



# ***CREATIVITY IN PRACTICE***

Commissioning Editor: Norman Jackson

Executive Editor: Jenny Willis

 **creative academic magazine**

Issue Number 9 2017

# CREATIVITY IN PRACTICE

## CONTENTS CAM9

Commissioning editor's introduction, Norman Jackson	p.3
Creativity in practice #creativeHE conversation	p.6
Creativity in the corporeal, hermeneutic and analytical domains, Christian Julmi	p.27
How do we learn to practise creatively in a domain? Norman Jackson	p.31
Sea of creativity: a metaphor for creativity as practice Jon Rae	p.38
Illustrating an ecology of practice: making a geological map, Norman Jackson	p.43
Now we are 3	p.48
Contacts	p.49

**MERRY CHRISTMAS  
AND  
HAPPY NEW YEAR!**

# Commissioning Editor's Introduction

Norman Jackson



In 2016-17 Creative Academic undertook a year-long project to explore the idea of 'creative pedagogies for creative learning ecologies.' It was an open exploration the results of which were published in Creative Academic Magazine CAM#7. For our next project we are going to focus on creativity in practice settings and what we discover will be shared through [Creative Academic Magazine](#) (CAM9), which will be published 4 times while the project runs between December 2017-2018. This is an open learning project and we welcome contributions from anyone who is interested in exploring these ideas with us. We are particularly interested in your practice experiences and your interpretations of how creativity emerged through what you were doing. We are also interested in

theory and research that helps us understand the related phenomenon of creativity in practice and creativity as practice.

## Background

While we are happy to recognise creativity in others most people don't like talking about their own creativity. This is partly because culturally it is considered inappropriate to publicly broadcast our own achievements and processes, and partly because we are just not used to talking about it and don't have the words to describe it in a meaningful way. Which is why people like Steve Jobs have helped by explaining creativity in simple down to earth language. He is famously quoted as saying, *"Creativity is just connecting things. When you ask creative people how they did something, they feel a little guilty because they didn't really do it, they just saw something. It seemed obvious to them after a while. That's because they were able to connect experiences they've had and synthesize new things."* Steve Jobs

If we want a more creative world there is a job to be done in encouraging people to share their own stories about being creative and what creativity means to them in their own everyday practices and circumstances. All too often in education we talk about creativity in a way that is not contextualized or situated in time, or a place, a circumstance, a culture, a problem or an opportunity that someone - a particular person, cares enough about to want to put effort and imagination into doing something that brings something into existence. But for creativity to have value beyond an individual: it must be relevant to others and a particular context or purpose.

Creative Academic is concerned with understanding the nature of creativity in different contexts and the ways in which teachers encourage learners to use and develop their creativity. Over the last three years we have been developing the idea that creativity, like learning and achievement, is an ecological phenomenon. Through this exploration we are evaluating a number of propositions.

*"In order to fully understand creativity and what influences it, and in order to confidently prescribe ways in which individuals, organizations, and societies can enhance it, we must undertake studies of creative behavior - and the accompanying psychological states and environmental contexts - in situ, as it is happening... this is only one of the many pathways that creativity studies should take in the coming years. But, I believe, it is one of the most important."*<sup>1</sup>

Firstly, we are exploring the idea that when we are involved in a significant challenge, our mind and body does not just inhabit a physical environment, rather, when trying to learn and achieve something significant, we are in a deep relationship with that environment. From an environmental perspective it does not make sense to talk about the environment in which we are learning and trying to achieve without reference to ourselves as the organism that is perceiving and interacting with the environment. 'Every organism has an environment: the organism shapes its environment and environment shapes the organism. So it helps to think of an indivisible totality of 'organism plus environment' - best seen as an ongoing process of growth and development'<sup>2:20</sup>.

***Proposition 1 : We as whole persons engaging with our problems, challenges and opportunities in our environment, are indivisible.***

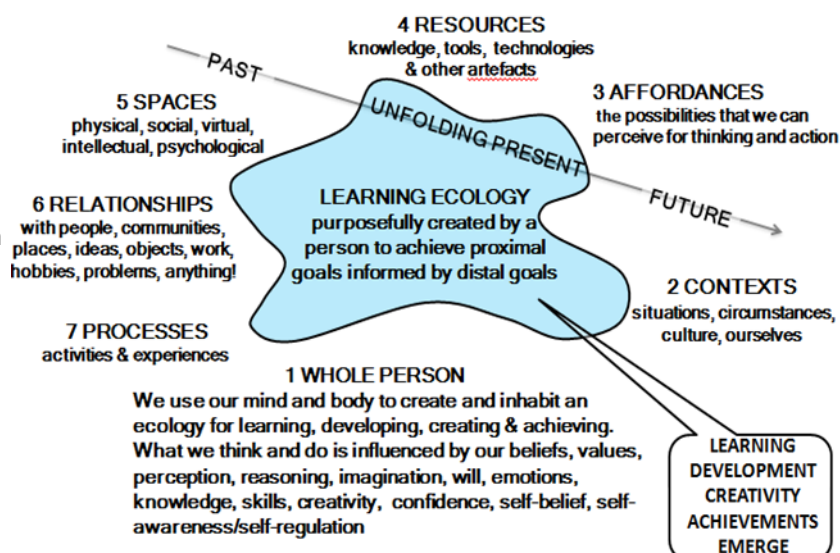
For any organism learning how to perceive the environment and find meanings in what is perceived and then act on those understandings in ways that are beneficial, is fundamental to its very existence and flourishing. The same applies to people. If we focus on the world of a practitioner, learning how to perceive the environment and find meanings in what is perceived and then act on those understandings in ways that are beneficial is at the heart of being an effective, productive and creative practitioner in any field.





The second proposition we want to explore is the way we sense and perceive our environment and the problems, challenges and opportunities it contains, is through what we are calling an *ecology of practice*. Ecologies of practice are the tangible, embodied expressions of thinking and action that enable us, to perceive and interact with our environments and the problems and opportunities contained within them in order to discover meanings relevant to our goals and purposes (Figure 1).

Figure 1 Framework for appreciating the components of a learning ecology<sup>2</sup>



‘An individual’s self-created [*ecology of practice*] grows from the circumstances (contexts and situations) of their life and is established for a purpose that is directed to accomplishing proximal (immediate) goals connected to more distal goals. Their ecology comprises themselves, their environment, their interactions with their environment and the learning, development and achievement that emerges from these interactions. It includes the spaces they create for themselves, their processes, activities and practices, their relationships, networks, tools, other mediating artefacts and the technologies they use, and it provides them with affordances, information, knowledge and other resources for learning, developing and achieving something that they value.’<sup>17:72</sup>

**Proposition 2 :** *Our ecologies of practice connect and enable us, as a whole person, to physically, intellectually and emotionally interact with a complex environment in order to engage with the problems, challenges and opportunities we care about.*



Every individual has a unique past history, personality and capabilities and unique interests and purposes interacting with our environments, that we have chosen or have been put into, that contain challenges and problems requiring unique solutions. It is little wonder that in such circumstances there is considerable scope for personal creativity to flourish.

**Proposition 3:** *Our personal creativity emerges from our uniqueness as a person and the ecologies of practice we create to learn and achieve, that deeply connect us to our environment and the problems, challenges and opportunities it affords.*

Here, we might draw on the ecological definition of personal creativity proposed by Carl Rogers which he considered to be ‘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, or circumstances of their life’<sup>3</sup> This concept of creativity connects individuals, their interests and the problems they care about and the whole environment in which they are living<sup>4,5</sup>.

**Proposition 4** *Creativity and being creative means different things in different domains of practice.*

“Although psychologists who study creativity have reached no firm and uncontested answers to these questions, the consensus in the field has moved over the past quarter century from a belief in domain generality to one of domain specificity. Baer<sup>6,7,8</sup> (1994a, 1994b, 1994c) provide[s] convincing evidence that creativity is not only content specific but is also task specific within content [domain] areas.”<sup>9</sup>

## Focusing on practice

In the next stage of our work we will focus our attention on the practice environment and examine the *ecologies of practice* people create in environments that are not structured specifically for learning. We want to explore how a person’s creativity emerges from their practices. By ‘practice’ we mean ‘action rather than thought or ideas’<sup>10</sup>, ‘the application or use of an idea, belief, or method, as opposed to theories relating to it for example, the practice of teaching’<sup>11</sup>.

By gathering stories of *practices* in different settings and contexts we want to see if the idea of an ‘ecology of practice’ makes sense to describe and theorize the way we relate to and interact with our environment and the people and things in it, to fulfil a particular purpose, achieve a significant goal, solve a problem or make the most of an opportunity. Through these personal illustrations, we want to explore how creativity featured in particular ecologies of practice.

In order to practise as a teacher, or perform any other complex role, involves a commitment to developing the skills, behaviours and ways of thinking that are necessary to fulfil the role in an effective, professional and creative manner. It is necessary to *practise* these ways of being ‘to perform (an activity) or exercise (a skill) repeatedly or regularly in order to acquire, improve or maintain proficiency in it.’<sup>11</sup> In some domains practice means repeating a technique over and over again while in others practice is gained through participating in whole projects or complex experiences within which particular skills and techniques are used.



Another aspect of our project is to explore how practitioners develop themselves through education, training and practical experience and informal learning, to be able to practice in effective and creative ways. In this way we might connect the practices of teachers in higher education to the practices of practitioners in the world beyond formal education.

## Project aims

Our open learning project has four aims:

- 1) To involve people in creating and sharing narratives of their own practices through which they used their creativity.
- 2) To evaluate and develop the idea of ecologies of practice/creative practice. We will use the framework shown in Figure 1 to try to explain learning and practice as an ecological phenomenon to characterise a particular problem solving process in a practice setting and reveal the ecological relationships and interactions involved.
- 3) To explore what creativity means in different practice settings (domains of practice) and consider how it emerges and is manifested within an ecology of practice.
- 4) To consider how practitioners develop the necessary understandings and capabilities to inhabit their professional environment in a productive and creative way. In other words, how they come to know how to develop their own ecologies of practice. In this way we might connect the development of practitioners in a field to the signature pedagogies and signature learning experiences developed in different domains of higher education.

## Invitation

We invite anyone who is interested in these ideas to join our collaborative project by sharing a written or oral narrative of the way they or practitioners in general in their field of practice tackle a typical problem or challenge. Narratives can relate to work, hobbies and interests, caring for others or any other context.

To join the project and view example narratives please visit

<http://www.creativeacademic.uk/creativity-in-practice.html>

If you would like to produce a written or oral narrative please contact the project leader Professor Norman Jackson [normanjackson@btinternet.com](mailto:normanjackson@btinternet.com).

## Sources

- 1 Teresa M. Amabile (2017) In Pursuit of Everyday Creativity Working Paper 18-002 Harvard Business School
- 2 Ingold T (2000) *The Perception of the Environment Essays on livelihood, dwelling and skill* Routledge: London
- 3 Rogers, C.R., (1960) *On becoming a person*. Boston: Houghton Mifflin
- 4 Jackson N J (2016) *Exploring Learning Ecologies* Chalk Mountain / Lulu
- 5 Jackson, N. J. and Willis, J. (eds) *Exploring Creative Ecologies* Creative Academic Magazine Issue #5 September 2016 Available at <http://www.creativeacademic.uk/magazine.html>
- 6 Baer, J. (1994a) Divergent thinking is not a general trait: A multi-domain training experiment *Creativity Research Journal* 7, 35-46
- 7 Baer, J. (1994b) ‘Generality of creativity across performance domains: A replication’ *Perceptual & Motor Skills* 79, 1217-18
- 8 Baer, J. (1994c) ‘Performance assessments of creativity: Do they have long-term stability?’ *Roeper Review* 7: 1, 7-11
- 9 Baer, J. (2016) Domain Specificity of Creativity: Theory, Research, and Practice. *The Creativity Post* Available at: [http://www.creativitypost.com/science/domain\\_specificity\\_of\\_creativity\\_theory\\_research\\_and\\_practice](http://www.creativitypost.com/science/domain_specificity_of_creativity_theory_research_and_practice)
- 10 Cambridge Dictionary available at <https://dictionary.cambridge.org/dictionary/english/practice>
- 11 Oxford Dictionary available at <https://en.oxforddictionaries.com/definition/practise>

Norman Jackson  
Commissioning Editor  
Creative Academic Magazine  
December 12<sup>th</sup> 2017



## Creativity in Practice #creativeHE Conversation

We launched our creativity in practice project through an open on-line conversation on the #creativeHE Forum between December 4<sup>th</sup>-8<sup>th</sup>. The conversation was structured around 5 questions one for each day. We use our magazine to curate the content of our conversations on the forum to provide an opportunity for the whole Creative Academic community to read what was discussed and to enable those who contributed to the conversation, to reflect on the diverse range of perspectives that were shared.

### Creativity in Practice: Creativity as Practice

3 What can we learn from expert practitioners about how creativity emerges in their practice?

2 How does the environment in which we practice influence our creativity?

1 How do we learn to practice and be creative in our practice?



5 What theories of creativity are relevant to the ideas of creativity in practice and creativity as practice?

4 What can we teach ourselves about the way creativity emerges through our own practices?

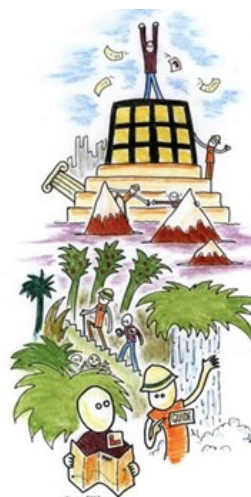
From novice to master - Patrick Sanders

Q1 How do we learn and develop entirely new practices? At what point do we feel we can use our creativity in this developmental process? Is there a consistent pattern in how we develop new practice e.g. the Dreyfus model from novice to expert? If there is, how does creativity feature in this process?

[Paul Kleiman](#) - The 'from Novice to Expert' is intriguing when I think of part of the research I undertook for my doctorate. I asked colleagues, via a questionnaire, for the words and phrases they used when describing creativity or 'being creative'. The c. 2500 words and phrases that resulted (from 81 individuals) fell into five main categories in descending order: Thinking, Making, Doing, Solving, Dreaming. Now, I can see how the Novice to Expert applies to 'Making' and 'Doing', but I'm not sure how it applies to the others. Is N-E consistent across the range? E.g. to be an Expert 'Maker' does one have to be an Expert 'Thinker' etc. There are many Expert craftspeople who rigidly follow taught rules etc. Just some early morning thoughts.....

[Norman Jackson](#) Thanks for starting the conversation +[Paul Kleiman](#) - perhaps it depends on context and the levels of complexity involved in practice. Making a simple artefact might require only limited thinking but producing artefacts on a commercial scale would involve a lot more variables to be juggled and balanced and a lot more interactions to be orchestrated. The video clip by PatrickMayfield talks in these sorts of terms

[David Andrew](#) The [Dreyfus] model suggests a linear development from novice to expert, a model that pervades current views of education, concepts such as learning gain being hugely popular, and in my view dangerous. It also doesn't reflect much of the research, for example in chess players, which shows that experts are not better at doing what novices struggle with, but that they do different things.



from novice to expert

#### Skills Acquisition

Michael Eraut's summary Dreyfus model

##### Expert

No longer relies on rules, guidelines or maxims  
Intuitive grasp of situations based on deep tacit understanding  
Analytic approaches used only in novel situations or when problems occur  
Vision of what is possible

##### Proficient

Sees situations holistically rather than in terms of aspects  
Sees what is most important in a situation  
Perceives deviations from the normal pattern  
Decision-making less labored  
Uses maxims for guidance, whose meaning varies according to the situation

##### Competent

Coping with 'crowdedness'  
Now sees actions at least partly in terms of longer-term goals  
Conscious deliberate planning  
Standardized and routinized procedures

##### Advanced Beginner

Guidelines for action based on attributes or aspects.  
Situational perception still limited  
All attributes and aspects are treated separately and given equal importance

##### Novice

Rigid adherence to taught rules or plans  
Little situational perception  
No discretionary judgment

[Paul Kleiman](#) Thank you +[David Andrew](#). Yes, it's the linearity and implied hierarchy (it's in the language) that bothers me. I would not wish my 'expert' surgeon to no longer 'rely on rules and guidelines', though I would hope that should some need to improvise occur he/she would use their 'expertness' to deal with it successfully. And, yes of course, context is all. An expert in a highly specialised field may be a complete novice in all others.

[Norman Jackson](#) These are interesting perspectives +[David Andrew](#) and +[Paul Kleiman](#) The criticisms I've read about the Dreyfus model (for example Michael Eraut's excellent work on how professionals learn) suggests that the model holds well for the early stages - novice - advanced beginner but is less convincing for the stages that move into expertise and mastery. And we all recognise that we hold different levels of expertise in the different aspects of our own lives.

*Story of practice : Over a year ago I decided, with a friend, that we wanted to learn how to record our band. We purchased a second hand 'digital mixer' and had a go at trying to get it to talk to the computer which hosted the processing software, but we didn't manage to make it work. Other things then got in the way and we left it. A year later, feeling quite ashamed at our lack of progress, we resurrected the idea with a different level of motivation and over three or four weeks, and quite a lot of time and effort, and some expert help, we reinstalled the software and managed to get it to work, we set up the mixer and recorded our band and fumbled to do some post-recording mixing on the computer.*

*We are novices trying to get to the next level of understanding and competency and it's a painfully slow learning curve with every procedure needing to be looked up and practised. Nothing is intuitive and nothing is automated and I am often in a state of perplexity and anxiety when I think I have done something wrong to the equipment. I have found that the biggest source of help and aid to learning is not the 350 page manual but google. When I reach a block I type my query into google and either the relevant page in my manual comes up, or I find a forum where the problem has been discussed and often resolved or I find a video on YouTube that gives me an answer that demonstrates the practice which I can then imitate. Copying in order to do something is the way I'm learning to practise at the moment and there is no creativity involved as far as I can tell.*

[Paul Kleiman](#) Very interesting +[Norman Jackson](#). It accords with the Creative Continuum that I have been using for a long time now, which runs from Replication ('I do, you copy) at one end, through Formulation ('Yes, there are rules and guidelines but also flexibility'), Innovation (combining existing materials etc into new forms) to Origination (the genuinely and completely new which can also be the, initially rejected, 'shock of the new'). There is no hierarchy, and as your experience shows, both within and across our various and very varied practices we move constantly one way and t'other along that continuum.

[Chrissi Nerantzi](#) Thank you for starting the conversations +[Norman Jackson](#) and Paul. I will think about the questions and come back here later today. I am wondering how much/if we really learn from an "expert" and/or what needs to happen to enable this. Thinking of the distance the word "expert" even, can create...

[Norman Jackson](#) That's a good question +[Chrissi Nerantzi](#) - a member of our band is pretty nifty on the mixer but he assumes so much and doesn't share his thinking so it's not easy to learn from him. I end up photographing the settings on the mixer and either just accepting them or trying to work out as to why they have been set. Perhaps we learn from experts when we are just below their level of expertise and we can already think and act with a good degree of proficiency, and more importantly ask the right questions and draw meaning that makes sense to us from their responses.

[Paul Kleiman](#) Much as we might wish it, there is no obligation upon an 'expert' to share their expertise. Neither, even if they are happy to, is there any guarantee that they will be able to in any meaningful way.

*Story of practice: On a related tangent, the great educationalist Dorothy Heathcote who, working with young children, developed the idea of the 'mantle of the expert' (google it) used the notion of de-skilling oneself in order to learn together. The example she used was teaching letter formation to a class of infants. Dorothy went up to the blackboard and drew a perfect, copperplate 'a'. A small voice called out 'That's easy for you, Miss, you're an adult'. Dorothy took this to heart and went out and bought herself a Japanese calligraphy set. Back in the class, she again drew...and failed to draw that perfect, copperplate 'a'. The children saw this and commented that it wasn't very good. So Dorothy asked them to help her...and they took to the task with relish. Co-learning. Co-creation.....*

[Norman Jackson](#) You make an important point +[Paul Kleiman](#) that expertise in a field needs to be complemented by a willingness to help others who are less expert. To perform this role well - expert practitioners also have to devote time and effort to developing themselves to fulfil this role. Disciplinary HE teachers provide a good example - and perhaps the cognitive apprenticeships that learners serve and the way they develop practice through signature experiences that are relevant to practice in a particular field, connects this question to HE teaching and learning practices.

[Norman Jackson](#) - [Paul Kleiman](#) your comment that "we move constantly one way and t'other along that continuum" reminded me of Michael Eraut's work on *learning trajectories* in complex professional roles where practitioners are developing or regressing along different trajectories according to the nature of the work they are doing and the experiences they are having in their practices. So might this mean that our opportunities for using our creativity are also waxing and waning along similar lines. In any complex role there will be aspects where the work is routine and perhaps unchallenging where opportunities or motivations for using creativity are limited, while other work might be unfamiliar and challenging with lots of opportunity and motivations for personal creativity. I posted Michael's article on the resource page <http://www.creativeacademic.uk/creativehe.html>

[Norman Jackson](#) - [Paul Kleiman](#) further to my story about learning to record and mix I wondered whether the competency matrix might provide another way of visualising creativity in practice. This is often attributed to Maslow but it does not appear in any of his works so is best attributed to Noel Burch (1).



Figure Competency matrix 1 [https://en.wikipedia.org/wiki/Four\\_stages\\_of\\_competence](https://en.wikipedia.org/wiki/Four_stages_of_competence)

As far as recording and mixing is concerned I place myself in the conscious incompetence category and there is not a smidgin of creativity in anything I do. I know I will have to put considerable time and effort in to reach the conscious competence level. Since being creative is a conscious and deliberate act, I am wondering whether our ability to be creative in a particular domain is essentially limited to the right hand field of this matrix.

[Teryl Cartwright](#) I like some components of Amabile's view of creativity [researchgate.net](https://www.researchgate.net/publication/260000000) - [Figure 2: Componential Theories of Creativity](#) probably because there doesn't seem to be a hierarchy although her article on how to kill creativity in the business world

does talk about a different kind of expertise in managing creativity in others through the motivation <https://hbr.org/1998/09/how-to-kill-creativity>.

One question I still have and worry about is how much expertise will inhibit the "outsider" mentality of creativity? Will I get less creative the more I study it or is that a myth like others say it is?

[Norman Jackson](#) Hi +[Teryl Cartwright](#) its great to have you in the conversation once again. The problem with TA's componential model is it does not really help me understand the situation in my story of learning to record and mix other than, at the absolute beginner stage I am at I lack relevant domain specific knowledge/skill, creative process skills and motivation. What I'm trying to get at in the evolution of my practice, is at what point will I be able to use my creativity in a productive and useful way? And how might a theoretical model help me understand this trajectory?

Amabile	Runco & Chand	Sternberg & Lubart
Domain-Relevant Skills (Expertise)	Declarative Knowledge	Knowledge
	Procedural Knowledge	
Creativity-Relevant Processes (Creative Thinking)	Skills in Problem Finding, Ideation and Evaluation	Intellectual Skills
		Thinking Styles
		Personality
(Intrinsic) Task Motivation	Intrinsic Motivation	Motivation
	Extrinsic Motivation	

Figure Componential Theories of Creativity [researchgate.net](https://www.researchgate.net/publication/260000000)

I think 'dreaming' or 'imagining' is an important element of this evolution towards becoming a more creative practitioner. Perhaps its assimilated in her task motivation component but it is never elaborated. While, as a beginner we might hold a general vision of becoming a better, more accomplished and creative practitioner, without the domain and context relevant knowledge and skill we will not be able to progress towards that vision or imagine, in a technical or other way, the solution to problems along the way. In other words our ability to imagine is severely restricted if we lack the necessary understandings and experiences.

[Sandra Sinfield](#) I hesitated to respond cos I have mentioned this before - but how I learned to be creative in my practice was first to create a space for something to emerge.



