

Role of the Body in Creative Processes & Practices

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 **creative academic magazine**

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Commissioning Editor's Introduction

Norman Jackson



This issue of Creative Academic Magazine is unusual, in the sense that the idea and motivational force for its content originated from outside the Editorial Team. Way back in October 2015 I received an email from Lisa Clughen, enquiring as to whether we would be interested in devoting an issue of the magazine 'on the body in learning'. It's the sort of enquiry I hope we will get but rarely receive and after an initial conversation I was delighted to learn that Lisa was willing to lead the production of this issue. So Lisa joined our Editorial Team as Guest Editor and the result, I think you will agree, is fascinating and exciting. It has taken

Creative Academic into new territory that we need to inhabit and through our contributors introduced us to new ideas and research. So thank you Lisa for being brave and stepping forward to lead our exploration of the role of the body in creative processes and practices.

Sent: Monday, 5 October 2015, 12:12
Subject: The Creative Academic:
Suggested Edition

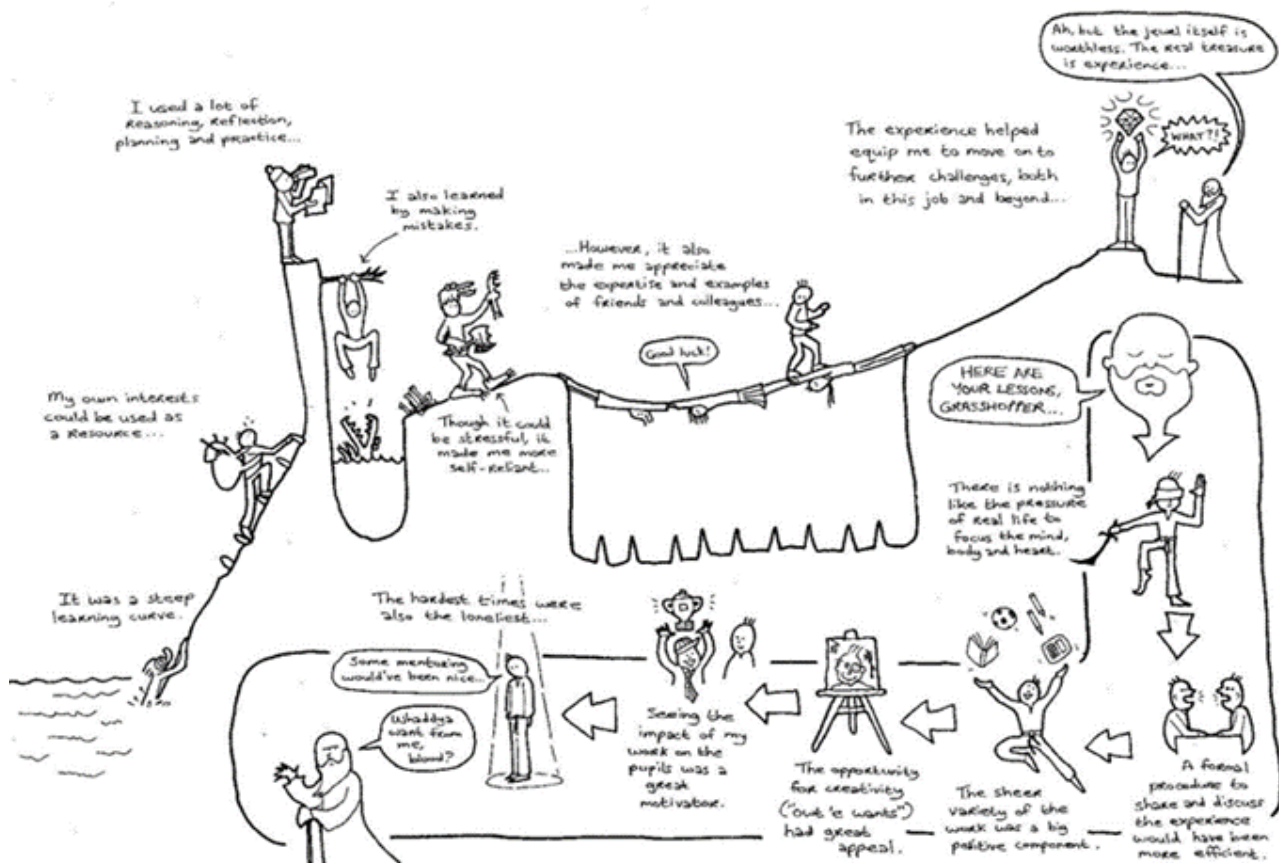
Dear Norman,
I wrote an article for the Learning and Play issue of Creative Academic Magazine and was thinking of offering to edit a special edition on the body and learning. It would not be for some time, but would you be interested in discussing this at some point?
Best wishes,
Lisa Clughen

Tribute to a Creative Friend - Patrick Sanders 1976-2017

We are dedicating this issue of Creative Magazine to the memory of Patrick Sanders whose creativity touched the lives of many people. I knew Patrick for about 10 years and I only recently learned of his untimely death in January 2017 through a chance conversation.



