

Concept of a Creative Ecology

Norman Jackson



Norman is Co-Founder of Creative Academic & Lifewide Education

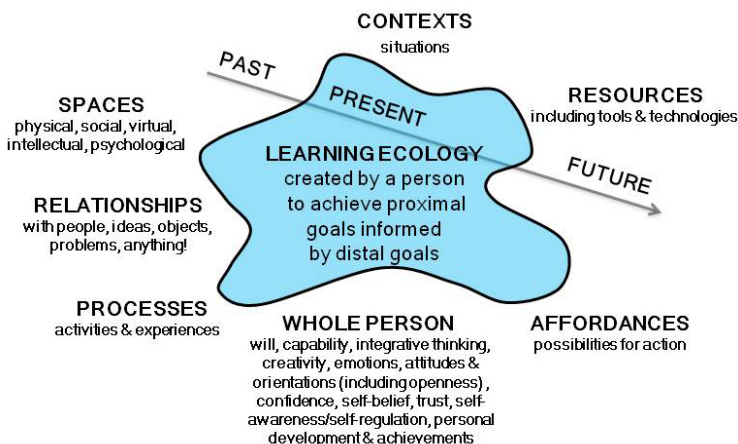
Creative Academic champions creativity in all its manifestations in higher education in the UK and the wider world and supports a global network of people interested in creativity in higher education and committed to enabling students' creative development. It encourages educational professionals to share practices that facilitate students' creative development in all disciplines and pedagogic contexts, and it seeks to connect researchers and their research to practitioners and their practice in order to benefit students and their learning. Membership is free and open to anyone who shares these interests and values. <http://www.creativeacademic.uk/>

Ecologies for learning, development & achievement

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 whole ecosystem so that it is maintained and sustained. When something upsets the balance - like a significant change in environmental conditions or the introduction of new species, the ecosystem is disturbed, organisms must adapt or escape to find better conditions and a new sense of order and balance is created.

A similar conceptualisation can be applied to human ecological systems or ecosocial systems (Lemke 2000, Jackson 2016) - the set of relationships and interactions among the people, resources, habitats, and other residents of an area for the purpose of living (Jackson 2016). 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 (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 and attempting to achieve without reference to ourselves as the organism that is perceiving and interacting with the environment we inhabit in order to learn, develop and achieve.

Figure 1 Components of a learning ecology (Jackson 2016)

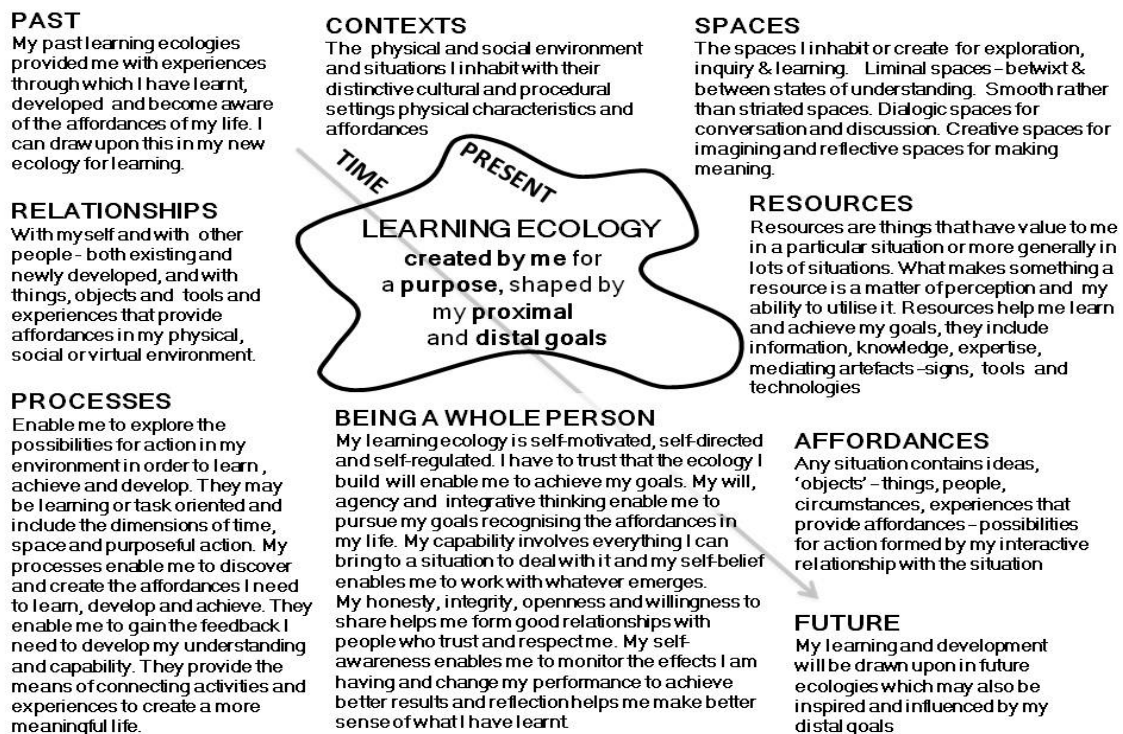
Exploring Learning Ecologies <https://www.lulu.com/>