**Story of practice:** *I let myself follow a path I knew not where - I gave myself permission to stumble - and take creative leaps. In practice this meant that after not really drawing anything at all for over 30 years, I started doing a daily watercolour for the first ten minutes on arriving at my office each day ... I really got into this - and experimented with 'blind drawing' and more watercolouring... Unexpectedly - this not only provided a meditative space to decrease my stress, but it also increased my joy and my self confidence. So, I enrolled on an [#artmooc](#) (a big leap of faith) - and each week as I practised what we had to practise - I also asked: How might I use this in my teaching (practice)? I took another [#artmooc](#) and continued this process... Just now I am on a F2F art class with the specific goal of taking lessons learned back to my EdDev practice.*

[Norman Jackson](#) Hi +[Sandra Sinfield](#) a good story is always worth sharing again and it illustrates so many points. You show us that in some areas of practice we can make use of our creativity very quickly and gain deep satisfaction and joy from the experience and what we produce. Your story shows how we have to trust ourselves and create the right environment and circumstances to enable our creativity to flourish, and the value of practising the skills in a disciplined way so that our practice develops and our confidence grows. And as it develops we see and find more opportunity to use it. Perhaps this is a general pattern for the way we develop and sustain new practice and grow our ability to be creative within our practice.

[Paul Kleiman](#) **Stumbling and dreaming.**

My occasional blog (I really MUST start writing again) is called 'Stumbling with Confidence'. That also came out of my research and the in-depth interviews I undertook as part of that research.

**Story of practice:** *The interviews always started with asking the individual to talk about what they would consider to be a creative experience in regard to learning and teaching. Once they had recounted the story, I asked them what made them pursue that particular course of action. So many times the answer would be "I stumbled across something" or something similar.*

As we stumble across 'stuff' all the time I was intrigued why a particular 'stumbling' led to something tangible and creative. The key ingredient was CONFIDENCE. Having whatever it takes to just 'have a go', but also having the confidence to deal with any consequences including that it may not work out. (I dislike the word 'failure'. An idea may not work out, but that does not mean there may not be a great amount of learning to be had).

That confidence relies, to some extent, on whether and how any constraints (see [rklaw99](#)'s post) operate. Constraints and resistance appeared to play a significant role in my research, and form part of the conceptual map I created. I heard a number of stories of creativity restrained or blocked by constraints; of getting one's creative 'kicks' elsewhere e.g. playing in a band; but also of a sometimes bloody-minded determination to plough ahead despite the constraints.

Re: dreaming. I agree (well I would wouldn't I) that it's a key component. A significant part of my work with students has been working on the basis of 'have an idea and make it happen', but then my disciplines are the performing and visual arts!

[Sandra Sinfield](#) I love the use of 'stumble' +[Paul Kleiman](#) - a collective known for creative academics.

[Paula Nottingham](#) - I enjoyed reading these comments earlier today. Eraut's work is extremely helpful for developing an understanding of learning in work environments. What he does is open up the arguments for categorising learning by offering ways to frame learning (so a space to think - not necessarily what to think). Many adult learners (myself included) have gaps in experience - e.g. knowledge skills and behaviour (terms coming from the new apprenticeship standards) - that have an almost 'snakes and ladders' effect on 'affective' learning

Our 'expert' groups have been working with writing critical narratives using reflective and reflexive strategies (Fook); these can be very powerful as they review life events to find meaning. I would agree that that the "motivations for personal creativity" are not linear. Members of the group, for example, have used mind mapping/visual mapping to see events and progression in terms of conceptualising practice holistically, and today we discussed rearranging life events into themes throughout life rather than as a more linear mapping (e.g. Dreyfus and Dreyfus) as a way to fully see these 'creative' episodes.

In the idea of "the stimulus to learn" is an interesting one - but putting things back into a behaviourist view with competence models (?) - quick google mentioned it as a "ladder" - which links to above snakes and ladders - with adult learners (including myself) it may not just be in one direction - the unconscious domain however does strike a chord - many with expertise may not know what they know. I think I need to read the article about creativity in action- something about creation between the artist and their environment....To add to this in response to later comments - the idea of 'stumbling' works well with the automatic - by the questions is - as above- the awareness of when you have reached your destination agree a good idea for the creative.

[Gillian Judson](#) - I am late to the game with a tired brain! 68 assignments collected and over halfway through--I will be lurking and liking for the moment. Sorry to not be more energetic this time around. I am chewing on this question you pose +[Teryl Cartwright](#) "One question I still have and worry about is how much expertise will inhibit the "outsider" mentality of creativity? Will I get less creative the more I study it or is that a myth like others say it is?" and I LOVE the "stumbling confidently" +[Paul Kleiman](#). I am a stumbler--but I don't mind it and I feel ok with it! And I appreciate it in others! Disposition matters.

[Norman Jackson](#) Thanks +[Paul Kleiman](#) +[Teryl Cartwright](#) +[Gillian Judson](#) +[Paula Nottingham](#) +[Sandra Sinfield](#) lots of things to think about this morning. I agree stumbling usually with some sort of purpose or direction is often what we do when we have a hunch and we are not clear about a course of action.. But at +[Paula Nottingham](#) points out there is a great difference between stumbling with the awareness that comes from a level of knowing and understanding, and the stumbling we do when we don't really know what we are doing. As I am doing in my learning to record and mix story.

I think there is something important here to the story of when our creativity becomes significant in our learning. When our imagination can interplay with our reasoning when we are stumbling or stumble across something that we are able to recognise as being meaningful and significant.

[Gillian Judson](#) - +[Norman Jackson](#) +[Paula Nottingham](#) I agree about the importance of knowledge. The imagination doesn't work without it! I imagine in my head my stumbling being due in part to the knowledge I am carrying--so varied, gaps, bridges, openings, value-laden--it puts me off balance until I find my way forward. I feel a blog post coming..

**Q2 How does the physical, social, cultural, organisational, virtual, intellectual and psychological environment we inhabit, influence our practices and our creativity in our practices?**



We used the *enchanted* exploration of Japanese culture by Dr James Fox (BBC TV) as a stimulus.

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

"This is an ordinary Japanese home...but every day it produces something extraordinary. I'd like to introduce you to my lunch. This is a bento box. Now, it's said that in Japan, you eat with your eyes. It's really, really important to appreciate the appearance of what you're about to consume. And, what's more, this bento box even carries meaning. Its theme is Japan's favourite season - spring. So, these little things are cut into the shape of cherry blossoms and there are a number of vegetables including this rape blossom that only come out in the springtime. So this little bento box is almost like a work of art. It's got technique, it's got form, it's got meaning, it's got symbolism, and it's almost too beautiful to eat. In Japan, much of domestic life is informed by aesthetics. The home itself can be a work of the imagination... and many of the activities that take place inside it are performed with precision and grace." Transcript of opening scene



And, what's more, this bento box even carries meaning.

[Stephen Powell](#) I think that the extent to which an environment influences our actions or controls our actions is an interesting question. "According to Maturana and Varela, you can never direct a living system; you can only disturb it. More than that, the living system not only specifies its structural changes; it also specifies which disturbances from the environment trigger them."(Capra 2003, 32).

In direct response to the question Norman, I think that we decide how an environment influences us and in turn that is determined by our past experiences that shape how we view the world. I think that this is why as humans we are so hard to control despite the best efforts of others to change environments with a desired effect in mind.

[Norman Jackson](#) Thanks +[Stephen Powell](#) that's a very ecological way of seeing our relationship with our environment. So the question is, can you turn your proposition into a story that illuminates how you responded to the environment in your practice in a creative way? What was it about your interaction that encouraged you to be creative?

[Stephen Powell](#) I don't think my work environment is designed to encourage creativity. However, I do see challenges (this is personal view based on previous experiences) in my work environment, things that are broken that demand a creative solution. An specific example of my creativity in this context is about using approaches like Soft Systems Methodology to solve these problems. Is this creative in the way that colleagues in this community would see it, I don't know. At a personal level, I find the act of devising ways to find out about a problem and develop models of the real world for analysis and discussion to be a creative act.

[Norman Jackson](#) I think any technique we have found works for us to help us think about something is valid where creativity is concerned +[Stephen Powell](#) We all have these sorts of ways of thinking that we have made our own and enable us to see affordance in a situation for creative action. Seeing an affordance (especially if others can't) and then using imagination and reasoning to work out how to engage with what is perceived certainly feels creative to me.

[Chrissi Nerantzi](#) Hi agree with the idea of disturbing +[Stephen Powell](#) There is also something about how open we are, I think, in embracing new experiences and I am not sure that this has to do exclusively with what we have experienced before, but how we have perhaps re-acted, made of these experiences? I think culture is important, but a non-welcoming culture requires creativity to deal with the constraints and find ways to cope and thrive? Often we look at the way out... but what about finding a way within? Wondering...

[Chrissi Nerantzi](#) through engaging in everyday creative tasks, we develop creative habits. These will help us feel positive and hopeful about ourselves and the world around us. In the past we did a pottery course as a family. It was fascinating how it brought us all together and enabled us to be creative in different ways. We still use the bowl we created. Do we need to make more time for such activities?

[Sandra Sinfield](#) Thanks for the lovely prompts +[Norman Jackson](#)! I do so agree with +[Stephen Powell](#), as I understand it, that we need not wait for a creative environment to be creative (necessity is the mother of invention?)... but choose to respond creatively (hence my watercolor meditation, mentioned in A1, below, that unleashed a more positive and joyful response) to the constraints that we operate within. BUT... it is saddening that we have to fight so hard and struggle so much to make creative spaces in HE. Surely, if not here - where; if not now, when?

Luckily I work in EdDev so I do not have the new teaching load that most staff have - I still have the time to collect resources, bundle them up, wheel them around to rooms, set them up, use them, take them down... But this adds literally hours to some teaching sessions - so I can see that for many discipline academics this is just not possible. It would be great if alongside the thousands of pounds worth of tech, teaching rooms had paper and pens and chalk and Maker Spaces.

[Paula Nottingham](#) Truly inspiring show - I scanned and flicked and searched Google to investigate the practices - space time inspiration - in HE? - difficult now as the spaces we inhabit are mainly office spaces (we are all in the same boat) so the iPhone and its virtual world becomes the spaces to share - but we still need studio space for physical - so doing Inktober was an outlet that I need to repeat...an ink drawing a day <https://www.instagram.com/lifelonglearnerldn/> - classic art assignment that still works - although our beautiful space is small and virtual - no maker spaces so envy Sandra - but ideas for a real space are intriguing [en.wikipedia.org](http://en.wikipedia.org) - [Tokonoma - Wikipedia](#) also loved Tomoko Kawao and the physical manifestation of words.

**Russ Law** : Hello, community! I've been sidetracked for a while, working in frankly decreasingly creative contexts of education. It's great that there are still people who care about this. As a school governor, I'm exercised by the contradictory pressures and requirements imposed by successive secretaries of state for education, especially around the curriculum. Schools are held to account, supposedly, for providing a broad, balanced and creative curriculum, while at the same time creativity is obstructed by the time spent by teachers and learners on highly prescriptive and narrow criteria (on which they will be judged), that require teachers to play safe and use every available minute for the core curriculum that is formally assessed. We have token amounts of time allowed for the arts, but these aren't valued enough. The only real creativity we see is that used by teachers to survive the time-consuming bureaucratic demands and relentless pressures they endure.

[Norman Jackson](#) Hi +[rklaw99](#) thanks for joining the conversation and for drawing attention to the political, regulatory and managerial dimension of the practice environment. I can guarantee that if you invite a group of educational practitioners to talk about what inhibits their creativity some reference will be made to the bureaucratic and regulatory environment. So if this is a constraining factor in the environment, how do so many practitioners overcome or get round this constraint to practise in ways that enable them to use their creativity? I'm sure you have a few good stories to tell. Perhaps in your role as a school governor you have been able to help mediate or see ways around some of these environmental inhibitors? Or maybe you have witnessed how teachers have achieved this?

## creative academic



[Jennifer Willis](#) +[rklaw99](#) and +[Norman Jackson](#) I empathise with Russ' frustration. As you both know, I have the luxury of being 'retired' and of tutoring in a private establishment, mainly for children (and some adults) whose first language is not English, but also for children being prepared for 7+, 8+ and 11+ exams. The latter do place some constraints on what I can teach, but less so on how I teach. Apologies to those who have heard me speak about this before. Essentially, I have to tread a fine line between teaching the putative subject (usually English) and my own belief in developing individual awareness and love of learning. Hence I devise a lot of my own resources, specifically tailored to the class. I use video, realia, and can be more interactive than is possible with a group of 30. This all motivates the children and they feel confident to ask questions that may be way off the theme of the lesson e.g. one day this week, whilst learning about Benjamin Zephaniah's poetry, one Philippino/Chinese lad asked what 'sexual harassment means', whilst in another group, a British-born Korean girl asked if male nurses/doctors were ever present at a woman's delivery. I went home that night feeling I had achieved something.

All of this requires a self-confidence no doubt born of experience. I am 'the expert' after 40 years of teaching, so, whilst respectful of my employers' and parents' expectations of me, I try to give our students something different. It is a bit of a compromise for both me and my employers, but I know they value my work so I can keep pushing the boundaries a bit! Of course, there is another dimension: it is far easier to stick to the boundaries. I could make life easier by just teaching from a text book. I believe this is short-sighted. The extra effort on my part will, I am sure, have a more permanent impact on my students and produce learners who can not only succeed at passing exams, but also enjoy learning. Come to think of it, is this really any different from my approach within the state and institutional sectors?

[Teryl Cartwright](#) *Story of practice: This time of year brings out a different kind of creativity--doing things for others. I thought about how I started with a small idea this weekend--how to celebrate a co-worker's December birthday using her favorite animal, the bear, as the theme.*

*Of course, 'happy bear-thday' was easy. And so was making a bear out of a box of butterscotch krimpets and some Reese's cups covered in additional gifts of kitchen towels, hat, and gloves. Peanut butter cupcakes with chocolate icing and an office decorated with famous cartoon bears wishing her a happy birthday came next.*

*My point is that creativity might be not just "what if" or "why not" but it is also "how to" and "let's." Hoping to hear of the little things you do to be creative for others.*



[Norman Jackson](#) That's a wonderful story +[Teryl Cartwright](#) and a lovely illustration of your own creative practice for a purpose that is bigger than yourself. You've set us all a challenge but also highlighted how a change in the environment (Christmas) can stimulate new opportunities for creative practice. In your example its creativity as practice in order to produce these artefacts that will give enjoyment and pleasure to others Thanks for sharing and leading by example.

[Sandra Sinfield](#) Absolutely love your example +[Teryl Cartwright](#) - and you are so right - grab the opportunity :-D

[Kym Drady](#) Love the bears, and the Christmas challenge encouraged me to share my creation below.



**Kym Drady** Playing catch up forgive me, I thought about the task, I don't believe I am a creative personally but can help others to be. The only creativity I have engaged in recently, other than the [#HE](#) Creative meet up, is to do with my hobby, dogs and showing.

***Story of practice:** the creative act is designing my dog's annual Christmas Dogs fancy dress costume and set. Fancy dress has a history in our family, when my son Joe was younger, he used to compete in the summer fair fancy dress competition. The first year he went as a collection road signs and he won, next year he went as a smartie tube, won again, by this point it was highly competitive. The final year was world cup year, and he wanted to go as the world cup, it took my friend and I 3 full weeks (and several bottles of wine) to recreate a costume and make him the world cup, we wowed never again!!!!*

And 10 years on here I was preparing my second charity dog fancy dress, last year we went as the 'Fairy Tail of New York' and won and this year we made 'Dachshund through the snow' I had obviously been racking my brains as to what to do and mid November middle of the night I awake with the idea from nowhere???. We identified a day, I collect all the materials and we set about, bouncing ideas off each other and bit by bit, and gradually the large cardboard box and the craft bits take shape, we had only 1 day, we had no idea where it was going it just evolved bit by bit. I wanted falling snow in the set, and was gutted I could achieve this, snow machines are too big and too powerful for our box scene and fans (tried many and fake snow) wouldn't work. So while the outcome is pleasing, it was disappointing I couldn't recreate the visual set I wanted. We had to satisfice. in terms of the model we are probably somewhere between novice and expert but not really either. We try things, play about and definitely build on each others ideas changing and modifying as we go along. Our first outing with the costume set is this coming weekend, wish us luck, hoping to raise lots of money.



[Norman Jackson](#) Hi +[Kym Drady](#) Thanks for sharing your interesting story and creative artefact. I was struck by many things. The first was your long history of involvement in fancy dress making and your successes in competitions which must certainly put you well up the scale of expert practitioner. The second thing that struck me was how you created a 'maker space' for yourself with materials and presumably tools, (perhaps the bottle of wine was also important!). It sounds as if you started with a sort of vision and proceeded without a fully worked-out design, making it up as ideas come to you - an interactive, physical and emergent sort of process blending imagination and skill. Perhaps this way of working creates more of a feeling of inventiveness than if you worked from a design. I also gained a sense that the competition was an important motivational factor. I think the disappointment about not quite achieving what you wanted is often associated with creative acts, and is another motivational force that encourages us to try again. Lots of stuff to think about. Good luck with the fund raising... another bigger than ourselves story.

[Teryl Cartwright](#) I have a dachshund and love this idea! Best of luck for the competition. It is great that you've been trying snow machines and everything. That's creative!

Remember when that photographer made a book of dogs diving into a pool? You have a bestselling book in "Dachshund through the Snow"! I can imagine herds of them and the various poses with making snowmen and snow angels. A snow fort or having a snowball fight, ice skating and in the sleigh too. Of course if we gave this title to DeWitt he'd do interesting things but what fun for artists too. Imagine Picasso or Dali's Dachshund through the Snow. Modrian or Magritte "This is Not a Dachshund in Snow". Love the dressing up and the creativity, thanks for sharing!

**Sharon Court** Hello all!

**Story of practice:** Responding to Norman's comments on how 'creativity emerges in a process of thinking, action and interaction in our everyday practice' I can illustrate this through the construction of a piece I showcased yesterday with a group of students at Highbury College. I've pasted in some of my notes as it'll help explain what we were discussing:



I've been invited in today as part of British Values week, to talk about The Viewfinder. This sculpture was made for Portsmouth Cathedral as part of their annual theme programme Viewpoint faiths: connected which was exploring faith and spirituality through the arts. The Viewfinder shows the portrait of a young Muslim woman. We don't know anything about her, not even her name.

A number of different images pass in front of her face as the piece rotates - her image is viewed through these different lenses and our perceptions of her are filtered through these images.

But what do we really know about her? Are any of the lenses we see her through relevant or truthful? Do they tell us anything useful about her? No. We might think we know something about her, but in truth we don't...

The Viewfinder represents the idea that our individual views and opinions are drawn together from all sorts of different places: maybe the press, maybe social media, maybe friends or family...It has been deliberately built using a ramshackle assortment of different objects and materials: we've got embroidery hoops, an old spinning wheel, a vegetable crate, a wooden towel rail...all sorts of things. Our ideas and opinions are informed by lots of different, sometimes disconnected things, from all sorts of places...





Ok, that's the context for the piece. Now here's the narrative bit which responds (I hope!) to what Norman was saying:

As an artist I've come to learn that the process of making something creates its own story, its own narrative. As I'm building and making problems occur, unexpected issues arise and you have to solve them as you go along. When I was first working on this it was during the campaign about the EU referendum. Months beforehand - even a year beforehand the idea of leaving the EU and the Single Market wasn't even something any of us had considered.

I was playing with motors to try and get the spinning wheel to turn on its own, but the wood was too smooth for the motor's cog to get any traction and it suddenly occurred to me: what does it take for an idea to gain traction? For it to change and evolve from some kind of ethereal, wispy concept into something strong enough and tangible enough to motivate people to act? Not just to think but to move?

This is where the process of creativity - the process of creating something, actually generates its own story and thought process, which is what gives the finished object/image its layers of meaning - not just for the artist but hopefully the audience too. I have no formal artist training, I respond to things intuitively and emotionally - what I create is an intentional type of storytelling, which invites people to engage with the discussion and hopefully go on to broaden and deepen their understanding.

For me, the creative process is an extension of my thinking and processing - it's simply made tangible or visible, rather than just relying on words.

Hope that's helpful? I'm making an effort to keep up this time, so I look forward to hearing more from others :)

[Norman Jackson](#) Thank you +[Sharon Court](#) for sharing your practice and the interesting and illuminating story about how you created your sculpture. Your scene setting is great as you share the meanings and purpose underlying your artefact - often we only see artefacts and have to infer what they mean. I think every artefact should have its story attached to it. I'm going to hold back with my comments until others have had a chance but I really liked this 'As an artist I've come to learn that the process of making something creates its own story, its own narrative'. I think this applies to any significant making or developmental project. There is always a story about ourselves, our imagination, our intellectual, psychological and physical journey and our interactions and relationships with the materials, subjects and environment. Your story captures this really well and I hope others will share their experiences.

[Teryl Cartwright](#) I was intrigued by the idea of viewfinder but even more by the question about what does it take for an idea to gain traction. Your story about the wood being too smooth makes me wonder if ideas that come too easily are not going to get traction. The whole post, the explanation of your emotion creating creation and the meaning-making from the product and process were very insightful and inspiring reflections. Thanks for giving us this to think about!

[Sharon Court](#) Hi Teryl! Thanks very much for your feedback :) I take what you say about ideas coming 'too easily' - that's worth further thought... :)

**Day 3 December 6th**

**Q3 What can we learn about creativity in practice from people who are expert practitioners?**

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

The way creativity emerges in a process of thinking, action and interaction in our everyday practice is revealed in the narratives we create about a particular situation and set of circumstances. The story itself is a creation based derived through a process of making sense and drawing out meaning from the experience. In this video clip professional photographer Dewitt Jones talks about an experience he had taking photographs for an advert he made in Scotland. His narrative reveals what he thought and how he felt as he was faced with the reality of the situation and his explanations of what happened reveal the way he interacted with his environment. Through his story we can appreciate how his thinking, emotions and practice combine in ways to enable him to create new and original artefacts. What can we learn from this story about creativity in/as practice? Do you have a story that illustrates how your creativity enabled you to gain something valuable from a situation?





[Sandra Sinfield](#) : A quick response before watching the video (remember to love even your transgressive students!). One of the best PD events I went to was when I was part of the LearnHigher Centre of Excellence in Teaching and Learning. We were asked to interview other practitioners and be interviewed by them to surface our creative, successful, emancipatory practice. It was heart warming and inspirational. Should we do this at a F2F :-D?

[Gillian Judson](#) +[Norman Jackson](#) A few things to contribute today! First, what resonates with me is that connection between learning more about the river and his imagination being engaged...he keeps repeating "now I'm getting intrigued" (at first he was unable to see the extraordinary in this "ordinary" and somewhat (at first) disappointing location. He needed those experts (I would call "story-tellers") to show him what was unfamiliar (Who wears ties for fishing?), extreme, unique and ultimately wonder-full. I also notice he juxtaposes the "intellect" and "intuition"--"turn around Dewitt". He was seeking what he called "the place of most potential" and "the right answer" (ultimately he found many and he surprised himself over and over again. Knowledge. Heart. Wonder. "Attention") he said he was "paying attention"--a full-body attention as far as I can tell. An attention fuelled by what seemed to be a quest for some kind of "magical" result. "By being creative, we really do fall in love with the world."

[Norman Jackson](#) Fantastic takeaways +[Gillian Judson](#) DJ is a masterful story teller and I guess he looks for story in what he is perceiving. Perhaps story is a way of discovering, representing and communicating meaning. I like the way you have connected learning, and imagining and it seems to me they combine to motivate him. His enthusiasm grows as he learns and uses his imagination to see more potential in the situation to achieve his goal. Intriguing is a good word to describe this state of being sucked in to another level of awareness and his story is all about self-awareness and having his whole sensory system engaged with the unfolding situation. The images he realises fit well your notion of a quest for something magical.

I was looking at an interview with David Hockney and he said something very interesting in the context of art school education. "You can teach the craft its the poetry you can't teach". Perhaps what we witness with DJ is him using his craft to search for the poetry in this situation.