I was introduced to Patrick by Anna Newell, who was at that time Creative Director of the Centre for Excellence in the Creative and Performing Arts (NI) - an interdisciplinary arts-based project at Queen's University Belfast. Anna brought Patrick to act as our 'artist in residence' for a conference on experiential learning that we ran at the University of Surrey in 2008. We immediately recognised his talent and he worked with us on several more projects over the next four years. The figure shows one of Patrick's drawings he made for Experiential Academy. He was adept at turning someone's story into a visual adventure.





Patrick was a well-respected collaborator on a wide range of arts projects and a familiar presence at live performances in Belfast, which he would often illustrate in his inimitable style. His training was in Devised Theatre, and he worked in the field of drama as a performer, director and workshop facilitator. Although he claimed 'he could not draw', he was often employed as an artist-in-residence at conferences, workshops, theatre rehearsals and focus groups, where his illustrations were used to capture the meanings in the conversation and help generate further discussion. I also worked with him on a stop-motion animation project for the Quality Assurance Agency.

As a professional cartoonist, he was in demand around the UK and Ireland, and his work has been documented across Europe, including Germany and Switzerland. His list of clients included the Centre for Excellence in the Creative and Performing Arts at QUB, Surrey Centre for Excellence in Professional Training and Education (SCEPTre), Tinderbox Theatre Company, Bruiser Theatre Company, Kabosh Theatre Company, Prime Cut Productions, the Higher Education Academy, the European University Association, Millward Brown Landsdowne, the Rainbow Project and SCOPE (NI).

As a performer, Patrick had been an ArtsCare Clowndoctor (Dr Jumbles), bringing creativity and play into challenging hospital environments

'PATRICK Sanders was a ray of sunshine in the lives of countless sick children in his role as a 'clown doctor'.
Irish Times

He created shows for young audiences, including 'A Boy and His Box' with Replay Theatre Company and the 'Nearly True Tours' with Young at Art. His interactive, live drawing show for children, 'Once Upon a Time', was chosen to represent work from Northern Ireland at the all-Ireland event, 'The Gathering', in 2010 and the Belfast Children's Festival's All-Ireland Showcase in 2012. The show collected the award for Best Multi-Arts Project at the 2013 British Awards for Storytelling Excellence.



'Patrick had the rare, perhaps unique ability to lay bare complex issues and arguments into simple and often very funny cartoons that not just helped to illustrate a piece, but to increase our understanding... Patrick was a joy to work with: he was kind and sensitive and had a forensic intelligence that helped us to see the world for what it is.'

In 2013, the Arts Council awarded Patrick an Artists Career Enhancement Scheme (ACES) award. These awards are made to talented, up-and-coming artists. The award paired Patrick with Replay Theatre Company, where he worked on a new piece, combining illustration and performance, for young audiences

I will remember Patrick as a modest, fun loving, kind and gentle man who loved to play with words and ideas to create interesting and fresh perspectives and draw out deeper and insightful meanings from any conversation, talk or situation and I am truly sorry that I will no longer have the chance to collaborate with him to enjoy his visual adventures.

In 2008 when we were developing our ideas on lifewide learning at SCEPTre we asked Patrick to devise a symbol to represent the learner as the integrator of their lived experiences and he devised the images that serve as the cover for this issue of the magazine. We think the idea that we uniquely embody all the learning we have gained from our lived and imagined experiences in everything we do or imagine, is an appropriate symbol for this magazine. But Patrick's symbols also show that we are never complete and our innate desire to create a better version of ourselves is the motivational force that drives our actions and our personal creativity.

Thank you Patrick for sharing your wonderful imagination and presence with us.

Sources

Irish Times 28 January, 2017 Clown doctor and talented illustrator brought laughter and insight <http://www.irishnews.com/notices/livesremembered/2017/01/28/news/clown-doctor-and-talented-illustrator-brought-laughter-and-insight-905649/>
Patrick Sanders, a tribute SCOPE NI January 19 <http://scopeni.nicva.org/article/patrick-sanders-a-tribute>

THE SECRET CONFESSION OF PATRICK SANDERS



A little background: I'm an illustrator and cartoonist based in Belfast...