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.

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 processes for learning, development and achievement (Figure 1 & 2)

Figure 2 Explanation of the components of a learning ecology¹



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. It is often said that necessity is the mother of invention and therefore a driver of creativity but this is not the case when we play with and pursue ideas for the sheer joy of using our imagination and intellect. Being creative here is both personal - it gives us pleasure and a sense of fulfillment and social by giving is the sense that we are contributing to something bigger than ourselves that will outlive us when we are gone.

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 (Rogers 1961). His view of personal creativity (see quote on right) and how it emerges from the circumstances of our life, is an ecological concept. I like it as a way of framing our creativity because it 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 worlds we inhabit.



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

But the idea that creativity and the experience of being creative involves people acting and interacting with their world can, like so many ideas in learning and education, be seen in the ideas and writings of John Dewey (Dewey 1934). Glavenau et al (2013) 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 (Glavenau et al 2013:2).

These ideas were developed by Woodman and Schoenfeldt (1990) who proposed an interactionist model of creative behavior at the individual level. This model was later developed by Woodman et al.⁸ 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' behavior(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) (Meusburger 2009)

Meusburger (2009a, b) 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.

'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'^{9:98}

'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.'^{10:2}

The interactionist ways of looking at creativity is consistent with the ideas of '*creativity as action and of creative work as activity*' (Glavenau et al 2013:1 & 11). 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 perform⁶. Creativity exists on the other hand also *as action* whenever the attribute of being creative actually comes to define the form of expression' (Glavenau et al 2013:2). 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.

Thinking spaces within a creative ecology

An ecology for learning, development and achievement that contains affordance - our potential for thinking and action, embraces not only the physical, virtual and social spaces in our environment, also contains the mental / psychological spaces that enable us to think about and experience ideas and situations in a variety of ways : including creative thinking. Our learning ecologies that embrace ourselves acting and interacting with our ideas and environment both host and stimulate our imagination which feed 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 integrated with other cognitive processes, is the way we perceive the affordance in a situation (Jackson, 2016b).

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' (Pendleton-Jullian and Seely Brown 2016). At the neurological level creative insights can arise in two processing modes—spontaneous and deliberate (Dietrich 2003:1015). An energetic ecology for

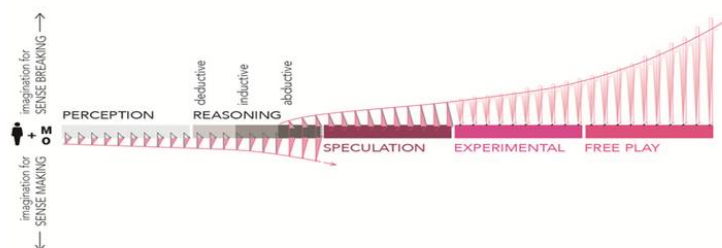


Ann Pendleton-Jullian
& John Seely Brown



'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/>

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 (Jackson 2016a):

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) 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).