[Mar Kri](#) some quick thoughts on this : some of the things I hear in his story ...  
"I done my homework I had images on my head..."..i understand from this that pure intellect isn't sufficient to get us in that space.. that DJ did more than engaging his intellect or formulating a pre planned/pre thought plan on "how to do it".

he shows how entering that space required from him an attitude of letting go of his "intellect", and making allowance to different forms of knowledge - or rather knowing to emerge- , eg: he was willing to enter a space of not knowing... this i think is hugely important when we play with the idea of creativity This particular bit in his story reminds me of an article i read recently that reaching a space of disequilibrium is significant in order to reach a sense of equilibrium and meaning all over again...a very important factor towards him reaching this creative space was his willingness and determination to go there on his own..."to the place of most potential"; this communicates too a trust in this unknown process?

Also for me what comes out very distinctly is the relationship between man and nature and the space it creates affords for our engagement and birth of creativity...

"my intuition s screaming to me"....if our intuition has a voice , a story to say ,then its imperative we begin to listen more closely and expose these stories, in our attempt to "get back in that space"..

[Paula Nottingham](#) A humbling story really, seeing the process rather than the act of creativity. I realised thinking of the story that limited circumstances for the creative happening abound because many things are pre-planned. Perhaps the key is building in elements that are not planned. We recently had a workshop using free writing (e.g. Elbow), and two of the participants read out their writing - each liked the style of the other - one was free flowing and the other added more critical elements. The best thing was getting something out of the experience of sharing, that was the tangible creative act.

[Norman Jackson](#) Hi +[Mar Kri](#) thank you for your insightful observations and commentary, I think you and +[Paula Nottingham](#) are right to highlight that this story is all about working with uncertainty and an unfolding and unpredictable situation requiring a mode of being that is open to the feedback being received and sensed from the environment. These are conditions that are often the opposite to what we try to create in the higher education environment so it is little wonder that learners are not prepared for such situations. How can they develop intuition for situations and circumstances they never or rarely encounter in their disciplinary studies? It would be great to discover some examples of courses or teachers deliberately creating or utilising such conditions for learning and encouraging creativity.

[Chrissi Nerantzi](#) Hi +[Norman Jackson](#) and all, I am wondering if this expert practitioner view and behaviour could actually hinder creativity in practice?

[Paula Nottingham](#) *Story of practice: For this autobiographical example, it was not teaching a discipline, but the idea of collecting ideas for a professional inquiry (so more of a study skill). I did a campus session where we used a word search to develop strategies for reviewing literature. This was the first time I did this - so I had to use improvisation for the session (this did relate to improvisation within performance) - the disciplinary area was the arts with a variety of specialisms including performers. Allowing themes to emerge from this activity related to the expectations for finding personalised meaning within the independent project themes. Learners actively found the key words to bring out meaning, and then did mind maps to bring the ideas back to looking at particular topics; there was a great collective spirit from the session - and yes - I think it related to 'putting on a show' together as a creative company.*

[Mar Kri](#) "It would be great to discover some examples of courses or teachers deliberately creating or utilising such conditions for learning and encouraging creativity" + [Norman Jackson](#) I personally feel that training counselors in HE can entail a lot of creativity .. I am always aspiring to be creative and there's a long way still for me to go. I often use stones/pebbles figurines/ role play ,psychodrama techniques and more in an attempt to help students connect embody, deepen awareness of themselves, their interactions and roles they play in groups or dynamics unconsciously being played between themselves and their clients (eg.when I supervise therapist's practice)... this awareness is often seen enough for creative change to occur ..it's actually a very dynamic and creative process which ripple effects (either on their relationship to self /and others or even their practice ).. it's almost like it's a window to a new terrain that was prior to that blocked or misty....by identifying and processing (freely exploring under mild and tentative facilitation) the "dilemma" or problem they bring ...dissolves...and new understanding and meanings gained.. which in turn allows them to be more freely in tune to themselves \*this often means more creatively and freely available to their clients. There's a lot to be said on the value of visceral learning in HE and +[Paul Kleiman](#) has beautifully written on this.. (Been reading your blog recently Paul ).

For me creativity and use of all aspects of ourselves ,our bodies emotions cognition, spirituality go hand in hand.. +[Chrissi Nerantzi](#) raises a very interesting topic.perhaps defining what behaviour would allow us to speculate more specifically ? I am interested to hear more on the how it could hinder ...I absolutely agree that it can hinder ..if coupled with particular behaviours beliefs attitudes ..e.g.(very much related in my view to how they operate the power inherent in their knowing when in relation to being with others).

- 1.fall into the illusion that I know best about subject area than my students do (I avoid personally the word expert,I have a natural dislike to its sound, without dismissing the knowledge people have in areas)
- 2 that belief could lead to my trying too hard or structuring too rigidly disempowering in that way the inherent creative force within each individual.
3. Provide an environment that aims to transfer knowledge as opposed to co create knowing ..
4. Avoid experimenting and taking risks from fear of not appearing the expert
- 5.Avoid dialogue
- 6.Avoid play...the list could be endless..

Just some thoughts before I engage in the creative settling routine of my 2.5 year old son..

**Teryl Cartwright** Some things I learn from others to practise creativity:

From Concept Artist LeWitt (instead of photographer DeWitt) I learn to think about creativity differently as LeWitt thought about art differently.

[https://www.moma.org/learn/moma\\_learning/themes/conceptual-art/sol-lewitt-and-instruction-based-art](https://www.moma.org/learn/moma_learning/themes/conceptual-art/sol-lewitt-and-instruction-based-art)

"Are instructions just a set of rules or can they fuel creativity?"

<https://www.lissongallery.com/artists/sol-lewitt>

Some of what Sol does with art (follow rules) to be creative is what I do with the field of creativity. I follow rules in supposedly "less" creative fields (math, science) and see if they make me more creative. This takes care of my concern about being an expert and losing creativity as a result. Experts break the rules in creativity so if I am following rules I am not an expert. I can stay a novice and outsider because I am using concepts that I am not fully familiar with or that as an expert I might take for granted.

It allows me to try out different fields--using Peter Elbow's believing game

<https://www.d.umn.edu/~cstroupe/ideas/believing.html>

For example, if I believe creativity is "flow" then I can extend it to explore different kinds of flow such as comparing them to the kinds of rivers that are formed based on the landscape, such as the difference of the delta in a flat land to a narrow deep channel in a steep mountainside. I can say in a creative landscape analogy that creativity branches out easily without obstacles but deeper creativity, the one with the depth of carving into a writer's block to make its path, must flow in one place over and over for a long time. I can then explore the rules of channeling that engineers use to change the course of a river and how that looks for changing or channeling the flow of creativity (but only if I believe those rules might apply in creativity itself).

If I use the doubting game side of Peter Elbow's rules and say that for me flow doesn't describe the optimal creativity I am looking for, then I can explore the image and implications of salmon swimming upstream or consider the contrary rules of tetraquarks underneath the flow of things with normal rules.

In writing and doubting as creative practices, I can doubt that Joseph Campbell has discovered all the types of stories there are and see if I can make a story based on a redox problem (where the element/person you expect to be affected by an action isn't, it's the one you least expect to react that has the most reaction) or follow an origami pattern's rules symbolically in a screenplay to see if I can make mirroring scenes like the repeating folds you have to do on the left and right in making a paper crane.

In science and practising thinking experiments, I can doubt that a steam engine is the only way to use change in temperature to run an engine and explore how cold generators might work by making ice to run.

This imitation of Elbow's game and LeWitt's rules help me to use "Concept Creativity" instead of "Concept Art." This allows me to try out a lot of different ways to see things. It is like the DeWitt lessons in photography. Look, then look again and SEE with a different angle, different timing, different heart.

**Norman Jackson** I got side tracked today - actually I enjoyed it. My wife decided we need some art work on our bare walls. I have been saying for years I will paint something but never got round to it. I sensed that this time I was going to have to go along with it. So I began to search for inspiration and turned to one of my favourite artists David Hockney. I came across a wonderful documentary in which Andrew Marr (himself a masterful practitioner) interviewed David Hockney about his work just before his major exhibition at the Royal Academy - The Art of Seeing. And for the second day in succession I was 'enchanted' <https://www.youtube.com/watch?v=cO5rCS6G3XU>

Here is a man with great artistic talent, intelligence, and a work ethic that few can match, who never stops thinking about his work, who sees the extraordinary in the ordinary, who is a craftsman who makes poetry with his images. His observations and narrative illuminate his practices. They reveal his journey and how his past experiences and what he values are brought to bear in his present work "The Yorkshire landscape is painted by someone who has lived in LA for 30 years". He reveals how he feeds off the environment in which he places himself "I am affected by the space.. it thrills me". His mind is shaped by his environment and he in turn sees, feels and represents his environment in ways that have never been seen before.



Andrew Marr summed up what Hockney teaches us very well. "It's just about looking. The harder you look the more you see and the more you get back" I wonder whether this is a general principle that can be applied to any context in which we are trying to create.



**Jenny Willis** Apologies for not joining the conversation sooner - having been coughed over by countless poorly children for the last week or two, I have inevitably succumbed to the same virus. Nevertheless, Norman has coaxed me into action with his suggestion that I view David Hockney's wonderful video, 'The art of seeing'.

My preferred artistry is through words and thoughts. As I watched the video, I was bombarded with inspirational ideas and memories. Just this weekend, I was driving back to London from my aged father's home in the Cotswolds. It happened to be one of the nights when the harvest moon dominated a clear sky. Driving directly towards the gigantic orb was mystical: trees were silhouetted as I chased its ascending path. Surely this was an example of my seeing 'with eye, hand (in my case, mind) and heart'?

Earlier in the day, we had visited an antique shop where we purchased a large glass kilner jar filled with mesmerising shells. My husband wanted the jar, I the contents. Hockney also says 'We always see with memory'. Was my attraction to the shells a regression to the four year old me who collected shells on the banks of Lake Habbinya, lovingly filled a plimsol bag with them, only to have to leave these treasures behind when we were evacuated back to England at the outbreak of the Suez crisis? Whatever the reason, taking out each shell this week, touching its surface, admiring its natural formation, colour and smell has brought me many hours of pleasure and revitalised my need to create.



The sense of loss and joy was another theme I played with as I watched the video. Throughout, it was clear that Hockney has been strongly influenced by China. There was an unspoken reminder of the Zen paradox: we need, for instance, to have experienced pain to truly appreciate pleasure. And perhaps this brings us back to the stage of learning: with age and practice, we become the skilled expert, but that does not necessarily mean we retain the keen emotional component of art. As Hockney observes, 'You can teach the craft, it's the poetry you can't teach.' He has succeeded in retaining the poetry, whilst being an expert, yet also having that essential quality of curiosity and adventure. He is not afraid to move into unexplored media and return to being a novice. He does this by knowing how to see. It is this ability to remain young in spirit that keeps him (and the rest of us who defy our chronological age) sensitive to the beauty of nature and immersed in life.

I have been an inveterate fan of Proust since I first encountered his work at the age of 19. I guess my fascination with synesthesia stems from this, too. How one sense can trigger such vivid, unconscious memories. For Proust it was the taste of a madeleine cake; for me, it tends to be smells - my mother's cooking when I was a toddler, hessian rope on the swing my father made us in Iraq, that sort of thing.

Turning to the academic relevance of perspectives, I always recall an exercise I had to do for an OU Advanced Dip in Educational Management many years ago, when we had to describe a scene from different perspectives. I used the same technique recently with a group of KS3 English language students: they had to tell the same story from the perspective of a mother looking out of a window at her children digging in the garden; the children digging in the garden and discovering a fossil, and then from the perspective of the fossil being dug up (this was not my invention, but an exercise in a text book). They loved it, and it produced some highly creative stories.

#### Q4 What can we learn from each other about the way creativity emerges through our own practices?

The goal of the conversation is to share examples of practice in a way that enables us to grow deeper understandings of how creativity emerges from our everyday practices and our relationships and interactions with the world. There are at least two sorts of narrative that would be useful. The first is a general account of how practitioners in your field engage in practices through which creativity can emerge. The second type of account is autobiographical reflecting a particular experience that you have had in which your creativity emerged during the course of your practice. All contributions are welcome together with any observations and comments, or links to research or theory, that enable us to develop our understandings of how creativity emerges from practice.

Examples of each are offered on the resources page. <http://www.creativeacademic.uk/creativehe.html>



**John Rae** I really enjoyed reading your piece for Day 2, Teryl. I was also taken by a comment that you made, Norman – the one about Stephen's 'ecological way of seeing our relationship with our environment'. That made me think about my own practices and their environmental relationships, and especially how environment might relate to my creative practices.

**Story of practice:** *I present a sculpture that I completed just a few days ago. I made it for a research participant whom I interviewed. I was interested in learning how this person led a team to successfully enhance social inclusion for people who are older and have some sort of disability. That's my usual way of conducting research – to interview someone who has experience or expertise related to my topic, make art in response to that interview, and then take the completed artwork back to the research participant to continue the conversation, that is, to 'dig deeper' than what I would otherwise be able to do. I plan to take the sculpture back to my research participant in a few days.*

*The sculpture complete, and having been prompted by notions of 'ecology', 'practice' and 'creativity', I now reflect on the making of the artwork. The initial cluster of practices – interviewing, listening, recording, analysing, and so forth – were performed within the institutional environments of a community care service and also a university. Other practices were performed at home, a small farm dominated by quite a steep hill. This hill is littered with trees, most of them thriving but a few have died. I often walk up and down the hill and on one occasion I was wondering what to make for my research participant. What emerged – possibly through the convergence of mental images of artworks seen or made myself, and the vision of dead trees – was this sculpture. It is a little hard to pick out the detail but you may notice two figures holding hands. I was thinking about partnership and caring as central themes in achieving social inclusion. Of course, I remain anxious to see what my research participant will have to say.*

*In making the artwork, I had to fell a tree. I did this in a landscape not unfamiliar to the sound of a chainsaw, or the thud of a tree hitting the ground. The noise that the engraving tool made is not uncommon in my work shed either, nor is the scent of the varnish I applied to the shapes that materialised from the sawn tree trunk, trying as I did, to give the emergent shapes prominence or 'zing'. One may say, then, that I made this artwork through what Stephen Kemmis, Christine Edwards-Groves, Jane Wilkinson and Ian Hardy refer to as an 'ecology of practices'. This ecology comprised the practices of making, sawing, transporting, communicating, engraving, painting, and no doubt more. The practices are living and connected things<sup>1:36</sup> that were harnessed together<sup>1:37</sup>*

Dewitt Jones' ecology for learning, achieving and creating can be applied to this story too. In fact, it seems to add direction or flow to the ecology of practices that I have just described. That is, I came to the situation prepared (methodologically and practically) for an imagined future — new knowledge or wisdom. Entering the interview space armed with a recording machine and notes, and then the making place with various tools and skills, and reflecting on my interactions with my research participant, I engaged with the materiality of timber and paint. I responded to uneven surfaces, the marks made naturally as well as those that I made. I watched lines, shapes and patterns emerge, and this will no-doubt continue as I renew my relationship with the research participant and as others experience the sculpture.

#### Reference

1 Kemmis, S., Edwards-Groves, C., Wilkinson, J., & Hardy, I. (2012). Ecologies of practices. In P. Hager, A. Lee & A Reich (Ed.), *Practice, Learning and Change* (pp. 33-49). NY: Springer.

#### Teryl Cartwright

**Story of practice:** *I've been taking a pottery class this past month and it has been a joy to enter into such a creative space.*

*When you drive to Shiloh Pottery, you go past small towns and farms and then up the driveway past the chicken house of noisy residents to what looks like a log cabin. The door handle is actually a wooden latch you pull up. You walk into a room of the finished pottery and are greeted by a golden retriever named Bear. The grey and white cat is named Dog. He has another name now but I prefer that one. As you walk into the workspace, the instructor Ken greets you. He's like Santa with a gruff and whimsical sense of humor and long-standing patience. He sometimes carries a pen in his beard. There are always others there, students or helpers, working or visiting, or as Ken calls it, "playing in the mud."*

*To the left of where I usually sit at the wheel is a huge aquarium with two turtles the size of dinner plates. The spigot where I fill the bowl of water is a dragon fountain, spewing hot water instead of fire. The tools which I borrow are along the wall near the chemicals which make the glazes. The mixed glazes are kept in the huge garbage cans with towels thrown on top. The de-aired clay is on a shelf by the work my daughter and I did the previous week as we learn to throw our pots. We cut the clay with wire and weigh it before patting it into balls. If you get air in the clay you knead it out on the table as if you are making bread with a vengeance.*

*The plate which holds the clay on the wheel is called a bat and the ball of clay is to be slapped to its center after I wet the bat slightly to make the clay stick. If you do that slap right, the thunk does sound like making a hit in baseball.*



*When the wheel spins and I must center the clay, I've been learning how to keep my hands still. It seems like the most counter creative thing you learn. Usually, you think you have to be moving to be creative but while the wheel spins and you center the clay, your hands learn not to fight the clay as much as hold still and surround it. The clay is like a wild animal that needs firmly but caringly trained, much like creativity.*

*Your knees have to be pressed on either side of the wheel and your elbows sit on your knees, twice the power of The Thinker. After the clay has been centered which is the most important thing (even in creativity centering is everything!), you press into the center with your thumbs to make a space and you use a pin tool to see how thick the bottom of your pot is.*

*Finally, when you get that depth right you overlap your thumbs, making them into a "W" and you use your middle fingers on the inside and outside of the clay to form the sides as evenly as possible by moving them up together at a uniform speed at the three o'clock position with the other fingers alongside them for guidance.*

*You can bring more clay up from the bottom based on your pressure of your fingers but you have to gradually let go as you get to the top or the clay will form lopsided edges or worse, break. You can't keep going over and over the edges either, Ken calls that "loving it to death" and it doesn't fix your mistakes, it often creates new ones.*



*I think one of the most unrated parts of the creative space though is not the sights but the sounds. It's been interesting how differently my pots come out and I know some of this is influenced by the variety of music in the background often from the 60s and 70s. Then there are the sounds of the wheel as I press the pedal at different speeds like I'm driving. There are the muted conversations, the voice of the instructor, the blending of the glaze in the trash cans with a power tool that sounds exactly like a kitchen mixer, the water from the dragon, and the thunk of the clay ball hitting the bat, all these little things inspiring me to create pottery.*

*I sometimes close my eyes as I'm centering the clay and centering myself to listen to being creative and to hear myself being in a creative space. I don't know what sounds creative to you, but it has been fun to find out here in this new creative space in my life that sounds so different than the small thinkings of a writer typing on a laptop.*

<https://www.facebook.com/ccartists/videos/870855696418727/>

**Norman Jackson** A wonderfully emotionally engaging story + **Teryl Cartwright** which engages really well with the question of how our environment influences our practice and creativity and also yesterday's question about when are we able to use our creativity in the process of developing entirely new practice. Could you offer a perspective on this?



**Teryl Cartwright** + **Norman Jackson** Like your band you mentioned, I've tried some new areas of creativity. I've been working on and off on learning enough code to make a game. Part of the frustration is not wanting to learn the whole language of code to do it but to be more like the tourist with enough to get around while visiting a foreign country. I took a side track and made the game into a card game which had an unexpected bonus--the graphics I learned to make actually can be used as sprites in one of the game making apps I tried. I think that motivation is fueled by courage, curiosity and hope. You can plant seeds to develop curiosity by small things learned. You can develop hope by pointing out the small steps forward, by honest and well timed encouragement.

I am wondering about developing courage though--some of this might be humor--laugh or shrug off mistakes and risks--but some might be that dreaming/visioning I am exploring, even if you might have limited knowledge or experience on how to dream well and dream clearly. That courage to underpin motivation/persistence to me might be developing the skill of better dream vision, even if it is a vision as Sandra pointed out to allow yourself to wander and let something emerge.

**Sandra Sinfield** Thank you + **Teryl Cartwright** I really enjoyed reading this - and the evocation of that place - those sounds... It's one reason that I would like our HE classrooms to be more like primary school (where people can stay in and decorate and own a space) - rather than secondary ones (where people are nomadic moving from room to room - propelled by the bell). Or to use a more university descriptor - I wish we could all have more of a Studio style space - so that the room itself started to denote and connote the sort of activities that take place there and the modalities both adopted and inhabited. So that work is displayed - and can be taken up again - and that the very air and light and sounds create that 'making' atmosphere.



**Kevin Byron** "Patience is about being patient with patience!" (Reflections by Idries Shah)

I don't know of any project or work task performed by anyone that doesn't involve creativity at some level for its completion. If the project is purely routine, and not requiring any new thinking - as many of our daily tasks are - the creativity is still there idling in the background, but disengaged from its role in providing something novel for the completion of the task, simply because it's not needed. At those times creativity is manifested as day-dreaming. The engine of creativity is always running, but waiting for the critical thinking gears to mesh with its own, and during the development of a project - as has been suggested in the other contributions - creativity is constantly engaged and then disengaged. During the latter we are applying critical thinking to assess the relevance and usefulness of the creative idea that appeared earlier.

We can readily draw on our critical thinking skills on demand because unlike creativity they can be taught, they are based on reason, and the outcomes can be tested against logical fallacies. Creativity however can't be taught, has no fixed form, and can't be summoned at will. I'm reminded of the quote by Shakespeare from Henry IV: "I can call spirits from the vasty deep." ..... "Why so can I, or so can any man. But will they come when you do call for them?"



There are tools and techniques to help in stimulating our creativity, and whilst they may be useful in group work for low level creativity, I rarely resort to them when working alone. Generating ideas that are both original and useful (ie relevant) requires patience. This requirement of patience is now an accepted part of my creative practice which often has exhausting consequences. For example if I'm invited to give a presentation, or design a new workshop for one of my university clients, the first thing I do is put the date in the Google diary, and then push any thoughts about it to the background of my mind and focus on something else. I do this because I know from previous experience over many years that I need to feel ready to do the work. That readiness is signaled by the emergence of an idea that will enable me to progress the work. Often this starts when the deadline is very close, and there follows an intense period of work where the ideas begin to flow, and each idea is punctuated by a lot of critical thinking to tame, shape, and give expression to them. If I start such a project straight away I'm doing things the other way round. That is to say, starting with critical thinking and hoping that creative ideas will appear. That never works for me, and I've spent many hours working in hotel bedrooms into the early morning sometimes as late as 3am, and then presenting later that same morning. I don't know where I find the energy to sustain living on the edge like this, and I pay the price afterwards when the tiredness kicks in.

The other observation from this work is that I never start at the beginning - that usually comes last. I develop and present my work using PowerPoint, and regard this as a very creative medium provided all the so-called creative bells and whistles provided my Microsoft are avoided and that the design is rich in visual literacy. I initially use PowerPoint as a storyboard, and if I do anything at all before the time is right to focus on the presentation, I create a number of blank slides, and maybe on the odd occasion type in one or two key words on each blank slide. This represents the slow burn going on in the background awaiting the explosion of work that will follow. When I've mentioned to colleagues that I'm working on a presentation, what I really mean is that I'm waiting for the story to appear, and I never know when that will be. Maybe the pressure of a looming deadline has a catalytic effect which is why I work down to the wire!

When I'm not designing workshops I fill the space with other projects, some of which involve creative play with words. This includes cryptic crossword compilation, visual metaphors and the occasional video. These all evolve in exactly the same way as my professional work. Furthermore because there is no deadline there is a sense that they are never finished. An example is posted here, and as soon as I'd posted this video more ideas started to appear..... <https://www.dropbox.com/s/1pshn2tb7mf7sl1/Gaps.mp4?dl=0>

**Teryl Cartwright** One of the images I use to talk about patience as part of creativity is this [i.bnet.com](http://i.bnet.com) from the Netherlands. Here's what I wrote for that presentation a few years ago:

"Patience: Grounded bridge. To be able to stand up in the midst of what overwhelms and to even like a child reach out to it shows adversity doesn't have to be rushed across or around. The bridge is through though so the risk is to procrastinate too much or to see the barrier and emptiness of the place you are in instead of possibilities. Creative process: what do you do while you wait?"

Thanks for sharing the cool animated graphic about filling in the gaps. In our What's Missing CE last month one of the participants shared this process which you might find interesting as a concept to fill in the gaps <https://en.wikipedia.org/wiki/Kintsugi>

And here's a scientist that you might look at for his creative process: <https://www.symmetrymagazine.org/article/something-borrowed>

If creativity could be taught (I'm one of THOSE optimists), what would your graphic above look like?

