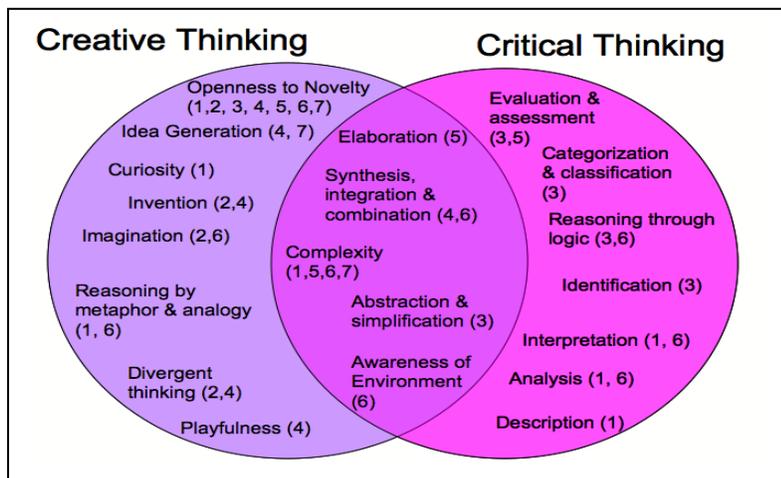


Figure 4 Integration of creative and critical thinking in problem solving (Puccio, Murdock, and Mance 2005)

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 (Puccio et al 2005 and figure 4).

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.

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 (2008:15) was right when he said “‘Will’ is the most important concept in education. Without a will nothing is possible.” Will forms around purposes which 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 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 ability to work with whatever emerges through our engagement with these circumstances.

Perceptions of Creativity and Being Creative

The meanings we give to creativity and being creative frame our thinking and actions and the way we experience being creative. 'Being creative' has both narrow and broader meanings (Lent, 2014). 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.

Macdonald (1995: 123-24) distinguishes two different kinds of creativity namely, production-related and discovery-related. Production-related creativity doesn't only mean novel inventions and product designs, he means the creation of something of value that never existed before, in *any creative medium*: canvas and paint, clay, bronze, electronics, architectural materials, machined metal, welded metal, paper/computer and words, biochemistry, and an infinite number of other media for creative self-expression. The product or creation need not be novel in all respects, but something about it must be novel, and it must have value – aesthetic value, utilitarian value, inspirational value, or value of some other kind.

Discovery-related creativity on the other hand has more to do with seeing something in a different/novel way. One of its manifestations is the scientific breakthrough where insight leads to yet another layer being peeled off the onion of perplexity and truth. Another manifestation of discovery-related creativity is spiritual seeing, where the individual changes to a new and more

enlightened perspective on something. But the task of expressing these insights-of-discovery to others involves returning to production-oriented creativity in order to share the insights that have been gained. This insight means that any sharing of creative self-expression must involve a 'product' or 'performance' in the case of oral communication or physical demonstration.

Exploring Our Own Ecologies for Personal Creativity

The purpose of the #creativeHE exploration is to apply, test, evaluate and develop the idea that our ecologies for learning, development and achievement are also the vehicles for our personal and collaborative creativity.

The methodology we are using is for participants to create and share a written and/or graphical narrative of an experience in any context or situation, in which they believe they were creative. Each 1000-2000 word narrative (can include illustrations, photos and other media) will have a descriptive element and an evaluation from an ecological perspective drawing on any ecological concepts the writer feels are appropriate including the framework developed in this paper. The narratives and insights gained will be shared through posts on the #creativeHE platform.

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

In your narrative please share your own perceptions and perspectives on your creativity and also consider the value of Carl Rogers ecological concept in your own narrative of 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 life'*, (Rogers 1961/2004:350)

SUGGESTED PROCESS FOR EVALUATING THE IDEA OF CREATIVE ECOLOGIES

After reading the introductory paper.

1 Construct a narrative describing an experience that you have been involved in that required or encouraged you to be creative - please use these prompts if you think they are helpful

- the background/contexts and any challenge(s) you were addressing
- your goals/objectives
- the affordances/opportunities in the situation with potential for action and creativity
- the types of spaces that were involved (physical/virtual/mental)
- the process you created and the activities you undertook to achieve your goals
- the people/relationships that were important in your experience
- the resources you used or created
- the ways in which you used your creativity and what was creative about what you did - where did ideas come from?
- the qualities, dispositions, values, knowledge and skill that you brought to the situation

2 Reflect on your narrative drawing out any insights on the ecological nature of the way creativity emerged from the circumstances you describe and any shortcomings or inadequacies of the idea of creative ecologies.

Throughout the process

3 Share aspects of your narrative and insights you have gained with other participants on the #creativeHE community website and invite them to comment and share their perspectives.

4 Read and learn from the postings and comments of other participants and refine your own thinking and narrative

At the end of the thinking and writing process the intention is to curate what has been shared and learnt through an issue of Creative Academic Magazine <http://www.creativeacademic.uk/magazine.html> This is our tangible, creative product, from our co-created learning ecology. The magazine will be published on the Creative Academic website to enable others to benefit from our explorations. If you do not want to share your narrative (which can be anonymised) through the magazine, please let me know.

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