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 (2016). 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 (2007:15) 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 (Joas 1996). ‘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'* (Rogers 1961).

Story of an Ecology for Learning and Creative Achievement : Dewitt Jones

Dewitt Jones the award winning photographer, tells the story (Jones 2013) of an assignment in which he had to produce a photograph of salmon fishing in Scotland for a Dewar's Whisky advertising campaign. As the story unfolds he finds himself in a set of circumstances that he did not imagine but his thought processes and actions enabled him to interact with and learn about the unfamiliar context he was in. Using his field specific knowledge, technical skills and imagination he produced 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 (Kaufman and Beghetto 2009) which I argue emerged through his ecology for learning to achieve. 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>

Narrative



This is not assignment for the [national] geographic but a big advertising campaign I did for Dewar's 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, 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."

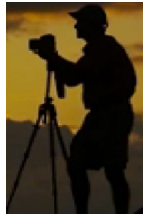


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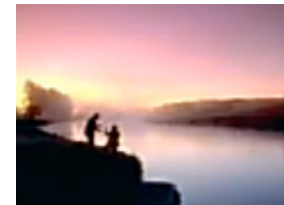


It was up to me. How many times every week is up to you? I got talking to one of the guides, the gillies. The gentleman there in the foreground. Each beat of the river, each stretch has a different guide, a different gilly and they know every rock, and every shoal and every riffle. He told me that salmon 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 we create* involving our whole selves 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 Rogers (1961:350). We can use the model of a learning ecology proposed earlier (Figure 1) to analyse 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). But we sense that he is a man that strives to achieve the very best he can in whatever circumstances he finds himself. His proximal goal is set within his implicit distal goal of sustaining and developing himself as the world class professional photographer he is. It's these deeper meanings that he gives his

professional life within which this transient ecology for learning, developing and achieving is constructed.

In his narrative DJ shows us that when we are faced with a new and unknown context and situation we draw on our 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. Surprise and the apprehension or excitement it creates contains affordance and stimulation for new thinking and action. We have to take steps 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. The way he feels about the environment he is in changes as he learns more about - his curiosity leads him to discover things that intrigue and engage his intellect and his emotions.

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) he uses the expression 'I want to be in the place of most potential' to show us the motivations that are driving his thinking and actions.

Figure 3 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.



In seeking this knowledge he forms relationships with the gillies, the people who know the environment and its daily dynamics better than anyone else. We can see through his story telling that he has a vivid and playful imagination and he shares his excitement when he recognises the possibilities for action in the situation and circumstances he is inhabiting. We get a sense of discovery-driven excitement as he tries and succeeds in discovering the place and time of highest potential to achieve what he wants to achieve. He demonstrates well how he uses his imagination to imagine 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 desires.

Taking the photographs is not a random act, it is 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 and 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 images he was searching for but not knowing how the evolving natural conditions would enable him to produce these photographs before they happened. 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 to himself as well as satisfying the technical brief he had been given.

The ecological perspective suggests that his creativity emerged over time from his interactions with all of these things in his environment in the elegant manner described by Rogers (1961). It is not easy to identify creativity in one particular thing, rather it is integrated into his ways of thinking, behaving and being when in situations that required and encouraged him to be creative.

The wisdom in DJ's story of personal creativity is in the way he reveals that not only do we need domain specific technical knowledge and abilities to fulfil our goals, we need to learn about the environment we are inhabiting and applying our technical knowledge and skill, and to 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 deep contextual knowledge and understandings. Furthermore, he shows us how creativity is not about searching for one right answer, and we should not be satisfied with one possible right answer that is good enough, but should carry on searching for more possibilities until we are satisfied that we have enough possible right answers to choose from. 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 alone, rather it is a decision that is negotiated with others - presumably his clients the marketing folk at Dewers had some say in the matter. In this way we can perhaps connect to Csikszentmihaly's (1996) 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 - in this case the communication and advertising experts in the marketing department.

An ecology for further inquiry

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 deliberate planned and emergent opportunistic ways.