**Norman Jackson** I do agree with you +Kevin when you say, "There are tools and techniques to help in stimulating our creativity, and whilst they may be useful in group work for low level creativity, I rarely resort to them when working alone. Generating ideas that are both original and useful (ie relevant) requires patience." I also facilitate techniques that demonstrate the power of associative and other types of imaginative thinking in groups but I never use these techniques when I am trying to think about something in my work. Like you say its more about focus and perpetual thinking and wandering consciously and unconsciously around the what it is that is interesting me deeply grounded in the context and purpose for thinking and doing. Usually, the possibilities emerge if I'm patient.

**Kevin Byron:** +[Norman Jackson](#) Thanks, and no problem - I was a bit late with my contribution...! Regarding the use of tools and techniques, after I had attended the CPSI conference in the USA, I wrote to a number of facilitators that I'd met asking them whether they used the tools that they presented in their workshops. None of them did, and this led me to question the value. I concluded (and may have commented on this earlier) that there is a 'creativity placebo' effect at play in group work. That is to say that one could invent a creative tool that had no evidence to support its usefulness, and a significant number of people in the groups would believe it helped them to generate ideas.

<https://www.dropbox.com/s/1pshn2tb7mf7sl1/Gaps.mp4?dl=0>

There is a precise analogy here with the placebo effect in complementary health therapies such as crystal healing, reflexology, homeopathy etc. When evidence based clinical trials were conducted with these therapies, they were all shown to be ineffective beyond the placebo effect.

The placebo effect typically works for 30% of people in a random group. The remaining 70% tend not to report that it didn't work because this is non-confirmatory information and not particularly interesting. Also these therapies focus on giving people lots of special attention which makes them feel good, and this makes them less likely to report failure.

To put some perspective on creative tools and techniques, at one of the weekly courses I attended at the CPSI conference, I worked with about twenty other attendees in sharing and demonstrating methods. At the end of the week we had catalogued and experienced over 90 different creative tools and techniques. Each had a name and one I recall from a facilitator from the Netherlands was called 'Rabbit & Prunes.'

Also there are dozens of books claiming to offer creativity 101. I did a study of some of these diverse idea-generation tools and concluded that they can all be subsumed into only 4 categories and these are:

1. Association (our default mode of creative thought),
2. Transformation (starting with an existing idea and using prompts to transform it - eg SCAMPER, TRIZ),
3. Analogy (entering another world to find relationships between this, and the target area in which ideas are sought) and
4. Combining (eg Forced connections, morphological analysis - though this does overlap a little with 2 above).

[Norman Jackson](#) Hi +[kevin byron](#) thanks for your elaborations. What you have said is very interesting. I think there is probably a placebo effect on the facilitator as well. I do enjoy facilitating these sorts of activities as long as the group size and dynamics are right.

I use a limited range of techniques but I now integrate them into a process that begins with group thinking and ends up with individuals (or sometimes pairs) thinking, doing and performing. With educators its typically designing a particular sort of learning experience in their own teaching context in order to make it personally meaningful and for participants to bring to bear their personal knowledge and circumstances. So the group think becomes a participatory demonstration of how we might use the cognitive spectrum (perception, reasoning and imagination) when tackling a challenging problem, as a platform for an individual contextualised design and perform activity. The combination of group and individual activities seems to work well as a productive learning experience through which creativity can be considered, manifested and discussed.



#### **Norman Jackson Stumbling into something new**

**Story of practice:** In a post on day 1 +[Paul Kleiman](#) offered the metaphor of stumbling as practice that is often associated with creative action. I offer this story as an example of live stumbling.

In an earlier post I mentioned I had enjoyed watching David Hockney paint in the Yorkshire countryside. I was intrigued and I kept searching YouTube for more clips of him painting. I was infected by his quiet enthusiasm for digital painting on the ipad - he made it look easy. I thought I'd like to try and paint something and I looked up how he used his ipad to paint. I stumbled upon a lovely clip by Jeannie Mellersh who told me that one of the ways we can understand someone else's practice is to try and emulate it. In the video clip <https://www.youtube.com/watch?v=-fngaQQzOG8> she demonstrates how she used her ipad to paint his Hockney's April 28th picture. "I've been looking at David Hockney's exhibition in London showing his ipad paintings I've recently bought an ipad and in order to understand how he painted one say this one on April the 28th [Angie is looking at the catalogue] I have attempted to recreate it on my iPad" This practical down to earth demonstration really helped me understand her practice and david's practice as an ipad painting craft.

I was so inspired by Jeanie's demonstration that I borrowed my wife's ipad, downloaded a paint app and had a go for myself. Its a finger digital painting of my garden and I enjoyed making it so much that I am going to invest in some digital brushes. On a small scale this is an example of stumbling into something new and being infected with the idea that this is something I could do and enjoy doing, then having a go.

It happened because I was willing to stumble around, with a degree of purpose and openness, coming across something and being intrigued. The advanced practitioner shared his passion and revealed the beauty in the landscapes I sometimes take for granted. The competent practitioner showed me how simple it was to learn the techniques and that gave me the confidence and will to try for myself. The result was satisfying and it felt creative to me (but not necessarily anyone else but that doesn't matter to me). Furthermore, I can now see the potential in the medium for doing more. I have developed some practice based knowledge and changed my perspective. I am not a complete beginner, I have drawn and painted off and on throughout my life but done very little in the last 18 years. I guess this proves to me that, in some areas of practice, we can be creative and productive with relatively little knowledge and skill if the circumstances are conducive.



*Finding deeper meaning in the story: Over lunch I thought a bit more about what I had done in relation to sharing my practice. The reason I was stumbling was to find interesting video materials that I could use to support this conversation. My goal to paint a digital picture was nested within the bigger purpose of trying to support and facilitate this conversation. The story was more than an example of trying to be creative in an artistic sense. It was a story about my practice as an online facilitator and how I used my creativity in this unfolding process. It was a story about me interacting with my environment and watching with anticipation to see what emerged.*

[Paul Kleiman](#) That's lovely +[Norman Jackson](#). It also reminds me that as well as writing more, I really ought to get back to drawing nice things again. I've spent far

too much time lately creating political photo-collages in response to Brexit and Trump! Your very last point, about being creative and productive with relatively little knowledge and skill, is something I thought about saying in response to your story about your band experiences and trying to learn about mixing and recording. At the time I thought that perhaps you were setting your sights rather too high. A bit like the music (jazz) lecturer I used to work with who insisted that you cannot call oneself a musician unless you can sight read at least adequately! Your drawing, and your experience, is a classic example, I think, of that 'little c' creativity...which might, of course, eventually lead to some 'big C' creativity.

[Chrissi Nerantzi](#) Such a warm story of (re-)discover +[Norman Jackson](#) which paint app did you use? The drawing radiates calmness to me. I did a lot of drawing and painting when I was little encouraged by my mum. Then I did a little bit more as a teenager and started again when I had my own children and even had done a water colour course. I would love to get back into it on a more regular basis with my boys, as I did feel I was getting a lot out of it and I would love to share this further.

[Norman Jackson](#) Thanks for your friendly encouragement +[Paul Kleiman](#) and +[Chrissi Nerantzi](#). Yes paul you are right it is an example of the small c stuff of everyday living that because I had the time I was able to do. When I think about it I have far more knowledge and developed skill to achieve this small work than I have for the recording and mixing story. In the latter case I'm not setting my sights too high, I just want to do the most basic thing, which I was able to do with the digital picture.

I used the brushes redux app Chrissi which was nice and simple but I want to use the app that David Hockney uses which is an earlier version of brushes I think [subsequently I found this was no longer available] there are so many of them which is a bit confusing. I also need to get the brushes and I think this is another thing we have to have the tools in order to create something. iPad and as a minimum.

+[Chrissi Nerantzi](#) I have always admired and envied your digital artwork and also +[Simon Rae](#) and perhaps its your examples that are part of the motivational force that drives my interest. Motivation is a complex and multifaceted thing. If I can develop the skill I will eventually try and produce illustrations for the magazine but I am a long way off that ..

Paul Kleiman: Hi+[Chrissi Nerantzi](#). +[Norman Jackson](#) identifies something so obvious yet so difficult for so many people: the affordances of time!

Time to pursue one's curiosity about something new or unfamiliar.

Time to experiment and, in Samuel Beckett's famous phrase "Fail again. Fail better".

Time to reflect, and to feed that reflection into the next phase of activity.

[Jennifer Willis](#) Love your image +[Norman Jackson](#). You have inspired me to look into the technology. Just a word on motivation: yes, I believe this is fundamental to our willingness to try new things. Being willing to share your achievements with others requires self-confidence, and confidence in those you share with not to be gratuitously critical. It demands humility, acceptance that we are not always in the expert zone. I look forward to the day that you do produce your own illustrations for the magazine!

[Teryl Cartwright](#) Thank you for sharing your work! This is so cool, I may have to try it this weekend!

[Sandra Sinfield](#) A lovely example +[Norman Jackson](#) - and it prompts me to think about the new 'moral panic' that has infected HE about plagiarism... First we introduced more coursework rather than exams... this seemed to generate a need for longer and longer bibliographies... then first year students were required to submit essays with bibliographies including ten or more references - when at this stage they are not quite sure of academic 'rules', perhaps they do not yet know how to read for study - nor how to write formal university essays - so a bit more copy and paste happens as their way of copying more proficient writers. Before this, it was accepted that the first year was the learning/adjusting year - and many of us were not even taught how to reference till the second year. Can we use your argument as leverage for more modeling and stumbling in the first year?



[Norman Jackson](#) Hi +[Sandra Sinfield](#) I think there is a very real argument for modelling what underlies our practice. I have often said that teachers should be able to stand up in front of their class and explain how and what they have learnt, and how they have stumbled, in order to perform their role. Generally, we like what lies behind our practice to be invisible so its not surprising that creativity remains hidden. Jeannie Mellersh provided a great example in 'working out loud' to make her practice and thought processes visible.

#### **Q5 What have we learnt about how creativity relates to practice and specifically our own practices?**

The final day of our conversation is devoted to making sense of the stories that have been shared to progress our understanding of how creativity manifests itself in our everyday practices. Please share any perspectives or insights you have gained through the conversation and any theories or research studies that you think help us understand this natural phenomenon. You probably have more questions than answers so please share these as well.

*Q In any domain/context for practice is there an experiential journey we must make that takes us from ignorance and incompetency to a level of awareness and proficiency that enables our creativity to be involved? And is the journey unique for every individual....?*

**Paul Klieman**

Thinking about the question, and particularly thinking about experiential journeys, stumbling, and various other things that have arisen in these interesting conversations, I went back through the various blog posts I have written over several years now. Looking down the index of articles I came across a post from 2014, about the journey I took to complete my PhD. The whole thing formed the final section of my PhD and, if you're interested, can be read here:

[stumblingwithconfidence.wordpress.com - Thinking, Making, Doing, Solving, Dreaming: reflections on completing a PhD thesis on creativity in higher education](http://stumblingwithconfidence.wordpress.com - Thinking, Making, Doing, Solving, Dreaming: reflections on completing a PhD thesis on creativity in higher education)

Here are some relevant (I think) extracts:

Thinking, Making, Doing, Solving, Dreaming: reflections on completing a PhD thesis on creativity in higher education

Note: Recently (Nov. 2014), when looking for something else entirely, I 'stumbled' across my PhD thesis which was hidden away on an external hard drive. It was finally completed in 2007 at the end of a long four years during which I stopped work completely on researching and writing for over a year due to the illness and eventually the death of my father. I eventually and successfully finished it due, in no small part, to the feeling that I wanted to honour his memory. As I started to read it, a whole lot of memories and emotions came flooding back, particularly in the short final section where I reflect on my own learning journey. Here is that reflective section, which I hope may be of some use or interest.

\*\*\*\*\*

Wanderer, there is no path;  
The path forms itself as you walk it.  
(Machado)

\*\*\*\*\*

Whilst the interview and the transcription processes were relatively straightforward, the process of analysis coincided with my long and difficult journey into understanding phenomenography. As the Machado poem quoted at the front of this study says: the path was unfolding as I was walking it.

There were a number of personal attributes and dispositions that assisted me in the rather daunting quest to seek out the structure of variation across the transcripts, and to undertake the intense iterative process of constituting, re-constituting and distilling the categories of description and the structural and referential aspects of variation. Amongst them was a dogged determination to undertake the task properly allied to a genuine enthusiasm for solving complex puzzles. It may seem a rather trite comparison, but the capacity to sit for an extended amount of time considering, categorising and attempting to piece together the hundreds of pieces of a complex jigsaw was a useful attribute in tackling the analysis stage of this study.

\*\*\*\*\*

Finally, to return to the quote from Machado at the beginning of this study, I have certainly walked, occasionally stumbled, and for some considerable time actually stopped - along the path of this study as it has formed itself. While the path continues in terms of further research, this document represents the end-point of a long, complex and fulfilling stage of that journey, and marks my own thinking, making, doing, solving.....and dreaming.

[Thinking, Making, Doing, Solving, Dreaming: reflections on completing a PhD thesis on creativity in higher education](#) [stumblingwithconfidence.wordpress.com](http://stumblingwithconfidence.wordpress.com)

[Gillian Judson](#)+1 +[Paul Kleiman](#) When my eyes actually start to focus again (only 2 papers left out of 68) I want to carefully reread and dwell on this post. But what jumped out at me--and what I think has emerged this week as well as in other creativeHE conversations is our multi-dimensional roles as educators in HE. You say "academics need to be perceived and involved as agents in their own and their students creativity rather than as objects of, or more pertinently, deliverers of a particular 'creativity agenda'". Let's chew on that! We are developing our own creativity--and allowing that transformation--being comfortable with knowledge-supported creative "stumbling"--as well as supporting/generating/affording the same opps for transformation in our students in directions/modalities they choose to go. Would be interesting to have a conversation like this one in which we each invite a student of ours to participate and contribute their perspectives on the creative process of learning/being taught in HE.

[Jennifer Willis](#) What have I learned?

My own contribution this week has been curtailed by illness, so I am not as well-placed as I would have wished to be to respond to this question. Like +[Paul Kleiman](#) I immediately focus on personal disposition, especially motivation: in his case determination, and a sense of duty to himself and his late father, in mine, a passion for passing on a love for learning. We saw, too, David Hockney's determination to get to the heart of what he was seeing, the time it took to deconstruct the colours in the land and trees.

The question of stumbling is interesting: as an expert painter, did Hockney have to go through the whole learning process when he moved to a new medium (ipad)? If he did, was his journey accelerated due to his expertise in a related art? I have often asked whether creativity is transferable, and previously given the example of how, due to arthritis, I can no longer use my hands to create the many crafts that had been my lifelong hobbies. In order to find another outlet for my desire to create, I have reverted to my laptop keyboard. I can still express my ideas and create papers, presentations, classroom resources etc.

Turning to John's wonderful story, I am reminded of how a consciously desired outcome was the stimulus for his creative process. And, of course, that is an ongoing process of creativity which doesn't end with the production of the artefact. Norman rightly contrasts creation of a tangible object with creativity where the result is intangible. I think this is partly what we seek to achieve as teachers - we don't just want one good piece of work or an exam pass, we are hoping to have had an lasting impact on the learner.

[Paula Nottingham](#) I have learned that structuring think around activities - e.g. the ecologies - helps to see them clearly for what they have and do not have in terms of creativity. Seeing other reflecting on their work has been extremely helpful away for the day job - things seem clearer if not resolved. It was great to see this year's choice for the Turner prize during the time we had together - mastering our craft might take some time but there is hope for us all getting to our goals! I think graphically examining the stages of development has made me more aware of the positive growth of becoming and maturing practice and themes around practice - what we do, how we do it, and how we feel about the outcomes.

[John Rae](#) I've enjoyed the discussion and appreciate the sharing of ideas, and for commented on my thoughts. I think that what I will take away from the conversation is the notion of 'stumbling'. I also think the concept 'emergence' is useful. I often refer to Margaret Somerville's paper 'Postmodern emergence', which informs my research. Now, however, I am wondering how stumbling relates to emergence - does it, if it does, when, and how? Also, how does materiality relate to stumbling? An artist might stumble from a mark that she makes on paper - to the next mark - and then the next - feeling the texture of the paper through the piece of charcoal in her hand which generates a desire to make the next mark. So, for me, I'll be wondering about stumbling/emerging/materiality. Thanks. [www.tandfonline.com/doi/abs/10.1080/09518390601159750](http://www.tandfonline.com/doi/abs/10.1080/09518390601159750)

[Norman Jackson](#) Thanks for your appreciative feedback +[John Rae](#). I think you connected up very nicely the ideas of stumbling with purpose and the way practices within the act of stumbling might (and do) lead to emergence of the next action. Stumbling in this way is a relational and interactive process between a person, their projects, and their material and psychological world. As John Dewey shows us the process of stumbling changes us as we stumble- he calls it undergoing but we can also view it as becoming. I hope very much that you will stay connected to our creativity in practice project.

## #CREATIVEHE CONVERSATIONS

[Teryl Cartwright](#)

What if I tried to share what I learned about my own practice of creativity by giving a picture instead of words?

[Norman Jackson](#) This is you +[Teryl Cartwright](#) I'd love to know what your unique imagination is saying.. probably nothing like what I'm thinking thanks for all your contributions..

[Teryl Cartwright](#) One of the neat takeaways from this week was to find an image that expressed new learning in my creative practice. Usually, I do it the other way--take an image or rule and "make" it creative or make a creative practice from that image or rule to try out.

I loved the idea of trying to express something wordless about creativity even if this picture is not creativity itself and not a practice of creativity, it is only a reflection of it. I imagined an art gallery filled with pictures labeled "creative" or "creative practice/learning" and the viewers left to interpret on their own what that could be.

Your picture on the iPad, for example, has some lovely ideas for creative practice. You have the foundation (the grass) very clearly defined with a boundary and strong color and yet the trees are impressionistic until you get to the white background with the lines of leafless trees. It's like stepping into a painting that is wonderfully incomplete. I am so drawn by the contrast because you'd expect the background to be dark or filled in with formless colors (that would be the easiest thing to do) but you draw the viewer in to look at the possibilities of the unfinished growth of trees. Your mix of fall and evergreen trees to each side remind me of the creativity that is present all the time versus the one that comes in season at the right time like Kevin Byron's deadline-induced creative harvests.

Your picture could teach someone to have a clear beginning vision, to use both kinds of creativity--evergreen and seasonal, and to not fill in the gaps with the easiest solution just to look good or "be done with it." It could teach the viewer to leave room for an open-ended outcome and leadership through vulnerability by showing your creative practice is something still a work in progress.

[Norman Jackson](#) You have a wonderful way of expressing yourself with words +Teryl Cartwright - there is much creativity here. I guess for one persons creativity to have meaning for another it has to engage them emotionally and cognitively. And because we are all unique our responses are all different. You extracted a lot more meaning from my digital painting than I did. I think I had been influenced by seeing David Hockney's vivid colours and so as I looked out of the window and the palette presented itself I used the shapes I could see and the colours in the palette with little in the way of technique.and it just came together in the way it did. I do like the idea of incompleteness everything in life is incomplete and trying to complete a bit more of whatever matters to you is a motivator.

The beauty of the digital painting app is it preserves what you did as a video which you can play back and see how it was made - like time lapse photography. How cool would it be if we could do that for real life projects. I've tried a couple more paintings since but they were not as fulfilling. Again this is the way creativity goes isn't it. You try something and it doesn't work out and you are not satisfied so you try again. On the back of this experience I have bought myself a large canvas to try my hand at a landscape in acrylics.

[Teryl Cartwright](#) That time lapse video sounds cool. It would give you insights on where/how you started! I hope you didn't mind my interpretation of your art. Sometimes it is just as creative to express appreciation or to encourage someone to continue although there are many practices on the best ways to do these too! Hope you'll keep trying the painting whether digital or canvas.

[Mar Kri](#) +[Teryl Cartwright](#) and +[Norman Jackson](#) You both truly are for me great inspirational teachers in this community. Teryl, you have a unique way of articulating yourself which leaves me often with a sense of "it's all been beautifully said"...a sense of completion in a way? a great way to dive into Norman's endless inquisitive invites for detailed and specific analysis of our thought process. Thanks to both.: -)

[Norman Jackson](#) Its lovely +[Mar Kri](#) and +[Teryl Cartwright](#) that we appreciate and help each other in this community. It makes it very special.

[Teryl Cartwright](#) +[Mar Kri](#) thanks for your encouragement and +[Norman Jackson](#) thank you for your compelling insights on all our posts and patience with my offbeat musings and sense of humor

### Acknowledgement

A great big thank you to everyone who contributed to the conversation. I learnt a lot through the conversation and I shared my thoughts through my blog. I'm sure I will draw on the ideas and perspectives in these conversations as our project unfolds.

Norman Jackson  
Facilitator





# Creativity in the corporeal, hermeneutic and analytical domains

## Christian Julmi



Christian studied industrial engineering with a focus on economic interaction and decision models as well as finance and accounting at the Karlsruhe Institute of Technology. From April 2011 to May 2015 he was research associate at the Chair of Business Administration, in particular Organization and Planning, at the University of Hagen, where he completed his doctorate on "Atmospheres in Organizations". Since June 2015 he is Academic Council at the Chair.

### Creativity as a domain-specific ability

The question whether someone is creative or not is quite important in daily life. People often admire other people for being creative, or they refer to themselves as being creative in social networks, CV's or job interviews. So, being creative is apparently something that we believe is a good thing. However, the ability to be creative is far from being a universal yes or no question. It is now widely accepted in creativity research that creativity is domain-specific<sup>1-4</sup>, meaning that the question of whether someone is creative has to be connected to whether someone is creative in a specific environment or domain such as poetry, music, science or math. Of course, this does not exclude the possibility that people can be creative in several different fields of practice, but this reflects an exception rather than a rule. One reason for this is that being creative in a domain or field of practice requires a lot of experience, practice and training. According to the so-called *ten year rule*, even the most gifted individuals require about 10,000 hours of practice and training before they are able to create significant works. Another reason is that the skills, aptitudes, traits, propensities and motivations that underlie a creative performance fundamentally differ between domains. Being gifted in the mathematical domain, for example, does not imply that the same person also possesses talent in the domain of visual arts.

### What do I mean by domain?

There are numerous approaches to the definition and characterization of domains. For example, we might think of the knowledge domains of different fields of professional practice like engineering, medicine, law or accountancy or the disciplinary fields of practice like history, geography or biology. We can also think of domains as distinct areas of ability and mental processing. For example, Gardner<sup>5</sup> differentiates between eight domains of intelligence: musical, bodily-kinesthetic, visual-spatial, verbal-linguistic, interpersonal, intrapersonal, logical-mathematical and naturalistic intelligence. However, such lists of domains may be extended or changed over time. In our research, we follow the phenomenological approach of German philosopher Schmitz<sup>6</sup> to explicate a structure of domains that reflects basal characteristics of human subjective experience. This structure consists of three basal intelligences: corporeal, hermeneutic and analytical intelligence.

*Corporeal intelligence* is the ability to deal with situations holistically without explicating individual significances or states of affairs. An example of corporeal intelligence is the driver who has to recognize and evaluate the danger of an imminent accident at a glance and to react to the circumstances (asphalt, rain, trees, cars, speed) without recognizing them individually.

In contrast, hermeneutic and analytical intelligence operate with individual significances. *Hermeneutic intelligence* explicates individual significances from situations without destroying the wholeness of situations. There are two types of hermeneutic intelligence: the adaptation to situations and the arrangement of situations. Adapting to situations is characterized by the cadence that respects situations in their wholeness. This type of hermeneutic intelligence is important in generally dealing with people, for example in politics or the family. It makes it possible to grasp which acts and words are suitable in a particular situation, or where the limits of what is achievable lie. The arrangement of situations is best reflected in poetry, which is understood as the skillful economy of speech. In poetry, individual states of affairs are retrieved to carefully form the internally diffuse meaningfulness of a situation in a manner that respects the wholeness of the situation. With *analytical intelligence*, individual significances are explicated and combined from situations as valid facts. Accordingly, analytical intelligence is the ability to extract individual significances from situations (explication) and to link them (combination). Whereas hermeneutic thought is bound to the situation, analytical thought is emancipated from the situation. Such emancipation from subjectivity and the wholeness of situations opens up possibilities of manipulation, but is exposed to the danger of the loss of subjective meaningfulness.