But what relevance do these ideas have for higher education? The wisdom in the story told by Dewitt Jones is that we can perhaps use the insights he provides to design and create learning ecologies for students within which their creativity is more likely to be engaged and used. How can we design learning environments, activities and experiences that contain within them the unfamiliar and unknown challenges and surprises that stimulate imagination, motivation and action to create novel solutions? Here we move into the realms of creative pedagogies - the approaches used by teachers to enable learners to create their own ecologies out of which their own creativity emerges. Clearly there is merit in linking the ideas of teachers' creative pedagogies and students' ecologies for learning and achievement, including their creative achievement.

In the next stage of exploring these ideas we want to build an ecology for collaborative inquiry. In the coming year Creative Academic is building and leading a consortium of interested parties - individuals, projects and organisations to explore the idea of *creative pedagogies and learning ecologies*, through a partly planned / partly emergent programme of activities (Appendix 1). The planned element of our project involves connecting and integrating the activities of Creative Academic, #creativeHE, the Greenhouse, the National Teaching Fellowship #pin project focused on Pedagogic Innovators and Lifewide Education (see appendix 1). 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 particular, we would like to extend an invitation to the members of the BERA Creativity Special Interest Group.

Sources

- Barnett, R (2007) *A Will To Learn: Being a Student in an Age of Uncertainty* Society for Research into Higher Education & Open University Press MaGraw Hill: Maidenhead
- Cook, S. D. N. & Brown, J. S. (1999) Bridging epistemologies: the generative dance between organisational knowledge and organizational knowing. *Organizational Science* 10 (4) 381-400.
- Csikszentmihalyi, M. (1996) *Creativity: The Work and Lives of 91 Eminent People*, Harper Collins
- Jones, D. (2013) Dewitt Jones on Creativity <https://www.youtube.com/watch?v=PVL2ruZiXso>
- Dietrich, A. (2003) The cognitive neuroscience of creativity *Psychonomic Bulletin & Review* 2004, 11 (6), 1011-1026
- Dewey, J. (1934). *Art as Experience*. NewYork: Penguin.
- Glaveanu V., Lubart T, Bonnardel, N., Botella, M., Biais, P-M., Desainte-Catherine M., Georgsdottir, A., Guillou, K., Kurtag, G., Mouchiroud, C., Storme, M., Wojtczuk, A., and Zenasni, F. (2013) Creativity

- as action: findings from five creative domains *Frontiers in Psychology* Volume 4 | Article 176 1-14
available at: <http://journal.frontiersin.org/article/10.3389/fpsyg.2013.00176/full>
- Ingold, T. (2000) Hunting and gathering as ways of perceiving the environment. *The Perception of the Environment. Essays on livelihood, dwelling and skill* Routledge
- Jackson N J (2016a) Exploring Learning Ecologies <http://www.lulu.com/home>
- Jackson, N. J. (2016b) If creativity is seeing affordance, development is realising what is afforded
<https://www.linkedin.com/pulse/creativity-seeing-affordance-development-realising-what-jackson?trk=prof-post>
- Joas, H. (1996). *The Creativity of Action*. Cambridge: Polity Press
- 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.
- Lemke, J. (2000) Across the Scales of Time: Artifacts, Activities, and Meanings in Ecosocial Systems. *Mind, Culture and Activity* 7 (4), 273-290 available on-line at <http://www.jaylemke.com/storage/Scales-of-time-MCA2000.pdf>
- Lent, A. (2014) Why is creativity the most important political concept of the 21st Century?
<http://www.rsablogs.org.uk/2014/adam-lent/creativity-important-reasons/>
- Meusburger, P. (2009) Milieus of Creativity: The Role of Places, Environments and Spatial Contexts,
in Meusburger, P., Funke, J., and Wunder, E. (eds.), *Milieus of Creativity: An Interdisciplinary Approach to Spatiality of Creativity*. Knowledge and Space 2. Springer 97-149
- Meusburger, P., Funke, J., and Wunder, E. (eds.) (2009) Introduction: The Spatiality of Creativity in
Meusburger, P., Funke, J., and Wunder, E. (eds.), *Milieus of Creativity: An Interdisciplinary Approach to Spatiality of Creativity*. Knowledge and Space 2. Springer 1-10 available at:
- Pendleton-Jullian, A. and Seely Brown, J. (2016) Pragmatic Imagination. Prequel from *Design Unbound*
- Rogers, C.R., (1961) *On becoming a person*. Boston: Houghton Mifflin
- Woodman, R. W. and Schoenfeldt, L. F. (1990) An interactionist model of creative behaviour. *J. Creat. Behav*, 24, 279-290
- Woodman, R.E., Sawyer J. E. and Griffin, R.W. (1993) Toward a Theory of Organizational Creativity *The Academy of Management Review*, Vol. 18, No. 2. (Apr., 1993), 293-321, available at:
[file:///C:/Users/norman/Documents/AAAAA/Documents%20\(4\)/CREATIVE%20ECOLOGY/reference%20to%20Woodmans%20interactionist%20model.pdf](file:///C:/Users/norman/Documents/AAAAA/Documents%20(4)/CREATIVE%20ECOLOGY/reference%20to%20Woodmans%20interactionist%20model.pdf)