For creativity, intelligence is a necessary but not a sufficient precondition. An intelligent performance gets creative only when something is understood and can be processed as a whole. Only if we have the feeling of penetrating something as a whole we can deal with it as if we had found the decisive word, as if we had somehow discovered the secret and could make what it was about as a whole visible. An insight of this type is an essential component of the creative process. The following section specifies characteristics of corporeal, hermeneutic, and analytical creativity in more detail.

## Corporeal, hermeneutic and analytical creativity

*Corporeal creativity* is integral to art (i.e., music, architecture, painting, graphics, sculpture, and dance), because it is the aim of any art to embody something that can be sensed with one's own felt body. The artist's felt corporeality guides and inspires (corporeal) creativity. Art is essentially the result of an encounter of corporeal feeling with atmospheres, which are spatially poured-out emotions in the domain of what is experienced as present.

Corporeal creativity: Artist David Hockney painting a landscape in the landscape and the atmosphere of the landscape



The quality of an artwork acquires its specific character from the artist's specific condition that he feels in his own felt body, and not from an intellectual act represented in an idea. Of course, an artist can be guided by such an idea, but this does not lend the work of art its artistic quality. Corporeal creativity consists of transferring a stimulus felt in one's own felt body into the objective form that can be sensed as a holistic atmosphere. This stimulus can have its origin in the felt-body itself (which is often the case in modern arts) or in an atmosphere that intervenes in the artist's corporeal feeling via suggestions of motion and synesthetic characters. Suggestions of motion depict the suggestion of a motion that can be felt on the own felt body (e.g., a glare, the branches of a weeping willow or an eye-stinging smell). Synesthetic characters are qualities of perception that go beyond that allocation to individual genres of perception (e.g., colors, temperatures, noise or light). A color is perceived as bright or dark (light), as cold or warm (temperature). Sounds can be heavy, dense or hard (mass). In general, it is the task of art to present atmospheres, and the ability of the artist is his corporeal creativity.



*Hermeneutic creativity* is possible in two forms: *adapting to* and *arranging* situations. Creativity in adapting to situations is revealed in the ability to grasp a situation in its entirety and to adapt to it. For example, hermeneutic creativity as adapting to situations permits skillful dealing in a negotiation situation, if the negotiator knows exactly when the right time has come to put forward demands, when it is better to concede or when the situation changes.

Arranging situations in poetry essentially relies on the sparing arrangements of words. In poetry, saying less is saying more. In Goethe's lines "Above all summits/Is rest", it is exactly the sparing word *is* that lets the meaningfulness of the situation shine through and makes it become alive. Such a hermeneutic sparingness is also

present in Japanese haiku, but can also be found in epic and dramatic poetry. Whereas the artist presents atmospheres, poetry presents situations; by careful explication they are made accessible in their entirety. As situations are permeated by atmospheres, atmospheres do also play an important role in hermeneutic creativity (but not vice versa). Accordingly, works of art can be integrated well atmospherically into existing situations, for example when a piece of music is used to accompany a situation shown in a film.

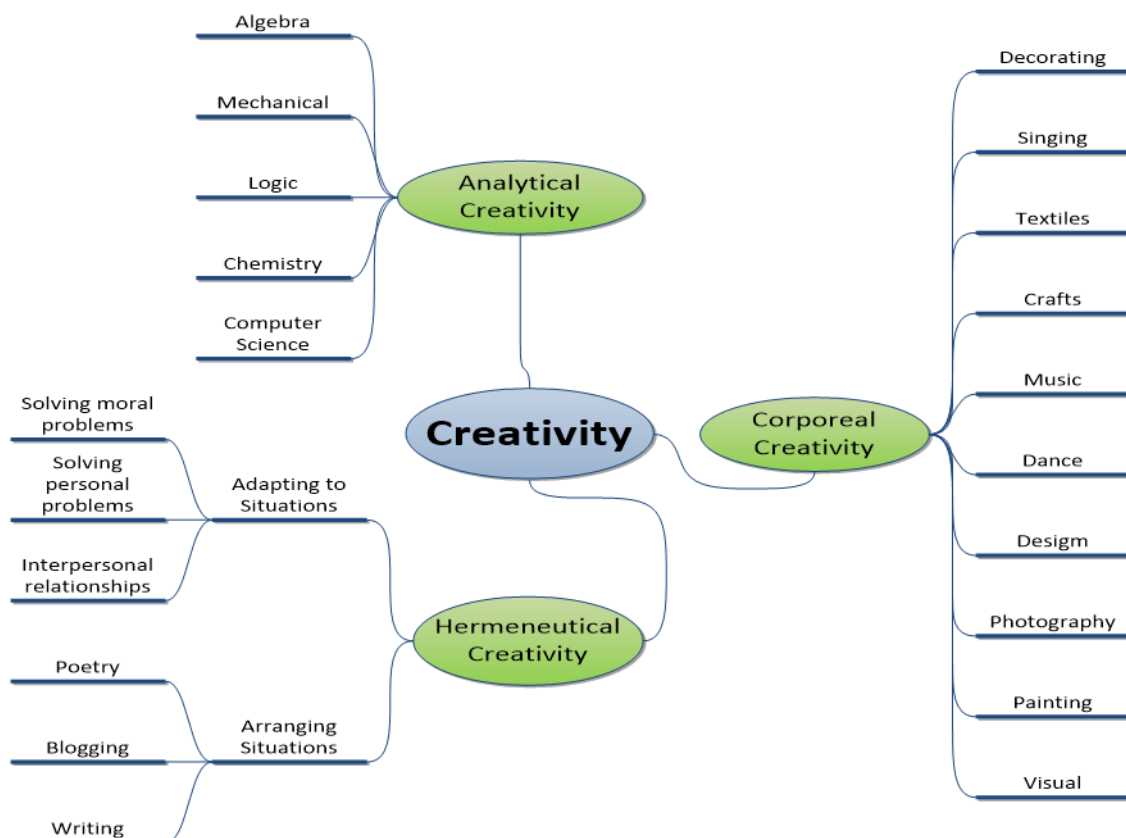
*Analytical creativity* refers to seeing through the entirety of a situation so that the situation is reduced to its essence, and to combining the reduced individual significances so skillfully with one another into constellations that the situation can be brought under control. Analytical creativity enables objective correlations to be gained from subjective situations. Whereas subjective situations possess a living character through their wholeness, objective constellations (of individual significances) lack a holistic character and are thus lifeless (e.g., the constellations represented in Euclidian geometry). In principle, there are numerous ways for reducing and combining individual significances from situations, so that it is possible that the significances that are reduced independently of each other from different points of view are contradictory (e.g. Euclidian and non-Euclidian geometry). A mathematician is analytically creative, for example, when he finds a new constellation of axioms that have a significant impact within mathematics.



## Implications for practice

In sum, corporeal creativity deals with atmospheres, hermeneutic creativity with situations, and analytical creativity with constellations. In this sense, creativity is domain-specific and three domains have to be differentiated on the uppermost level: corporeal, hermeneutic, and analytical creativity. These three domains characterized by a fundamental difference between creative processes and underlying abilities. Starting from this, and in descending hierarchical order, further subdomains can be differentiated (Figure 1).

Figure 1: Domains of creativity



With regard to persons, one can speak of corporeal, hermeneutic, and analytical abilities but this model of creativity does neither imply that someone who is corporeally creative cannot be analytically creative as well, nor that someone who is corporeally creative in one domain (e.g., music) is automatically also creative in other domains of corporeal creativity (e.g. painting).

Creativity in any domain still needs a lot of experience, practice and training, regardless of whether someone is creative in a corporeal, hermeneutic, or analytical domain. Besides talent, nurturing creativity means doing hard work in the first place. If someone wants to improve his or her creativity as a painter, one has to paint, just as a writer has to practise writing and an algebraist needs to study algebra. However, creativity practice and training does not lead to an increase in creativity across domains. Nurturing creativity is different in different domains.<sup>2</sup>



Apart from that, some differences can be made between practice and training in corporeal, hermeneutic and analytical domains. Being creative in a *corporeal domain* is inextricably linked to one's subjective felt body and sense of atmospheres. Corporeal creativity is about emotionality in the first place and requires an increase and cultivation of one's sensitivity and use of senses. Due to its subjective nature, corporeal techniques (such as yoga) or body psychotherapy may help to overcome corporeal blocks and routines that may hinder a free flow of creativity.

Being creative in a *hermeneutic domain* is essentially based on an intuitive and holistic understanding of personal and interpersonal dynamics and may be improved by making different experiences. Personal involvement seems to be especially suited for developing such an understanding, although reading classical literature can also lead to a deeper understanding of human nature. Whereas corporeal creativity is essentially based on one's own subjectivity and corporeal feelings, hermeneutic creativity needs a deeper understanding of social reality.

Analytical creativity, in contrast, is impersonal and is best improved through the extensive study of domain-related explicit knowledge. For *analytical domains*, Wallas'<sup>7</sup> classical four stage model of creativity can be used as a helpful heuristic to increase creativity. According to this model, the creative process consists of four stages—preparation, incubation, illumination, and verification. In the first stage, one has to extensively study the relevant systems of constellations within the domain of interest. Then, in the incubation stage, distraction is needed in order to get some distance from the acquired constellations. While the mind is wandering, the connections within the constellations loosen slightly and can then be rearranged—a process that largely operates unconsciously. In case of success, a sound and coherent rearrangement emerges which then passes the threshold of consciousness in the incubation stage (also known as the “eureka” moment). In the concluding verification stage, the value of the outcome has to be assessed.

Understanding the fundamental difference between the three domains of creativity presented here can help to customize creativity training. However, such an understanding is not a substitute for intensive practice and training in the domain of interest. In fact, the most important ingredient in improving one's creativity is and will remain self-discipline.

#### Acknowledgement

This article is based on a journal article published in 2015<sup>3</sup>.

#### Sources

1. Baer, J. (2015). The importance of domain-specific expertise in creativity. *Roeper Review*, 37(3), 165-178.
2. Baer, J. (2017). Content matters: Why nurturing creativity is so different in different domains. In R. A. Beghetto & B. Sriraman (Eds.), *Creative contradictions in education. Cross disciplinary paradoxes and perspectives* (Vol. 1, pp. 129-140). New York: Springer.
3. Julmi, C., & Scherm, E. (2015). The domain-specificity of creativity: Insights from new phenomenology. *Creativity Research Journal*, 27(2), 151-159.
4. Glaveanu V., Lubart T., Bonnardel N., Botella M., de 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 (2013) *Frontiers of Psychology*, 4:176, 1-14
5. Gardner, H. (1993). *Multiple intelligences: The theory in practice*. New York: Basic Books.
6. Schmitz, H. (2010). *Bewusstsein*. Freiburg: Karl Alber.
7. Wallas, G. (1926). *The art of thought*. New York: Harcourt Brace.

# CREATIVITY IN PRACTICE



# How do we learn to practise creatively in a domain?

Norman Jackson

## My practice as a facilitator

As a facilitator of #creativeHE conversations I always learn as I prepare for, participate in and then think and write about the conversation. Always, in the back of my mind is the question, *'how do I know what I know or don't know until I write it down?'* The process of writing 'it' down helps me organize, interrogate and draw meaning from my thinking and helps me realise what I don't know.

I might also add *'how do I know something until I visualize it in a picture?'*, as this is another technique I use to try and comprehend something and make it memorable. I realise that these are important aspects of my practice as a knowledge worker in the domain of education and learning.

In my role as an online facilitator I try to record my thoughts and feelings in a dedicated blog<sup>1</sup>. This article is based on the posts I made during and after the #creativeHE creativity in practice conversation<sup>2</sup>. It represents my initial attempt to make sense of how we learn to be creative in a domain.

## Preamble

I make the assumption that everyone is unique, shaped and developed through a life that only they have experienced. Therefore, the way they involve themselves in a domain or field of practice, including the way they use their creativity, will also be unique, although their practice will of course be influenced by what other practitioners do in that field.

I think it's much easier to demonstrate creativity when there is a tangible product arising from practice: it's one of the reasons why we associate creativity with artistic expression. It's far more difficult to demonstrate creativity when it is a course of action and conversations that bring about a change or new practice in an organisation. Conversations about creativity often reflect this bias towards tangible artefacts as an expression of creativity.

Is creativity transferable? Well our generic ability to imagine and connect and combine things in interesting and novel ways, and to be resourceful, can probably be applied in lots of different contexts or personal domains across our lives, but we cannot suddenly jump into a domain we know nothing about and expect to perform competently and creatively.

As I prepared for the creativity in practice conversation, the question that was uppermost in my mind at this early stage in our project was, *'how do we learn to use our creativity in a domain?'* This question is relevant to higher education teaching practices that aim to encourage learners to use their creativity in a domain specific, rather than a none domain specific, way. At what point in the journey towards becoming an experienced practitioner in a domain might we expect learners to use their creativity, assuming of course that we are trying to encourage them? This question connects us to our previous 'creative pedagogies for creative learning ecologies' project.



Exploring Creative Pedagogies for Creative Learning Ecologies

### Expert

No longer relies on rules, guidelines or maxims  
Intuitive grasp of situations based on deep tacit understanding  
Analytic approaches used only in novel situations or when problems occur  
Vision of what is possible

### Proficient

Sees situations holistically rather than in terms of aspects  
Sees what is most important in a situation  
Perceives deviations from the normal pattern  
Decision-making less labored  
Uses maxims for guidance, whose meaning varies according to the situation

### Competent

Coping with "crowdedness"  
Now sees actions at least partly in terms of longer-term goals  
Conscious deliberate planning  
Standardized and routinized procedures

### Advanced Beginner

Guidelines for action based on attributes or aspects.  
Situational perception still limited  
All attributes and aspects are treated separately and given equal importance

### Novice

Rigid adherence to taught rules or plans  
Little situational perception  
No discretionary judgment

## Learning to practice in a domain

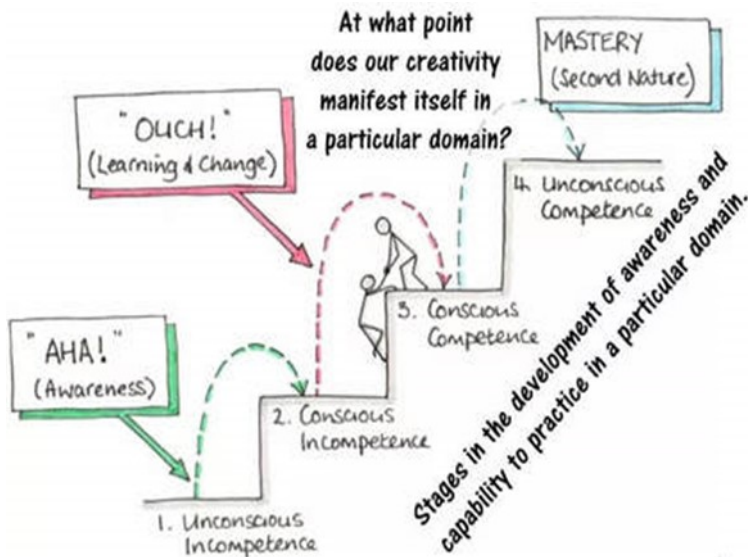
During the conversation we tried to explore what happens when a person enters a domain for the first time with no domain specific knowledge or skill - at what point will they be able to draw upon their creativity? By domain, I mean a discrete area of practice replete with its own contexts, situations, cultural expectations and social norms, demands, problems and opportunities, knowledge and skill requirements, and tacit understandings of what being creative means.

We considered the Dreyfus model<sup>3</sup> - the journey from novice to expert as we enter, learn and develop, and eventually gain some expertise in a domain. There was a sense that while this model works in some domains, where there are clearly defined stages in education and training, it was too hierarchical as a general way of explaining how a person develops in order to perform in a domain.

Figure 1 Dreyfus model of skills acquisition summarized by Michael Eraut<sup>4</sup>

In thinking about possible alternative explanations for the development of a person to practise in a domain, I remembered the awareness / competency model<sup>5</sup> (Figure 2) and thought it had good potential as a heuristic for understanding how a person might develop. I was working on the assumption that it is hard to be creative when you know next to nothing about the content, contexts, culture and practices in a domain so initially we cannot be creative in a domain specific way, so the question that bothered me, was at what point could we begin to use our creativity in a domain specific way?: in a way that experienced people who inhabit the domain would recognize as being creative.

**Figure 2** Awareness / competency model<sup>5</sup> of skill acquisition



I shared two experiences in the #creativeHE conversation that I could relate to this theoretical model of the development of knowledge, skills and awareness in a domain.

### 1 Mixing a song

Over a year ago I decided, with a friend, that we wanted to learn how to record our band. We purchased a second hand 'digital mixer' and had a go at trying to get it to talk to the computer which hosted the processing software, but we didn't manage to make it work. A year later we resurrected the idea with a different level of motivation and over three or four weeks, and quite a lot of time, effort and messing around we managed to get it to work, we set up the mixer and recorded our band and fumbled to do some post-recording mixing on the computer. We are novices trying to get to the next level of understanding and competency and it's a painfully slow

learning curve with every procedure needing to be looked up and practised. Nothing is intuitive and nothing is automated and I am often in a state of perplexity and anxiety. Copying in order to do something is the way I'm learning to practise at the moment. As far as recording and mixing is concerned there is not a smidgin of creativity in anything I do.

### 2 Digital painting

I enjoyed watching David Hockney paint in the Yorkshire countryside. I was intrigued and I kept searching YouTube for more clips of him painting. I was infected by his quiet enthusiasm for digital painting on the ipad - he made it look easy. I thought I'd like to try and paint something and I looked up how he used his ipad to paint. I stumbled upon a lovely clip by Jeannie Mellersh who told me that one of the ways we can understand someone else's practice is to try and emulate it. In the video clip she demonstrated how she used her ipad to paint one of Hockney's paintings. I was so inspired by Jeanie's demonstration that I borrowed my wife's ipad, downloaded a paint app and had a go for myself. It's a finger digital painting of my garden. The result was satisfying and it felt creative to me (but not necessarily anyone else but that doesn't matter to me. I guess this proves to me that, in some areas of practice, we can be and feel creative and productive with relatively little knowledge and skill if circumstances are favourable.

These experiences encourage me to believe that we begin to use our creativity in a way that is relevant to a domain when we become consciously competent to act in the domain and we have a problem, challenge or opportunity that we care enough to do something about it.

### Learning to practice in knowledge-rich domains

These stories are about practising in what for me are hobby domains which can be entered at a level of limited knowledge and skill. In contrast, many professional domains require the people who practise in them to develop a significant body of propositional and theoretical knowledge. The people who practise in such domains have been described as 'knowledge workers', that means their work involves developing and applying knowledge and they think and learn for a living<sup>6</sup>. Knowledge work can be differentiated from other forms of work by its emphasis on "non-routine" problem solving that requires a combination of critical and creative thinking.

To become a practitioner in knowledge-rich domains a person must serve both a *cognitive* and a *practical apprenticeship*. The cognitive apprenticeship<sup>8</sup> enables learners to develop the knowledge and ability to perceive, imagine and reason - *to think like* a lawyer, doctor, engineer, teachers, academic .... The practical apprenticeship enables the novice learner to develop the skills they need in order *to practise* as a geologist. These integrated cognitive and practical apprenticeships enable the novice learner to develop the knowledge, practical skills, values and self- and ethical awareness required for practice. Such apprenticeships are normally undertaken as part of a university BSc degree but extend into on the job training and experience in employment and advanced study for professional recognition.

Cognitive apprenticeship "learning through guided experience [in using] cognitive and metacognitive [skills], rather than physical skills and processes"<sup>8:456</sup>



Where learners are preparing to enter a field of professional practice we might draw attention to the *signature pedagogies*<sup>9-11</sup> of teachers and *signature learning experiences* in the curriculum which enable learners develop the understanding, awareness, cognitive and practical skills to productively inhabit a discipline relevant work environment. According to Lee Shulman, who developed the idea of signature pedagogies, 'they are types of teaching that organize the fundamental ways of educating future practitioners, and are used to transfer skills of how to think, to perform and to act with integrity in their professional work'<sup>9</sup>.

*Signature learning experiences* are developed through signature pedagogies. They enable learners to inhabit environments that are identical or close to the environments they will encounter in their future professional world and develop the perceptual awareness they will need to interpret and act in the work environment in the way a practitioner would. Through signature learning experiences teachers acting as instructors, supervisors, mentors and coaches, bring learners into the presence of particular aspects of the environment that they deem relevant and important in order that the learner might perceive and react to these things and develop new relational understandings.

*'When the novice is brought into the presence of some component of the environment and called upon to attend to it in a certain way, his task, then, is not to decode it. It is rather to discover for himself the meaning that lies within it. To aid him in this task he is provided with a set of keys in another sense, not as ciphers but as clues'*<sup>12:20</sup> *'Meaning is there to be discovered in the landscape [ or environment], if only we know how to attend to it. Every feature, then, is a potential clue, a key to meaning rather than a vehicle for carrying it'*. [12:208](#)

For example, field education in social work<sup>13:330</sup>

*'students learn to practise the profession through an apprenticeship supervised by expert practitioners....Contributions from adult learning theory'<sup>14,15</sup> ..provide the theoretical underpinnings for field education. Specifically, students learn to practice the profession through active involvement with "real" experiences in which they perform a service or helping role, and opportunities are provided for study of their practice...Students' "real" practice can be accessed directly by observing, listening to audiotapes, or watching video.'*

This way of participating in supervised learning experiences to solve problems that a professional in that field might encounter, may be combined with other pedagogical and learning practices. For example, in social work field education<sup>13:330</sup>

*'Ideally, practice is studied through two interlinked processes. One is subjective reflection about students' understanding and reactions to the practice situation. The second process involves conceptualization of the practice situation and interventions, through making connections to theory, providing conceptual frame works, and supplying explanations from the field instruction'<sup>16,17</sup> Insights gleaned from these processes are then used to plan interventions for subsequent practice. Traditionally, the one- to- one field instructor and student educational or supervisory conference is the structure for enacting a wide range of pedagogical techniques to ground this view of student learning....'*

Signature pedagogies and associated signature learning experiences are<sup>6</sup>: 1) *epistemological* - they deal with things that we have to know and know how to do 2) *ontological* - they are about the way we are in the world and the ways in which we orient ourselves to being and making meaning in the world and 3) *axiological* - concerned with value, worth, ethics and aesthetics.

*"Each of these elements cannot be separated out in practice, even though we might write about them separately in order to advance our understandings. The epistemological/ ontological/axiological combination becomes a kind of 'indwelling'<sup>7</sup> a tacit knowledge, which is conveyed as much through the presence of the practitioner and through the way that they orient themselves to questions and tasks, as it is about what they actually say and do. The combination of knowing, doing and being that are found in signature pedagogies is not separable into distinctive pieces which can be planned for, and learned/taught separately. Both epistemological and ontological learnings progress together, at the same time, and through one pedagogical practice."*<sup>6</sup>

This reflects their integration in the practices of workers in the domain.

## Practising to be creative

Much has been written about the relationship between the way people practise in order to improve and excel in domains like music, sport and chess. Malcolm Gladwell popularized the idea that to reach greatness in a field requires a lot of practice, "ten thousand hours is the magic number of greatness"<sup>18</sup> but this attempt to quantify the amount of time required to reach these expert levels of creative performance has been criticized by many researchers in the field of creativity.

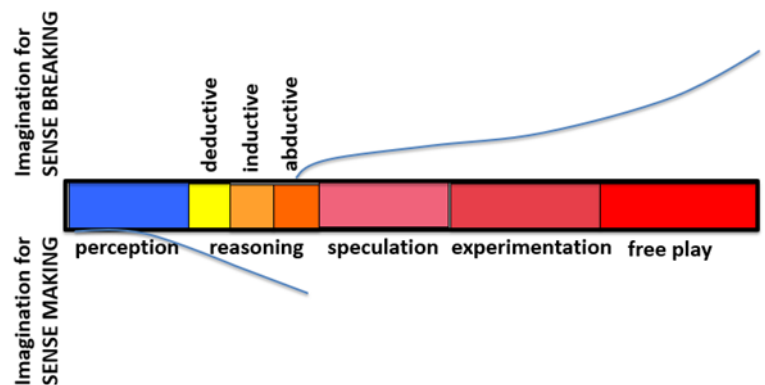
The originator of the idea Anders Ericsson, argues the idea of practising to improve and excel in a domain is more nuanced<sup>19</sup>. He shows that *deliberate practice* involving a repetition of techniques designed to learn efficiently and purposefully can and does lead to improved performance in some fields. This involves goal setting, breaking down complex tasks into chunks, developing highly complex and sophisticated representations of possible scenarios, getting out of your comfort zone, and receiving constant feedback. But according to these authors deliberate practice is most applicable to "highly developed fields" such as chess, sports, and musical performance in which the rules of the domain are well established and passed on from generation to generation. The principles of deliberate practice do not work nearly as well for professions in which there is "little or no direct competition, such as gardening and other hobbies", and "many of the jobs in today's workplace-- business manager, teacher, electrician, engineer, consultant, and so on."<sup>19</sup>

When my two personal tales of practice are viewed from this perspective it is not surprising that I could create a picture that gave me a sense of joy and fulfilment in a medium I had never painted in before without any previous practice in that medium but experience of painting with other mediums (general small-c creativity). But I was a long way from expressing myself creatively by mixing a 16 track recording in a domain that requires a lot of technical know-how and experience (domain specific creativity).

## Using imagination: making use of the full cognitive spectrum

Being creative involves the use of imagination. The journey to conscious competence is a journey towards being able to use imagination in a domain specific way and in ways that connect with and integrate other elements of the cognitive spectrum<sup>20</sup> (Figure 3). The idea of thinking like a... is shorthand for saying they can use the cognitive spectrum in a way that practitioners in that domain use it to solve their problems and develop opportunities.

Figure 3 Representation of the cognitive spectrum developed by Ann Pendleton-Julian and John Seely Brown<sup>20</sup>



All these mental processes are involved in a practice that involves creativity. When someone with domain specific knowledge, skill and experience tackles a challenging problem they work backwards and forwards along the cognitive spectrum perceiving (observing and comprehending informed by knowledge gained through study and experience), imagining (conceptualizing what is observed in order to create possible meanings and perhaps extending or modifying those meanings), and reasoning (the critical evaluation of what is perceived or imagined in order to evaluate possible meanings and make judgements) and reflecting on what has been seen and understood to try to develop more meaning from it.

## At what point in our journey to becoming a practitioner are we able to think and practise in a holistic, integrative and creative way?

In his book, 'Creative Thinking' John Bennett described what he called "The Law of Mental Declension," which stated that we perform every task at the lowest intellectual level possible. As we become more efficient in an activity or task we attend less and less at a conscious level until, eventually, much of our activity takes place at a fairly *automatic* level that requires very little conscious attention. This is the domain of the routine and familiar but where we are faced with the unfamiliar especially when coupled to tasks which are not straightforward, we have to be more aware, we need to remain at a "sensitive" level of awareness and alertness to be able to handle any unexpected features of the activity at hand. For these tasks we need to be sensitive to what is going on. As we add more uncertainty and complexity to situations we need to be even more attentive and sensitive to what is happening and become synthetic thinkers and critical inquirers. Bennett calls this form of thinking and learning "conscious" because we need a more complex and acute awareness of wider contexts and dimensions of the task at hand to deal with it.

Bennett, J. G. (1975) 'Creative Thinking', London: Coombe Springs Press

For reasons outlined above and with my own practical experience of becoming a geologist, I conclude that my ability to think independently in a domain specific way, really only began when I reached the state of conscious competency that enabled me to imagine, design and implement my own project. This did not mean that I was consciously competent to practise across the whole geological domain but across a specific part of it, that which I had sufficient knowledge to undertake an independent project.

This probably occurred at the end of my first year of university study when I undertook my first independent field mapping project on the Island of Arran. I spent 4 weeks battling the rain, vegetation and terrane working out how to make a geological map. By the end of my second year I had certainly developed a good level of domain specific awareness and competency when I began my final year independent project. I was responsible for imagining and visioning it, planning and executing it in a range of field and laboratory contexts. My dissertation and accompanying geological map were perhaps the first domain specific artefacts I produced that contained aspects of my domain specific creativity which combined and integrated perception, imagination and reasoning in a geologically useful and meaningful way. I find it

particularly interesting to learn that John Bennet (see text box) was well aware of the way our consciousness becomes more acute as we engage in the complex sorts of tasks I describe above.

This reasoning reinforces the idea that higher education’s role in developing learners who can use their creativity is best achieved through the domain specific signature learning experiences that prepare them for practice in the field, especially if there is a significant degree of responsibility, challenge and independence in the experience. I find it interesting to reflect on the creative pedagogies for creative learning ecologies project we undertook last year which arrived at a similar conclusion. In particular, the Media Works collaborative project-based learning at Polytechnic in California <sup>21</sup> and the social entrepreneur apprenticeship at Swaraj University, Rajasthan, India.<sup>22</sup>

### Contexts for practice

For a long time I have thought that contexts and challenges that are unknown or familiar provide the best environments for learning and creativity - we are forced to invent new practices to deal with such situations. John Stephenson's matrix (Figure 4) illustrates this.

**Figure 4** Conceptual framework to help visualize different sorts of contexts for practice<sup>23:3</sup>

I can now see that I need to adapt my thinking. It's clear that when a person enters a domain for the first time they are certainly challenged because they don't understand the context or the problems but they also lack the knowledge, skill and awareness to practise. I now appreciate that if a person is already consciously competent in a domain they can adapt their know how to meet the challenge and develop to new competencies. It's only when they reach the conscious competence level that the challenge of new contexts and problems provides the stimulus for domain specific creativity. My own development as a student geologist would fit this narrative. Through the project I created for myself working in the Cornish tin mines in the summer before my final year I put myself into an unfamiliar context with unfamiliar problems but I had developed sufficient conscious competency to cope, learn and develop in this situation.

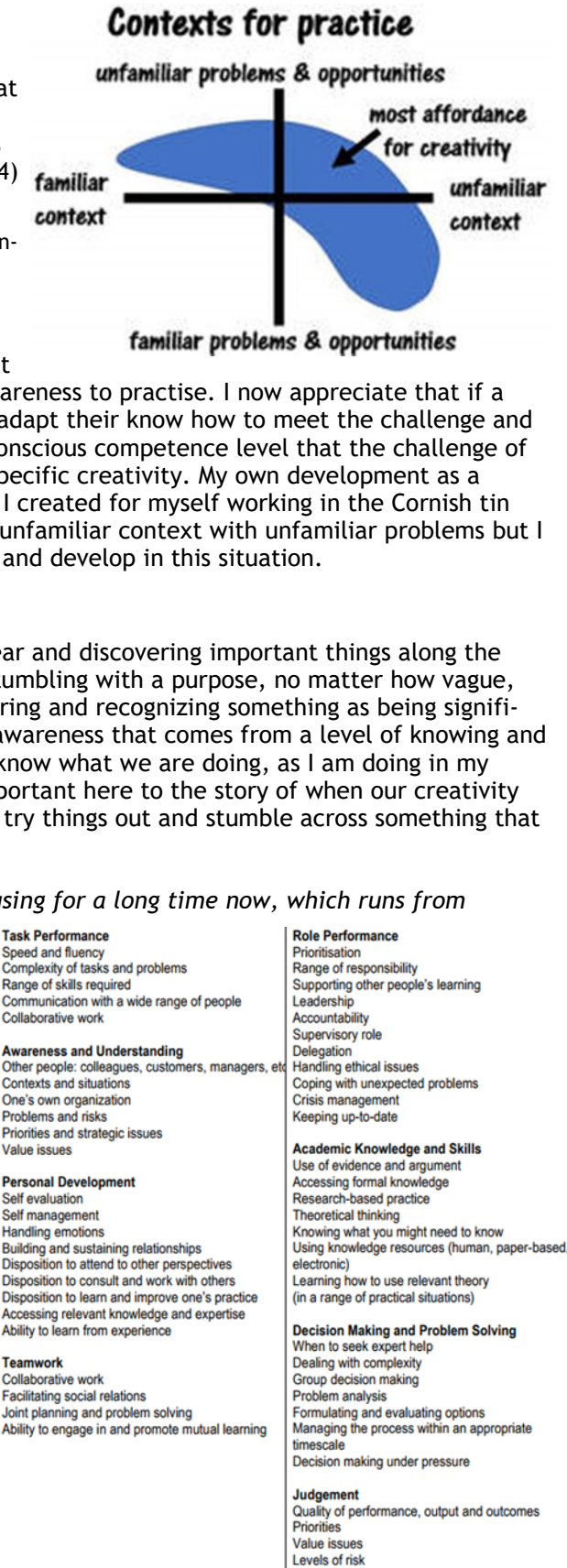
### Stumbling as practice

The idea of 'stumbling'<sup>24</sup> towards something that is not very clear and discovering important things along the way, is probably something we all do from time to time. But stumbling with a purpose, no matter how vague, denotes a level of awareness and competency, as does discovering and recognizing something as being significant. There is a great difference between stumbling with the awareness that comes from a level of knowing and understanding, and the stumbling we do when we don't really know what we are doing, as I am doing in my learning to record and mix story. I think there is something important here to the story of when our creativity becomes significant in our practices and how it emerges as we try things out and stumble across something that we are able to recognise as being meaningful and significant.

*“It accords with the Creative Continuum that I have been using for a long time now, which runs from Replication (‘I do, you copy) at one end, through Formula tion (‘Yes, there are rules and guidelines but also flexibility’), Innovation (combining existing materials etc into new forms) to Origination (the genuinely and completely new which can also be the, initially rejected, ‘shock of the new’). There is no hierarchy, and as your experience shows, both within and across our various and very varied practices we move constantly one way and t’other along that continuum”.*<sup>24</sup>

The idea that “we move constantly one way and t’other along that continuum” reminded me of Michael Eraut’s model of learning trajectories<sup>25</sup> in complex professional roles where practitioners are developing or regressing along different trajectories according to the nature of the work they are doing and the experiences they are having in their practices (Figure 5). I infer this to mean that opportunities for using creativity in particular work contexts are also waxing and waning.

**Figure 5** Michael Eraut’s learning trajectories<sup>25</sup>





## Complexity & ecologies of practice

My own experiences, and those shared by participants, tell me that we can use our small-c creativity in lots of different practices across our life but we can express ourselves creatively more quickly in some domains than others. My stories of trying to record and mix and trying to create a digital picture on the iPad illustrate this. I need to develop a lot more knowledge, skill and awareness for the former than the latter in order to use my creativity. This simple illustration tells us that domains are more or less complex in terms of their demand for knowledge, skill and awareness to perform and make things happen than other domains. For example the professional domains of teaching and medicine are more complex than hobby domains like gardening or painting.

Furthermore, admission to a professional domain might be heavily regulated with strict requirements to follow a regime of education, training and certification and following entry commitments to CPD. So the journey to levels of awareness and competency where creativity can be used, is much quicker and less arduous in some domains than others.

Creativity in professional practice can be simple small-c expressions but to achieve anything complex, significant and challenging - things that have not been attempted before, require imagination (vision) and a constellation of practices that have to be planned, implemented, connected and effects harnessed. This orchestration of a constellation of practices over time to achieve a complex goal is best thought of as an ecology of practice. In a companion article I illustrate what an ecology of practice might look like using the idea of a geologist making a geological map.<sup>26</sup>

When we enter a new domain we do not know how to create an ecology of practice. We are not expected to know this. What we are expected to know is how to learn in that domain and if we don't know we will be shown or we have to find out for ourselves. We begin a process of being a practitioner and becoming a more expert practitioner in that field. Eventually, we take on our own projects and apply what we have learnt as an independent and autonomous practitioner developing our own ecology of practice within which our learning and creativity are embedded.



## Creativity emerges through practice

Considering the narratives of creativity that were shared during the discussion Carl Rogers conception 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, or circumstances of their life'<sup>27</sup>, would seem to fit these ecological perspectives on creativity in practice very well. In a companion article I will try and illustrate this process in action through the example of a geologist making a geological map.

## Acknowledgement

I am very grateful to everyone who shared their thoughts, practices and resources through the #creativeHE Creativity in Practice conversation. We now have a much better idea about the questions and themes we need to explore through our collaborative project.

## Sources

- 1 My #creativeHE blog <http://www.normanjackson.co.uk/creativehe>
- 2 #creativeHE 'Creativity in Practice' conversation Creative Academic Magazine #9 December 2017 (this issue) <http://www.creativeacademic.uk/magazine.html>
- 3 Dreyfus S (2004) The Five-Stage Model of Adult Skill Acquisition Available at: <http://www.bumc.bu.edu/facdev-medicine/files/2012/03/Dreyfus-skill-level.pdf>

4 Eraut, M (2008) How Professionals Learn through Work. In N J Jackson (ed) Learning to be Professional Available at: <http://learningtobeprofessional.pbworks.com/f/CHAPTER+A2+MICHAEL+ERAUT.pdf>

5 Four stages of competency [https://en.wikipedia.org/wiki/Four\\_stages\\_of\\_competence](https://en.wikipedia.org/wiki/Four_stages_of_competence)

6 Davenport, Thomas H. (2005). *Thinking For A Living: How to Get Better Performance and Results From Knowledge Workers*. Boston: Harvard Business School Press.

7 Reinhardt, W.; Schmidt, B.; Sloep, P.; Drachsler, H. (2011). "Knowledge Worker Roles and Actions - Results of Two Empirical Studies". *Knowledge and Process Management*. 18 (3): 150-174.

8 Collins, A., Brown, J. S., and Newman, S. E. (1989). Cognitive apprenticeship: teaching the craft of reading, writing, and mathematics. In *Knowing, Learning, and Instruction: Essays in Honor of Robert Glaser*, edited by L. B. Resnick, pp. 453-494. Hillsdale, NJ: Lawrence Erlbaum Associates.

9 Shulman, L. (2005). Signature pedagogies in the professions. *Daedalus*, 134(Summer), 52-59.

10 Chick, N.L., Haynie, A., & Gurung, R. A.R. (Eds.)(2012). *Exploring more signature pedagogies: Approaches to teaching disciplinary habits of mind*. Sterling, VA: Stylus.

11 Gurung, R. A. R, Chick, N.L., & Haynie, A. (Eds.) (2009). *Exploring signature pedagogies: Approaches to teaching disciplinary habits of mind*. Sterling, VA: Stylus.

- 12 Ingold, T. (2000) *The Perception of the Environment: Essays on livelihood, dwelling and skill* Routledge: London
- 13 Wayne J, Raskin M and Bogo M, (2010) Field education as the signature pedagogy of social work  
Journal of Social Work Education, Vol. 46, No. 3. 327-339  
Available at: <http://citeseerx.ist.psu.edu/viewdoc/download?doi=10.1.1.461.6893&rep=rep1&type=pdf>
- 14 Knowles, M. S. (1980). *The modern practice of adult education*. Chicago, IL: Association Press/Follett.
- 12 Kolb, D. A. (1984). *Experiential learning: Experience as the source of learning and development*. Englewood Cliffs, NJ: Prentice Hall.
- 15 Bogo, M., & Vayda, E. (1998). *The practice of field instruction in social work: Theory and process* (2nd ed.). New York, NY: Columbia University Press.
- 16 Fortune, A. E., McCarthy, M., & Abramson, J. S. (2001). Student learning processes in field education: Relationship of learning activities to quality of field instruction, satisfaction, and performance among MSW students. *Journal of Social Work Education*, 37, 111-124.
- 17 Knight, C. (2001). The process of field instruction: BSW and MSW students' views of effective field supervision. *Journal of Social Work Education*, 37, 357-379.
- Knowles, M. S. (1980).
- 18 Gladwell, M. (2008) *Outliers: The Story of Success* Penguin
- 19 Ericson, A. and Pool, R. (2016) *Peak: Secrets from the New Science of Expertise* Hardcover Eamon Dolan/ Houghton Mifflin Harcourt
- 20 Pendleton Julian, A. and Brown, J. S. (2016) *Pragmatic Imagination* available at:  
<http://www.pragmaticimagination.com/>
- 21 Willis, J. (2017) Media Works Real World Challenge: A Project-based Ecology for Learning, Creativity & Achievement of Commercial & Education Goals *Creative Academic Magazine* CAM7C 62-65  
Available at: <http://www.creativeacademic.uk/magazine.html>
- 22 Hasija, R. (2017) Imagine a University with No Classrooms, No Teachers, No Degrees, Curriculum or Exams Founded on Principles of Self-Designed and Self-Determined Learning *Creative Academic Magazine* CAM7D August 2017 Available at:  
<http://www.creativeacademic.uk/magazine.html>
- 23 Stephenson, J. (1992) Capability and quality in higher education in J. Stephenson and S. Weil (eds) *Quality in Learning* Kogan Page, London Available at: <http://citeseerx.ist.psu.edu/viewdoc/download?doi=10.1.1.580.5690&rep=rep1&type=pdf>
- 24 The idea of 'stumbling' as a common feature of practices involved in creativity was introduced and developed by Paul Kleiman in the #creativeHE conversation *Creative Academic Magazine* #9A December 2017 (this issue) <http://www.creativeacademic.uk/magazine.html>
- 25 Mc Kee, A. and Eraut, M. (Eds.) (2012) *Learning Trajectories, Innovation and Identity for Professional Development* Springer
- 26 Jackson, N. J. (2017) Illustrating An Ecology of Practice: Making a Geological Map *Creative Academic Magazine* #9A December 2017 (this issue) <http://www.creativeacademic.uk/magazine.html>
- 27 Rogers, C.R., (1960) *On becoming a person*. Boston: Houghton Mifflin





# Sea of creativity: A metaphor for creativity as practice

John Rae

John is a Senior Lecturer and Associate Head in the School of Biomedical Sciences, Charles Sturt University, in NSW, Australia. He teaches organisational studies in undergraduate programs and health service management in post-graduate programs. John uses arts-based research, applying that methodology to his main topic of investigation – organisational creativity.



## Introduction

The dominant conceptualisation of creativity has been challenged over recent years and this has resulted in an enrichment of the creativity literature. For example, Charlotte Doyle<sup>1:51-9</sup> wrote about the ‘dimensions’ of creativity, arguing that this is different from the typical categorisation of creativity into hierarchies (such as was proposed by Dean Simonton<sup>2</sup>). A dimensional approach treats creative activity as, rather than adhering to, say, universal principles, and it moves away from binary constructs (eg. Big-C versus little-c creativity, individual versus group creativity, etc.) to a position that is more open-ended (eg. magnitude of recognition, number of co-creators). David Gauntlett<sup>3:76</sup> adds a more affective notion of what is often termed ‘everyday’ creativity than has been described previously, stressing that creativity ‘is a process which evokes a feeling of joy’. Reports such as these have the potential to provide more expansive conceptual frameworks for being creative, or ‘doing’ creativity.

The Creativity in Practice project is concerned with exploring and understanding what practice means in different domains and how creativity features in particular practices. From a research perspective, I am interested in how creativity emerges within organisations through practice, and I have developed a technique for exploring this. When I interview someone who has experience or expertise related to my topic, I make art in response to that interview, and then take the completed artwork back to the research participant to continue the conversation, that is, to ‘dig deeper’ than what I would otherwise be able to do. An example of my practice and an ecological interpretation of this particular practice is provided at the end of this article. In this contribution to the Creativity in Practice project I want to examine the metaphor I am using to explore creativity as practice in health organisations.

## From boundary, to organism, to ‘sea of creativity’

Through her use of metaphor, Seana Moran<sup>4:1-22</sup> adds to the debate about how to think differently about creativity, distinguishing between her *boundary* metaphor and her *organism* metaphors of creativity. This work opens the way for a deeper thinking, where privileged meanings associated with creativity are contested, which in turn creates a springboard for newer ideas about creativity.

Moran’s boundary metaphor, arguably the dominant metaphor in creativity scholarship, conceptualises creativity as ‘crossing, breaking, or pushing out a boundary’<sup>4:2</sup> thus reaching something that is typically described as novel and valuable<sup>5-10</sup> Moran’s organism metaphor, on the other hand, points in a different direction. It prompts thinking not so much about creativity being ‘achieved’, but something more akin to what has been described by Mihaly Csikszentmihalyi,<sup>11:27-36</sup> where the system itself becomes creative, and where ‘creator and created’ are not separated<sup>4:1</sup> This organism metaphor creates a new space for thinking about creativity, especially organisational creativity, although it has no (metaphorical) alignment to the magnitude, expanse or uniqueness of organisations like higher education institutions, nor does it address the tensions that typically occur between creativity and the less yielding aspects of a higher education institution – its legal responsibilities, societal expectations, shareholder demands, and mandate to achieve outcomes like work-ready graduates. These are the things that I now explore – through art.



Figure 1 Sea of creativity

Accepting the advice of Angie Titchen and Debbie Horsfall<sup>12:219</sup> that art-making could help me access my driving forces, through creative visualisation and self-expression, I made a preliminary drawing. From this emerged a possible metaphor around the nervous system – separation of neuron and muscle, yet connection through neurotransmitters, which, of course, gives rise to the most wonderful bodily movements and performances. Working from this transitional image, a more evocative one emerged that also spoke to ‘separation’ and ‘connection’ – waves and the shore – the ‘Sea of creativity’ (Figure 1).



The water colour and pencil representation of what I named the ‘Sea of creativity’ assists in reconceptualising creativity; and to be clear, it is *organisational* creativity that I have become interested in – the creativity of the health service, school or higher education institution. Of course, some viewers of Figure 1 would expect to see different hues; say shades of blue and aqua, perhaps over a golden wash. The cadmium red seems to suggest an inherent vibrancy – changing, performing, working with the unexpected<sup>13:266</sup>. The layering of lines and colour highlight complexity and tension.

A steady bank of waves in the top left-hand corner forms the sea and this is translated into lines and energy of different qualities on the beach, located at the bottom right hand corner. A luminous form emerges in the space between the waves and the beach. This is a central and hopefully a pleasing facet of the painting. Sea currents are represented by the darker wave-like lines and marks.

Waves are small movements of water molecules that are caused by winds – omnipresent iterations of activity. The water particles move in a circular motion. They do not travel; only their collective energy travels. Waves *are* the sea, rather than something passing over it. In the same way, ‘creativity does not happen at the edge but in the reconfiguration of the centre itself’<sup>4:11</sup>. In organisational creativity, it is the organisation itself that is creative (no doubt to varying degrees and at different times); creativity does not merely ‘pass over’ an organisation.

The beach is a space that is betwixt and between – between waves and shore. As waves connect with the shore their lengths decrease and they become taller; they take on a new form and eventually break. The shore is the less yielding aspect of an organisation. As tension between waves and the shore is played out, often unhurriedly, and at times thunderously, the form of the shore is altered, and the boundary between the sea and the shore shifts<sup>14:165</sup>. Those who play on the beach are (metaphorically) ‘liminal characters. They have become disconnected from the set of rules which sustained them in the world they have left behind; yet they are not of the world on whose fringes they have been washed up’<sup>14:165</sup>. ‘Organisational liminality’ (a term proposed for organisations that intentionally retain, or are assigned, certain anti-organisational attributes), allows actors to undertake activities that are not always sanctioned by the field. A more universal form of organisational liminality is envisioned here, a time and space within the everyday activities of organisational life, where moments of creative insights are triggered<sup>16:484</sup>. According to Ajit Nayak’s research<sup>17:420</sup>, tensions between self-expression and responding to organisational interests, and between personal morality and organisational ethics, challenge organisations, and managers; they influence social arrangements<sup>15:167</sup> and spawn new thinking in organisations. This reminds me of earlier works that highlight the importance of social relationships in creativity<sup>18,2:8</sup> and more recently the work of Gauntlett<sup>3:2</sup>, who emphasises the significance of ‘connecting’ and social capital to creativity.