APPENDIX 1



@academiccreator <http://www.creativeacademic.uk/>

Creativity in Higher Education Project *Creative Pedagogies & 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 and chrissinerantzi@gmail.com

References

- a) Exploring Creative Ecologies Creative Academic Magazine CAM5 September 2016
<http://www.creativeacademic.uk/magazine.html>
- b) #creativeHE google+ community <https://plus.google.com/communities/110898703741307769041>
- 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
<http://www.creativeacademic.uk/magazine.html>
- 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/>
- e) Exploring Learning Ecologies Chalk Mountain Lulu
<http://www.lulu.com/shop/norman-jackson/exploring-learning-ecologies/paperback/product-22603535.html>

Collaborative Programme of Activities September 2016-17.

Visit <http://www.creativeacademic.uk/2016-17-programme.html> to see updates

July 2016	<ul style="list-style-type: none"> • #creativeHE conversation 'Exploring Creative Ecologies' 	INSTITUTIONAL PROFESSIONAL DEVELOPMENT ACTIVITIES
September 2016	Launch of Creative Pedagogies & Learning Ecologies Project <ul style="list-style-type: none"> • Publication CAM 5 'Exploring Creative Ecologies' • Launch of #101creativeideas project 	
October 2016 November 2016	<ul style="list-style-type: none"> • 'Developing the idea of ecologies for learning & creativity' presentation BERA Creativity SIG seminar at the University of Cambridge: Advancing Creativities Research: Making connections across diverse settings. • #creativeHE conversation 'Creative Pedagogies' 30/10 to 04/11 • 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. • Launch of Exploring Creative Pedagogies & Ecologies book project 	
January 2017	<ul style="list-style-type: none"> • #creative Creativity Course (open course Creativity for Learning in HE) 16 - 20 January 17 • 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. 	
March 2017 Contribution to 'Open Education Week' March 27-31	<ul style="list-style-type: none"> • #creativeHE conversation 'Disciplinary Perspectives on Creative Pedagogies' 26-31st March • #LTHEchat Twitter conversation 	
April 2017 Contributions to World Creativity & Innovation Week April 15-21	<ul style="list-style-type: none"> • 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 Clughan • #creativeHE conversation also exploring the role of body in creativity during World Creativity and Innovation Week • Publication of #101creativeideas project - 1 idea of an activity to encourage students' creativity will be posted on Twitter each day prior to WCIW 	
May 2017	<ul style="list-style-type: none"> • #creative Creativity Course (open course Creativity for Learning in HE) 22- 26 May 17 	
September 2017 & beyond	SYNTHESIS <ul style="list-style-type: none"> • Face to face event 'Exploring Creative Pedagogies & Learning Ecologies' • Publication of 'Exploring Creative Pedagogies & Learning Ecologies' book • Publication CAM 7 'Exploring Creative Pedagogies & Ecologies' 	