The tension of the beach fluctuates but does not resolve; it is ubiquitous. The shore is always becoming. Each wave is different, and they roll and crash and interact with the shore in ways that are unpredictable. This is the condition of organisational creativity – ideas and actions are formed and (re)formed, domains are (trans)formed<sup>11:28</sup>, ‘rules emerge retrospectively’<sup>19:7</sup>, and organisations such as higher education institutions evolve.

The liminal beach is where organisations transform and evolve. In organisations, tensions between waves and the shore get played out as organisations resolve differences between their creative instincts and the less yielding, often policy- and outcomes-driven, qualities. Creative leaders ‘use the power inherent in these dualities to invent new assumptions and create new models geared at the ever-changing world’<sup>20:2</sup>

Like the waves that strike the shore: ‘A collaborative emergent is not a final end product, like a creative product .... it is a constantly changing ephemeral property of the interaction, which in turn influences the emergent processes that are generating it’<sup>21</sup>. Keith Sawyer moves this discussion to organisational evolution: ‘we could think of the emergent final state as the accumulation of hundreds or thousands of tiny emergent steps – each small change in connection weights is a tiny bit of emergent novelty’<sup>21:466</sup>. Ralph Stacey<sup>22:40</sup> then takes this notion to another level – local and global emergence, and the relationship between these in organisational life. The starting point for this perspective is that organisations are ‘not one monolithic identity, one social object, but many linked ones’<sup>22:39</sup> linked through networks, and of course through conversations<sup>23:128</sup>. Systems are generalised and idealised around the meaning of the organisation – its values and goals, for instance. These generalisations and idealisations are exhibited as artefacts such as plans or policies, and they serve as ‘tools in the communicative interaction and power relating between (organisational) members.... and between them and those concerned with its governance’<sup>23:39</sup>. But ‘generalizations and idealizations only have meaning in the local interactions of all involved in each specific situation’<sup>23:39</sup>. Organisation-wide generalisations and idealisations get interpreted locally through local conversations. Not surprisingly, local responses to artefacts (say policy documents) vary, and new generalisations emerge locally. Many local interactions then, in turn, transform global patterns because policy makers, for instance, are reflecting on this. The global influences the local, and the local influences the global – sea currents impact on beaches, and beaches affect sea currents, and also global climate.

## Consequences of the sea of creativity metaphor for organisational creativity research

To what extent do, say, organisational leaders, members, sponsors or service partners consider their organisation to be intrinsically creative? I suggest that organisations' success arises, at least in part, because they capitalise on their sea of creativity. We should consider creativity not so much as supplementing existing ways of operating, but rather, an essential force that is integral to an organisation's operations and evolution, where organisations are 'construed as temporarily stabilized event clusters abstracted from a sea of flux and change'<sup>17:281</sup>. This essential force ebbs and flows, of course, together with the wind's grip to form waves of different sizes, and as organisations adapt or are exposed to different conditions and changes. What is proposed here, then, is an ontological shift that has the potential to change one's narrative from 'what creates creativity', to 'how to generate conditions in which creativity can flourish'<sup>24:30</sup>.

If an evolving organisational creativity is not necessarily a discrete process with an easily observable end product, organisational creativity scholars should cast their net wide and dive deep if they are to understand it. Theoretical frameworks should speak to the temporal rhythm<sup>25:358</sup> of creativity, and acknowledge complexity and multiplicity of experience. Research methods might include, for example, art and other deeply probing methods.

The sea of creativity metaphor provides a platform for exploring not just the omnipresence of creativity in organisations like higher education institutions, liminality, emergence, and the global nature of organisational creativity, but also the interrelationships between these. What happens to the shore when the frequency of waves decreases, or increases, what of the shore that is more, or less, impervious to waves, or when the shore that is more, or less, exposed to the influence of currents? Triton, the mythological merman, calmed and raised waves by trumpeting on his twisted conch shell - what tools do we have to work with waves, or the shore and tides, and what are their effects? What surprises might emerge from studying the sea of creativity?

### A reflection on the Sea of Creativity

I reflect on how universities are unique and complex organisations; there are a great number of faculties, schools, disciplines (domains of knowledge and practice) and environments. Tension quite naturally arises from this multiplicity of contexts and situations, although it should be possible to balance these - to turn them into something productive. One might imagine that it is a person who does this 'turning', possibly as a project, and probably with the help of a 'model' or a 'method', but perhaps there is another answer; perhaps it is the enactment of a *practice* that makes the difference. My thinking is drifting from ideas about a 'process' of creativity to a 'practice' of creativity. Both these terms imply acting or doing something, but the former has a more mechanistic tone than the latter, and supporting this are the numerous models describing the process of creativity, and each has a set of stages, and the componential model of creativity<sup>5:357-376</sup> is a commonly cited example of this. The term 'practice', however, when one looks even just a little under the surface, has quite a different connotation. A richer meaning becomes apparent from the work of Jeannette Lancaster<sup>26:119</sup> and her phrase: 'practices interact with each other to form a field', which is a notion she borrowed from Theodore Schatzki and co-workers<sup>27:11</sup>.

Practice accounts are joined in the belief that such phenomena as knowledge, meaning, human activity, science, power, language, social institutions, and historical transformation occur within and are aspects of components of the *field of practices*. The field of practices is the total nexus of interconnected human practices.

Whether one considers this 'field' to represent the social, as Schatzki<sup>28:119</sup> did, or a country scene, which I would argue is also a useful metaphor (considering the multiple elements that merge to create the expanse of a field of either sort), it is possible to draw the conclusion that this notion of a practice is richer, more complex, with refreshingly indistinct boundaries, than the term 'process'. Indeed, the work of Nayak<sup>29:420-39</sup> and also Eleni Giannopoulou, Linda Gryszkiewicz and Pierre-Jean Barlatier<sup>30:23-44</sup> drew similar conclusions. With this in mind, I reflect on a sketch relating to creativity that I made some time ago (Figure 2).

Against this sketch, I wrote:

*Creativity floats in the Sea of Creativity, often in turmoil, coexisting with other forms, shapes and colours, and bumps against other things with vibrancy and tension.*

There is a yellow mark in the painting that resembles a 'C' - perhaps the 'C' in creativity. The letter 'C' (little c, big C and so forth) comes up from time to time in the creativity literature<sup>31:1-82</sup>. Here, however, the letter 'c' emerged materially, which is not insignificant if we take Ulmer's<sup>32:229</sup> view that writing, which we might extend to painting, or writing in paint, 'becomes a research into creativity'. Even now I am taken by the association of 'things' bumping against each other in the name of creativity and what Stephen Kemmis, Christine Edwards-Groves, Jane Wilkinson and Ian Hardy<sup>33:36</sup> call ecology

Figure 2 Creativity bumps up against other things



of practices, where ‘practices coexist and are connected with one another in *complexes* of practices ... with local variation ... like different species in an ecosystem’ [original emphasis]. As an illustration these authors use the practice of leadership in schools and associate that with practices concerned with learning, teaching, teacher education, education policy, educational research and evaluation <sup>33:36-7</sup>. It is possible, then, that in higher education institutions, a practice of creativity will be associated with other practices like analysing, researching, theorising, designing and innovating.

In the organisational setting, creativity must occur *within* a practice, to enliven or even to maintain it, however, a distinctive practice of creativity would also seem possible and even probable when circumstances are favourable.

## Conclusion

Metaphors are relevant to creativity scholarship. They nod to paradigm shifts, and these can influence what and how research is conducted. Whilst the sea of creativity metaphor by itself will not, in all likelihood, lead to a paradigm shift, it may add weight to Moran’s <sup>4:19</sup> intention to: ‘forge a rethinking - shaking up knowledge we’ve been taking for granted’. For higher education, this may open up new spaces for exploration. For example, the breadth and reach of the sea of creativity metaphor frees up creativity to move closer, conceptually, to other constructs such as the learning organisation or to learning ecologies. It may serve as a guide to creativity scholars and practitioners for thinking differently about higher education leadership, performance, culture and change? And if the sea of creativity metaphor provides buoyancy for such ideas, it must continue to swell and recede, be embraced but also challenged, expanded and modified, and be itself under the influence of Triton as he trumpets over it. The so called ‘turn’ to practice suggests that ‘life transpires through human activit[ies]’ <sup>34:122</sup>, however, putting the work of Nayak aside for a moment, insufficient attention has thus far been given to a practice approach to creativity. A practice approach can usefully depict creativity as integral to the constitution of higher education institutions and involve every person working in these organisations.

## Delving into the sea of creativity: A story of my own creativity in practice

I recently participated in the #creativeHE conversation on creativity in practice. A comment about ‘ecological ways of seeing our relationship with our environment’ made me think about my own research practices and how they relate to the environment, and how environment might relate to my creative practices.

*I present a sculpture that I completed just a few days ago. I made it for a research participant whom I interviewed. I was interested in learning how this person led a team to successfully enhance social inclusion for people who are older and have some sort of disability. That’s my usual way of conducting research – to interview someone who has experience or expertise related to my topic, make art in response to that interview, and then take the completed artwork back to the research participant to continue the conversation, that is, to ‘dig deeper’ than what I would otherwise be able to do. I plan to take the sculpture back to my research participant in a few days.*

*The sculpture complete, and having been prompted by notions of ‘ecology’, ‘practice’ and ‘creativity’, I now reflect on the making of the artwork. The initial cluster of practices – interviewing, listening, recording, analysing, and so forth – were performed within the institutional environments of a community care service and also a university. Other practices were performed at home, a small farm dominated by quite a steep hill. This hill is littered with trees, most of them thriving but a few have died. I often walk up and down the hill and on one occasion I was wondering what to make for my research participant. What emerged – possibly through the convergence of mental images of artworks seen or made myself, and the vision of dead trees – was this sculpture. It is a little hard to pick out the detail but you may notice two figures holding hands. I was thinking about partnership and caring as central themes in achieving social inclusion. Of course, I remain anxious to see what my research participant will have to say.*

*In making the artwork, I had to fell a tree. I did this in a landscape not unfamiliar to the sound of a chainsaw, or the thud of a tree hitting the ground. The noise that the engraving tool made is not uncommon in my work shed either, nor is the scent of the varnish I applied to the shapes that materialised from the sawn tree trunk, trying as I did, to give the emergent shapes prominence or ‘zing’. One may say, then, that I made this artwork through what Stephen Kemmis, Christine Edwards-Groves, Jane Wilkinson and Ian Hardy refer to as an ‘ecology of practices’. This ecology comprised the practices of making, sawing, transporting, communicating, engraving, painting, and no doubt more. The practices are living and connected thing <sup>33:36</sup> that were harnessed together <sup>33:37</sup> and enacted across and influenced by different environments.*





In the conversation we were using an example of creativity in practice based on Dewitt Jones'<sup>35</sup> ecology for learning, achieving and creating can be applied to this story too. I used this model and it seemed to add direction or flow to the ecology of practices that I have just described. That is, I came to the situation prepared (methodologically and practically) for an imagined future – new knowledge or wisdom. Entering the interview space armed with a recording machine and notes, and then the making place with various tools and skills, and reflecting on my interactions with my research participant, I engaged with the materiality of timber and paint. I responded to uneven surfaces, the marks made naturally as well as those that I made. I watched and responded to lines, shapes and patterns emerge. This process will no-doubt continue as I renew my relationship with the research participant and as others experience and respond to my sculpture.

## References

- 1 Doyle, C. L. (2011). Dimensions of the Creative Episode: Old Categories, New Perspectives. *Creativity Research Journal*, 23 (1), 51-59.
- 2 Simonton, D. K. (1984). Artistic creativity and interpersonal relationships across and within generations. *Journal of personality and social psychology*, 46(6), 1273-1286.
- 3 Gauntlett, D. (2011). Making is connecting: Polity.
- 4 Moran, S. (2009). Metaphor Foundations in Creativity Research: Boundary vs. Organism. *The Journal of Creative Behavior*, 43(1), 1-22.
- 5 Amabile, T. M. (1983). The social psychology of creativity: A componential conceptualization. *Journal of personality and social psychology*, 45(2), 357-376.
- 6 Amabile, T. M., & Khaire, M. (2008). Creativity and the role of the leader. Paper presented at the Harvard Business Review.
- 7 Oldham, G., & Cummings, A. (1996). Employee creativity: Personal and contextual factors at work. *Academy of Management Journal*, 39(3), 607-634.
- 8 Woodman, R., Sawyer, J., & Griffin, R. (1993). Toward a theory of organisational creativity. *Academy of Management Review*, 18(2), 293-321.
- 9 Zhou, J. (1998). Feedback valence, feedback style, task autonomy, and achievement orientation: Interactive effects on creative performance. *Journal of Applied Psychology*, 83(2), 261-276.
- 10 Zhou, J., & George, J. (2001). When job dissatisfaction leads to creativity: Encouraging the expression of voice. *Academy of Management Journal*, 682-696.
- 11 Csikszentmihalyi, M. (1996). *Creativity: Flow and the psychology of discovery and invention*. New York: HarperCollinsPublishers.
- 12 Titchen, A., & Horsfell, D. (2007). Re-examining research using creative imagination and expression. In J. Higgs, A. Titchen & H. Armstrong (Eds.), *Being critical and creative in qualitative research* Sydney: Hampden Press.
- 13 McDaniel, R., Jordan, M., & Fleeman, B. (2003). Surprise, surprise, surprise! A complexity science view of the unexpected. *Health Care Management Review*, 28(3), 266.
- 14 Mack, J. (2011). *The sea: A cultural history*. London: Reaktion Books.
- McDaniel, R., & Driebe, D. (2001). Complexity science and health care management. *Advances in Health care management*, 2, 11-36.
- 15 Lindsay, D. M. (2010). Organisational Liminality and Interstitial Creativity: The Fellowship of Power. *Social Forces*, 89(1), 163-184.
- 16 Hargadon, A. B., & Bechky, B. A. (2006). When Collections of Creatives Become Creative Collectives: A Field Study of Problem Solving at Work. *Organisation Science*, 17(4), 484-500.
- 17 Nayak, A., & Chia, R. (2011). Thinking becoming and emergence: process philosophy and organisation studies. *Research in the Sociology of Organisations*, 32, 281-309.
- 18 Perry-Smith, J. E., & Shalley, C. E. (2003). The social side of creativity: A static and dynamic social network perspective. *The Academy of Management Review*.
- 19 Green, B. (2011). Research, Practice, Emergence; or, Emergent Methodologies in Education Research. Paper presented at the Summer Institute in Qualitative Research.
- 20 Lombardo, B., & Roddy, D. (2011). Cultivating organisational creativity in an age of complexity: IBM Institute for Business Value.
- 21 Sawyer, K. (1999). The emergence of creativity. *Philosophical Psychology*, 12(4), 447-469.
- 22 Stacey, R. (2005). Local and global processes in organisational life. In R. Stacey (Ed.), *Experiencing emergence in organisations: local interaction and the emergence of global pattern* (pp. 17). New York: Routledge.
- 23 Sawyer, R. K. (2007). *Group genius: the creative power of collaboration*. New York: Basic Books.
- 24 Tosey, P. (2006). Interfering with the interference. In Jackson, N., Oliver, M., Shaw, M & SWWisdon, J (Eds.), *Developing creativity in higher education: an imaginative curriculum*. New York, N.Y.: Routledge.
- 25 Zhou, J., & Shalley, C. E. (2003). Research on employee creativity: A critical review and directions for future research. *Research in personnel and human resources management*, 22, 165-218.
- 26 Lancaster, J. (2012). The complex systems of practice. In P. Hager, A. Lee & A. Reich (Eds.), *Practice, learning and change: Practice-theory perspectives on professional learning* (pp. 119-132). NY: Springer.
- 27 Schatzki, T. (2001). Introduction: Practice theory. In Schatzki, T., Knorr Cetina, K., & Von Savigny, E. (Eds.), *The practice turn in contemporary theory* (pp. 10-23). NY: Routledge.
- 28 Schatzki, T. (2002). *The site of the social: A philosophical account of the constitution of social life and change*. University Park, PA: Penn State Press.
- 29 Nayak, A. (2008). Experiencing creativity in organisations: A practice approach. *Long Range Planning*, 41(4), 420-439.
- 30 Giannopoulou, E., Gryszkiewicz, L., & Barlatier, P. (2014). Creativity for service innovation: A practice-based perspective. *Managing Service Quality*, 24(1), 23-44.
- 31 Banaji, S., Burn, A., & Buckingham, D. (2010). *Rhetorics of creativity: A literature review*. Creativity, Culture and Education. Series Monograph. London: Arts Council England.
- 32 Ulmer, G. (1985). Applied grammatology: post (e)-pedagogy from Jacques Derrida to Joseph Beuys: Johns Hopkins Univ Pr
- 33 Kemmis, S., Edwards-Groves, C., Wilkinson, J., & Hardy, I. (2012). Ecologies of practices. In P. Hager, A. Lee & A. Reich (Eds.), *Practice, Learning and Change* (pp. 33-49). NY: Springer.
- 34 Whittington, R. (2003). The work of strategizing and organizing: For a practice perspective. *Strategic Organization*, 1, 117-126
- 35 Jones, D. (2009) More than one right answer <https://www.youtube.com/watch?v=PVL2ruZiXso>

# Illustrating An Ecology of Practice: Making a Geological Map

Norman Jackson

## Introduction

This article considers the idea of creativity in practice from two perspectives. Firstly, it offers a perspective on how someone becomes a geologist: how they learn to practise and perform the role. Here we are interested in the question, 'at what stage in the developmental process can someone use their creativity in a way that is relevant to the domain?' Secondly, it provides a narrative on how a geologist makes a geological map and offers a perspective on how creativity that is specific to the domain features in the process of making a geological map. In presenting these perspectives I am drawing on my early career experiences of learning to become a geologist and practising as a field geologist involved in mineral exploration.



## What is a geologist?

Geologists are 'knowledge workers', that means their work involves developing and applying knowledge in "non-routine" problem solving involving critical and creative thinking using scientific approaches of the natural sciences.<sup>1,2</sup> Geology is the study of the earth, its rocks and landscapes and the processes that formed them. To perform the role of a geologist a person must develop a substantial body of knowledge to enable them to perceive (see, recognize, interpret and understand) the rocks, structures and landscapes they are studying. They have also to develop the practical skills to describe and identify the rocks and structures in the field (and laboratory) and understand their relationships to each other. This is the specialized domain of knowledge and skills used to apply the knowledge to non-routine problem solving.

## How does a person become a geologist?

We cannot suddenly jump into a domain we know nothing about and expect to perform competently and creatively: this is especially true of domains that are rich in particular types of knowledge such as characterize the academic disciplines.

To become a geologist a learner must serve both a *cognitive and a practical apprenticeship*. The cognitive apprenticeship<sup>3</sup> enables learners to develop the knowledge and ability to perceive, imagine and reason - *to think like* a geologist. The practical apprenticeship enables the novice learner to develop the skills they need in order *to practise* as a geologist. Geologists integrate their thinking and practice in the contexts of field, laboratory and desk environments as they use propositional and theoretical knowledge to solving geological problems in real world environments. These integrated apprenticeships, together with the practical experiences they contain, enable the learner to develop themselves to think and act like other geologists in the field. Such apprenticeships are normally undertaken as part of a university BSc degree but extend into independent field and work experiences, and employment once a geologist has graduated.

Learning how to perceive the field environment in which the geologist works, and find meanings in what is perceived and then act appropriately on those understandings, is fundamental to being an effective practitioner. This perceptual understanding is not something that can be developed quickly. It takes several years of education, training and personal experience.

The *signature pedagogies* of geoscience teachers and *signature learning experiences* of students studying geoscience, define the ways in which learners develop the understanding, awareness, cognitive and practical skills to productively inhabit geological work environments (Figure1). Signature pedagogies, 'are types of teaching that organize the fundamental ways of educating future practitioners, and are used to transfer skills of how *to think, to perform* and *to act* with integrity in their professional work'<sup>4</sup>. *Signature learning experiences* are associated with signature pedagogies. They enable learners to inhabit environments that are identical or close to the environments they will encounter in their future practice world. They enable learners to develop the perceptual awareness they will need to interpret and act in the work environment in the way a practitioner would.

## How does a geologist learn to productively inhabit his practice environment?

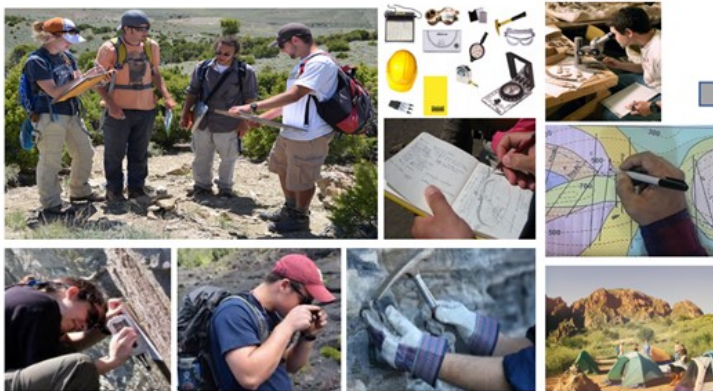
The *signature pedagogy* involves all the things teachers do to create an ecology within which learners develop their observational skills and practical capabilities for making a geological map. This will include teaching in field, classroom and laboratory situations, modelling behaviours, safe working practices and thinking processes, and demonstrating how tools are used to gather geological data.

**Figure 1** Visual explanation of relationships between signature pedagogy and signature learning experiences and ecologies of practice in geology education and how they prepare learners for professional practice in the domain

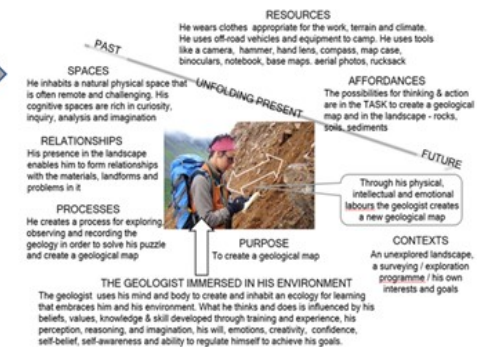
**Signature pedagogies** are the ways and means used by teachers in a disciplinary/practice field to develop the knowledge, awareness and capabilities of learners in that field so that can *think, perform* and *act* with integrity in their professional work.

**Signature learning experiences** are developed through signature pedagogies. They enable learners to inhabit and perceive the environment in which they practice in particular ways to find meanings in what is perceived and then act productively and with integrity on those understandings.

**Example :** In geology the *signature pedagogy* involves creating *signature learning experience* to enable learners to perceive the practice environment (called the field) in particular ways, use tools safely to help find meanings in what is perceived and then act on those understandings. In this way learners become aware of the ecology of learning in action and eventually are able to create their own ecology of practice.



**An ecology of practice** - enables a geologist to perceive and engage with his environment in particular ways, to attend to the things that matter to him and enable him to learn and achieve.



Signature learning experiences provide opportunities for a learner who is becoming a geologist to apply their knowledge using skills they have learnt to the solution of geological problems, in an experiential and embodied sense. In effect they are learning how to create and make use of an *ecology of practice* to perceive and interact with the environment in a domain specific way, to engage with, imagine and solve the problems and opportunities it provides.

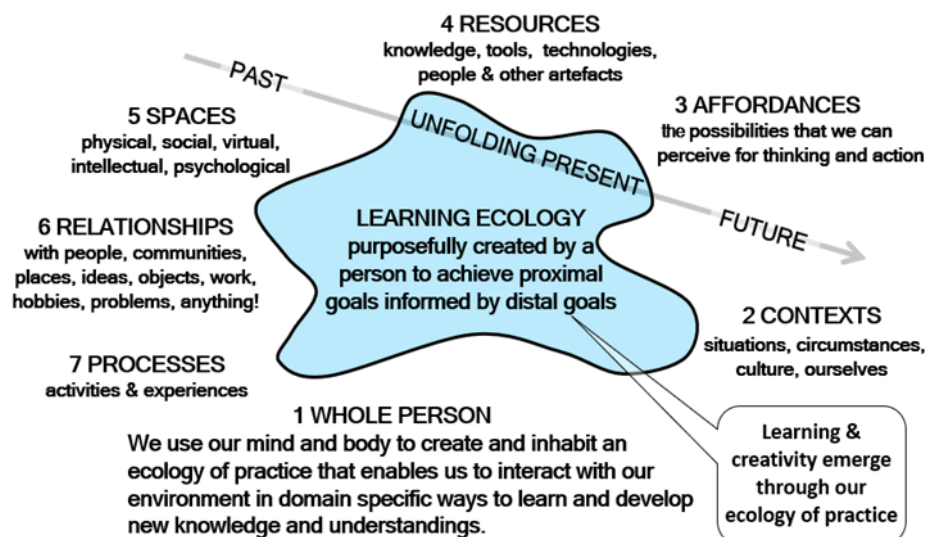
One of the most important *signature learning experiences* for students of geology involves them in learning how to *make* a geological map. When this is achieved independently of the teacher the learner has created their own *ecology of practice* for making a geological map. Figure 1 shows the relationship between signature pedagogy, signature learning experiences and the ecology of practice for making a geological map.

## What does an ecology of practice for making a geological map look like?

Geologists are 'knowledge workers' involved in developing and applying knowledge to domain specific problems. 'Learning with purpose', and the communication of what has been learnt, is the primary focus of their work. Based on this reasoning we can use the concept of a learning ecology<sup>5</sup> to represent the key features of a geologist's relationships and interactions with the domain specific environments they inhabit (Figure 3).

**Figure 3** Key features of an ecology of practice (adapted from Jackson's concept of a learning ecology<sup>5</sup>)

Making a geological map is a domain specific challenge that a geologist will encounter in his or her work. Using the framework provided in Figure 3 we can identify the elements of the geologist's field-based ecology of practice for making a geological map (Figure 4). (The complete ecology will also contain elements that are desk- and laboratory-based).

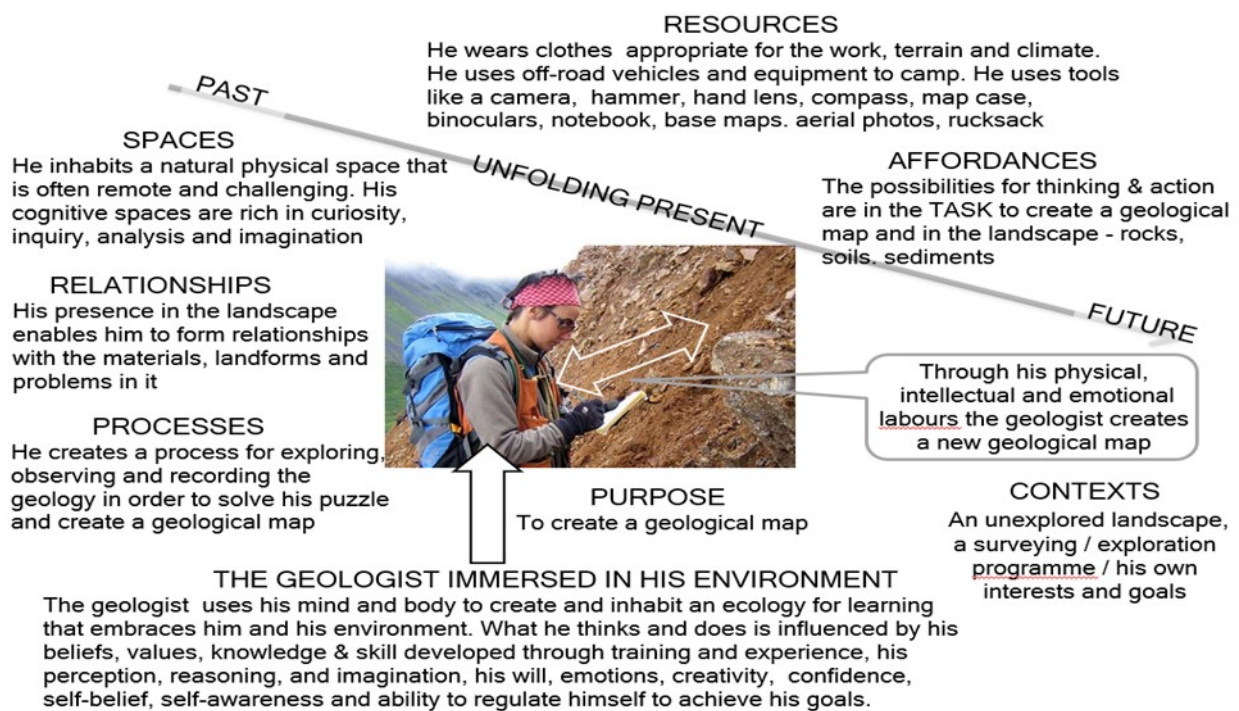




A geologist's ecology of practice is lived in his unfolding present but connected to his past experiences of making a geological map and studying geology as a subject. Its purpose is to accomplish the proximal goal, understanding the geology of the area and creating a geological map. But this is connected to the more distal goal of becoming the 'better version of himself' he wants to become. His ecology of practice comprises himself, his environment, his interactions with his environment and the learning, development and achievement that emerges from these interactions. It includes the intellectual spaces he creates for himself, his work processes, activities and practices, his use of tools and technologies<sup>6,72</sup>.

His ecology of practice involves him physically covering the ground and gathering and processing lots of information through particular domain and task specific actions - like locating the position of a rock outcrop on a geographic map or aerial photograph, measuring the dip and strike of bedding or other structures in rocks, breaking rocks and examining fresh surfaces with a hand lens and perhaps testing them with dilute HCl, photographing and sketching rock outcrops and annotating sketches with observations, and where there is little outcrop examining the soils. In these actions he is searching for meaning in his environment. Meaning that has been learnt through years of study and practical experiences in a range of environments.

Figure 4 A field geologist's ecology of practice for making a geological map<sup>6</sup>



The mental processes of perceiving, imagining and reasoning enable him to develop hypotheses about what is being perceived and these are intermingled with the actions and activities that enable him to test his theories, to find the pieces of the geological puzzle (rock outcrops and structures), sense (observing, feeling, measuring) the materials, and record (often sketching or photographing and making notes) what has been perceived. In this way ideas about the geology are tested, advanced or abandoned.

The geologist's thought processes move backwards and forwards along the cognitive continuum<sup>7</sup> depicted in Figure 5: perception (observation informed by knowledge gained through study and experience - 'seeing with memory'), imagination (conceptualising what is observed in order to create possible meanings), reasoning (critical evaluation of what is observed in order to evaluate possible meanings and make judgements), and reflecting on what has been seen and understood to learn from the experience.

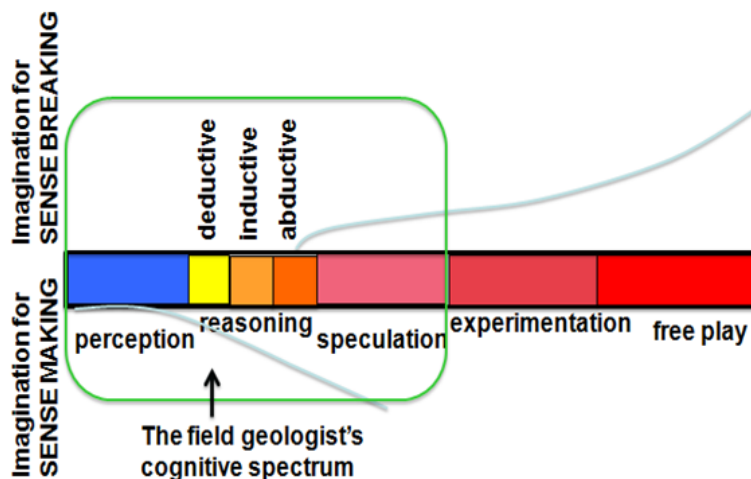


Figure 5 Representation of the cognitive spectrum developed by Ann Pendleton-Julian<sup>18</sup> The typical cognitive spectrum of a field geologist is represented by the green domain

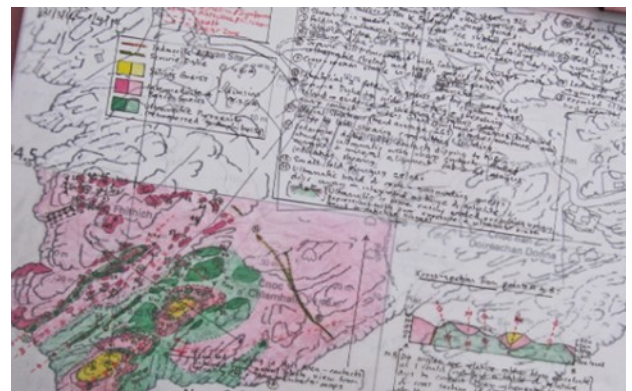
Making a geological map is like solving a giant jigsaw puzzle where most of the pieces are missing. The geologist's learning project is one of continuous inquiry driven by his curiosity and need to understand. His project requires all forms of reasoning and the use of imagination to speculate and project from the known into the unknown to try to visualise and make sense of the patterns and the stories he is seeing in landscape. This is the nature of the intellectual space he creates to understand his problem while physically interacting with the physical space of his natural environment.

This act of 'making a map' is also an emotional experience. The geologist experiences joy in the work he is doing as he feels he is making progress in work that means something to him<sup>6</sup>: he loves the challenge and he likes solving the puzzle which sustains his motivation. But he can also experience feelings of frustration when he spends many hours searching for answers but cannot find them. He is often uncomfortable: it rains a lot so he is constantly wet and it's not easy to keep his field slips and map dry. It can also be painful as slipping and falling is part and parcel of the scrambling over the loose rocks and occasionally, as he pushes himself to climb a cliff, he feels anxiety and fear.

These complex sensory experiences and intense interminglings of the physical, intellectual and emotional states of being enable him to form deep relationships with his work and the objects of his work - his landscape and the rocks in it. His emotions contribute to the investment he is making in his own meaning making process and encourage feelings of pride and resilience as he pursues his goals in what is a fairly inhospitable environment, knowing that he is making a contribution to the knowledge of his domain.

The geologist embodies his learning. He needs to get his body, and engage his senses and his mind, to the places he needs to be in order to find the evidence to test his working hypothesis. He has to get himself into the physical spaces that have the highest potential for solving his problem and then know how to act to enable his senses to gather the information he needs. While this is essentially a rational and analytical process my own experience has shown me that intuition and instinct might be involved. Sometimes it just feels right to do something without really being able to immediately explain why.

The geologist accurately records his field observations on a field slip (right) and in his notebooks. The process enables him to relate and synthesise disparate pieces of information to create a clearer and bigger picture of his puzzle and enable him to search more selectively for missing pieces. Notebooks containing field sketches can be like artists' sketch pads full of aesthetic and emotional value as well as scientific meaning.



Once back at camp, there is further pondering and reflection on what has been discovered as the day's observations are recorded in notebooks, digital photographs or video, are revisited and plotted on a cleaner base map like the one on the left.

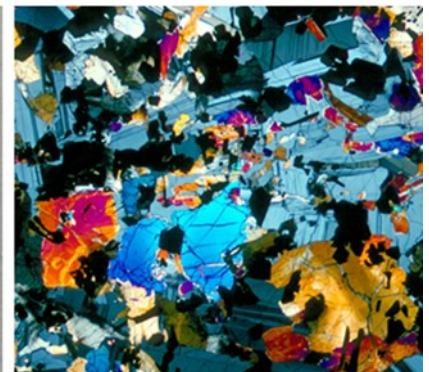
These analytical and conceptual processes continue after the field experience has been completed as rock samples are analysed and understood better. New artefacts and data are produced through these analytical processes. For example, geologists use microscopes to

study the mineral composition, textures and structures of the rocks they have sampled using thin transparent slices of rock (30 microns thick). Thin sections (example right) are important artefacts produced from natural materials that reveal the beauty in the rocks and minerals and enable those materials to be understood, characterised and classified. Through laboratory study the accuracy of the geological map and report the geologist is producing can be improved.

### How does creativity feature in this ecology of practice for creating a geological map?

As can be seen from this description of a geologist's ecology of practice, the geological map is the intellectual and creative domain specific artefact of his interaction with his environment

and the materials that are in it using the tools and resources available to him. In this illustration of an ecology of practice there are many affordances for creativity and many tangible expressions of personal creativity. Some of these expressions emerge in products or artefacts (field slips, notebooks, maps and reports) that can be valued and appreciated by other people who have the knowledge to understand the meaning in the artefact. But some of the geologist's creativity is only revealed in the narrative of his accomplishment ie the story of how he made his map.





The question we are interested in exploring is ‘how does a person make use of their creativity when they are engaged in the sort of domain specific problem solving described above?’ Here we might draw on the ecological definition of personal creativity proposed by Carl Rogers which he considered to be, ‘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, or circumstances of their life’<sup>9</sup>

In the scenario described above the field geologist *creates an ecology* that embraces the circumstances of his life - at least those aspects that relate to him being deeply immersed in his environment to create a geological map. This aspect of creativity - the process by which something new/novel is brought into existence, is often overlooked. While all geologists will use standard procedures and routines like those described above, the way the problem is tackled and understanding is constructed will vary between different geologists and here there is scope for personal creativity. As the geologist’s thought processes move backwards and forwards along the cognitive continuum<sup>6</sup> (Figure 5) the intermingling of perception (observation), imagination (conceptualization) and reasoning (critical evaluation) offers endless possibilities for the creation of meaning.

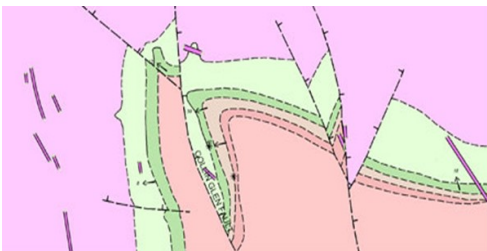
The intellectual, emotional and physical struggle of a geologist is focused on trying to solve a three dimensional puzzle with only bits of information and lots of gaps. He tries to understand the spatial and temporal relationships between one type of rock and another and develop understanding of the geological history of the area. It’s an ecological problem! Perceiving, conceptualising - the building of working hypotheses to explain the geology, and reasoning go hand in hand and as a hypothesis forms, his body and mind enable him evaluate it. Given this rich and dynamic cognitive and emotional environment it would not be surprising for sudden ideas to emerge which a geologist might attribute to a *creative insight*, when all the time possible answers and solutions to problems are jostling for recognition and application.

The elements of a geologist’s cognition and bodily actions work together in a merry dance through field, laboratory and office environments and the knowledge and understanding that is developed is communicated in maps and reports that are the tangible creative products of his ecological process. The final product of this process - a geological map and report is the geologist’s way of communicating his understandings to other geologists or people working in related professions like civil engineering, planning, mining engineering or hydrogeology.

#### Creativity in the corporeal, hermeneutic and analytical domains<sup>9</sup>

‘As far as I can see, field geology refers to the domain of analytical intelligence. The tacit knowledge is necessary to see “through the entirety of a situation so that the situation is reduced to its essence”, and the explicit knowledge is necessary to combine “the reduced individual significances skillfully with one another into constellations that the situation can be brought under control”. Both are analytical tasks. However, pedagogy is largely hermeneutic, so when it comes to education, the hermeneutic domain also becomes relevant.’

Christian Julmi



Producing the geological map is essentially a drafting process in which information is carefully transferred from field maps and notebooks onto a new base map and digitised. The process of reworking this information can stimulate further integrative thinking. But there is also an artistic element in the making of a map as pens or digital tools are handled and used to create the map. The final product is a beautiful object containing a story, explained in the image, the key and in an accompanying report, about the geological history and mineral resources of an area. The map is also a tool that can be used to make decisions about how a land-

scape and its resources might be used and managed.

The digitised map and accompanying report are the creative artefacts resulting from a geologist’s ecology of practice. In the words of Rogers’ they ‘*emerge in action*’ as ‘*novel relational product[s] growing out of the uniqueness of the individual on the one hand, and the materials, events, or circumstances of their life*’<sup>10</sup> Circumstances that the geologist, through his own history, learning and actions, has helped determine.

Through this narrative of a geologist’s ecology of practice we can gain an insight into what being creative means to him and the artefacts he makes that involve his creativity. In the coming issues of CAM#9 we will develop further examples to illustrate how creativity features in the ecologies people create in order to practice in a particular domain.

#### Sources

- 1 Davenport, Thomas H. (2005). *Thinking For A Living: How to Get Better Performance and Results From Knowledge Workers*. Boston: Harvard Business School Press.
- 2 Reinhardt, W.; Schmidt, B.; Sloep, P.; Drachslar, H. (2011). "Knowledge Worker Roles and Actions - Results of Two Empirical Studies". *Knowledge and Process Management*. 18 (3): 150-174.
- 3 Collins, A., Brown, J. S., and Newman, S. E. (1989). Cognitive apprenticeship: teaching the craft of reading, writing, and mathematics. In *Knowing, Learning, and Instruction: Essays in Honor of Robert Glaser*, edited by L. B. Resnick, pp. 453-494. Hillsdale, NJ: Lawrence Erlbaum Associates.
- 4 Shulman, L. (2005). Signature pedagogies in the professions. *Daedalus*, 134(Summer), 52-59.
- 5 Jackson N J (2016) *Exploring Learning Ecologies* Chalk Mountain / Lulu <http://www.lulu.com/au/en/shop/norman-jackson/exploring-learning-ecologies/paperback/product-22603535.html>
- 6 Jackson N J (2017) Ecology of a Geologist’s Embodied Creativity *Creative Academic Magazine* CAM8 available at <http://www.creativeacademic.uk/magazine.html>
- 7 Pendleton Julian, A. and Brown J. S. (2016) Pragmatic Imagination available at: <http://www.pragmaticimagination.com/>
- 8 Amabile, T.M. & Kramer, S.J. (2011) *The Progress Principle: Using Small Wins to Ignite Joy, Engagement, and Creativity at Work* Harvard Business School Publishing
- 9 Julmi, C. (2017) Creativity in the corporeal, hermeneutic and analytical domains *Creative Academic Magazine* CAM8 available at <http://www.creativeacademic.uk/magazine.html>
- 10 Rogers, C.R., (1960) *On becoming a person*. Boston: Houghton Mifflin



gain which means that Creative Academic is now three years old. In January 2015 our goal was to try to create a focal point for creativity in higher education and beyond, could be a place for sharing practices and resources. From a small group of friends who were subscribers) has grown to over 550 people from 27 countries - Argentina, Denmark, Ecuador, Egypt, Finland, France, Germany, Malaysia, Marshall Islands, Netherlands, Peru, South Africa, the USA. We also have over 650 followers on twitter

hip #creativeHE open learning and education platform with over 1000 members. We have facilitated two courses and three discussions.

dimensions of creativity in teaching, learning and practice more often in creativeHE conversations. In the last year we produced three substantial articles which have been accessed on-line nearly 8000 times.



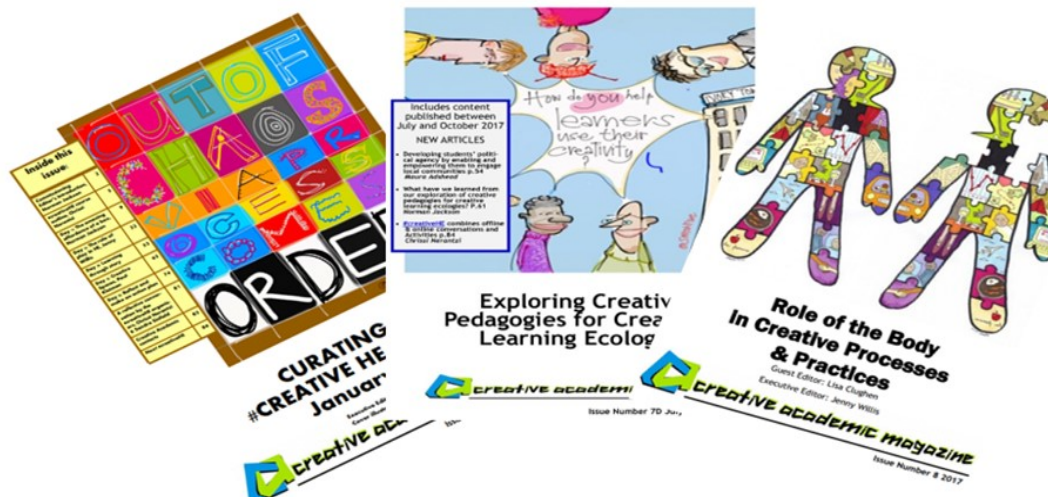
open learning projects on creativeHE. We are undertaking a series of imaginative ecological projects to learn and are producing impressive results in our magazine (CAM7).

we are undertaking a series of projects on Creativity in

with membership of creativeHE. Through creative commons, we can look back on what we have achieved with optimism.

dedicated to our work in the past year and especially to Executive Editor of our magazine. Also special thanks to our wonderful team of contributors: Kefalogianni, Lisa Clughen, Telyi Cartwright, Simon Rae, Sandra Cartwright. We appreciate any help we receive and if you would like to work

emic




## More from Creative Academic

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

## CONTACTS


[HOME](#) / [RESOURCES](#) / [BLOG](#) / [MAGAZINE](#) / [CREATIVE PEDAGOGIES](#) / [MORE...](#)

**creative academic**

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

## Google+ Discussion Forums

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

**creativeHE community**  
Creativity for Learning in HE course & community  
MODERATE

About Community  
Filter  
All posts

What do you want to share?


Ellie Hannan • General stuff, announcements

6d

Hello everyone! For those of you with an interest in digital learning and teaching, myself and +Chrissi Nerantzi are hosting a Wildcard event this afternoon (1:30-3PM UK time) called the #101creativeideas challenge.

It is part of the ALT Winter Conference and the idea is to create and share ideas for creative digital practice in learning and teaching!

You don't need to register, just go to <https://alt.ac.uk/online2016/sessions/101creativeideas-challenge-75>



+1 1

Chrissi Nerantzi • Thank you Ellie. Join us if you are around. Thank you for all your wonderfully creative ideas so far.

Chrissi Nerantzi Owner • General stuff, announcements


6d

Hello everybody,

Nassi (15) has created an advent calendar for some daily inspiration. Please access <http://www.celt.mmu.ac.uk/advent/index.html> to unlock your daily star.

Feel free to share with others. Thank you.

Chrissi from the #greenhouse

**AC16**  
celt.mmu.ac.uk

+1 6

francisco j. santos: Nice and inspiring. Thank you Chrissi.

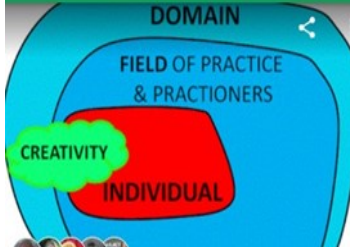
Sandra Sinfeld Moderator • General stuff, announcements

2w

#lovelid - loving this invitation! Thanks #clmoo!

Originally shared by Kevin Hodgson

<https://plus.google.com/communities/113507315355647483022>

**Creative Academic**  
A space for people working or studying in higher education to share their thoughts and practices about creativity in higher education

About Community  
Filter  
All posts

What do you want to share?

Norman Jackson Owner • General Information

9w

CREATIVE PEDAGOGIES OPEN COLLABORATION

We have just published our first newsletter .. why not join us in our quest for new understandings for improving our educational practices <http://www.creativeacademic.uk/2016-17-programme.html>

The next #creativeHE conversation October 30- November 4 will explore the idea of creative pedagogies and learning ecologies. <https://plus.google.com/communities/110898703741307769041>

Norman Jackson Owner • General Information

3w

NOVEMBER ISSUE OF CREATIVE ACADEMIC MAGAZINE #7 HAS BEEN PUBLISHED

It contains a number of articles drawn from the recent #creativeHE conversation including a synthesis of the Little Boy Story.

We are intending to publish several more articles in the December update and welcome further contributions on the theme of Creative Pedagogies for Creative Learning Ecologies. Special thanks to contributors +Jennifer Willis +Simor...