...I specialise in using cartoons to document conferences and live events - creating images to explain the ideas being discussed in a memorable and accessible way...



...so we can't just keep ignoring what's happening in our industry! I think...

...I also work as a performer, and some of my recent work for young audiences combines theatre and live drawing...



(A BOB & HIS BOAT, Replay Theatre Company)



My name is Patrick Sanders and I have something to tell you.

Often, when I'm working, I hear people (especially adults) saying things like:



Oh I wish I could draw like you!



You'd only laugh at my pictures...



I can't draw.



Some of this can be flattering, but I feel like I'm living a lie and it's time to own up to the truth. You see...



...I can't draw either.

Obviously that's not completely true - after all, I'm drawing this right now. And I drew all the time as a child...

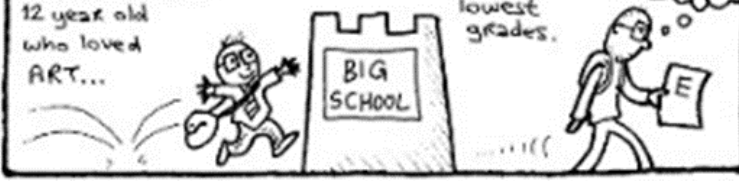


...But I never felt I quite "got it right"...

The way ART was taught at SCHOOL didn't help - I went in as a 12 year old who loved ART...

...and came out with ART as one of my lowest grades.

So much for getting into ART COLLEGE.



I still drew, but I would look at the work of "REAL ARTISTS" and despair...



Who am I to think I'm an artist? I could never create anything like that...

Guest Editor's Introduction

Lisa Clughen

Lisa Clughen studied Modern and Medieval Languages (Spanish and German) at the University of Oxford and completed her MPhil in Hispanic Studies at Newcastle University. She is a Senior Fellow of the Higher Education Academy and a team member of the Creative Academic magazine.



She is a Senior Lecturer in Spanish in the School of Arts and Humanities at Nottingham Trent University. In 2002 she established the School's Academic Support Service, a faculty-wide service that supports all students with their success at university.

Lisa has published and presented numerous papers on a wide range of subjects, including academic literacies; García Lorca; cultural representations of the body and eating disorders. She is the co-editor of Writing in the Disciplines: Building supportive cultures for student writing in UK higher education.

Her academic background in Cultural Studies (including Literary and Feminist theory) sets the context for her writings on the body. The theme of the body as an object of cultural alienation, erasure and even abuse has run through her work in both Hispanic and Literacy development, as has her celebration of the transformative potentialities of the body for learning, teaching and writing. In much of her writing, she endeavours to make the body visible and argues that a focus on the embodiedness of student writers is a vital and exciting consideration for the creation of learning and writing environments that are genuinely inclusive.

When I was at university in the 1990s, one of my peers, an English literature student, would try to create an environment that steeped him in the period he was writing about. When he was writing an essay about Gothic literature, for example, he would place a candelabra on his desk, dim the lights and wear a cape as he wrote. Fast forward to 2017 and a PhD student tells me that, when he is in the library at university, he can't do his research unless he takes his shoes off, whereas, when he is at home, he has to put his shoes back on to study. These are just two of the many tales I have heard over the years I have spent considering the body that point to the centrality of the body in creative practices - whether it be by altering the physical environment so the body feels able to write, as in these two examples, or in many other ways. I have worked with students for many years both in generic Writing Support and as a lecturer in Spanish and German and their comments on their experiences of studying and assessment have convinced me that ignoring the body's role in creative processes is not only a depleted attitude to creativity, but that we ignore it at our students' peril.



Yet it was only last year that the eminent neuroscientist, Guy Claxton (2016, 10), was driven to proclaim that 'We have become mind rich and body poor' and to lament 'the over- intellectualised, somatically impoverished institutions that surround us' (2016, 2). I lament this too. By proposing this edition of the *Creative Academic Magazine*, my aim was to turn the tables for a while and become 'body rich' in our discussions of our creative practices. To do this, people from a range of creative endeavours - from the Creative Arts to university lecturing - have been invited to consider questions such as:



- How do you think about the relationship between the body and any of the following: thinking, learning, teaching and creativity?
- How do your bodies come into your own creative acts?
- How do you embrace the relationship between the body and creativity in your teaching?

Why Split the Mind from the body?

It may seem odd that the mind/body split still persists practically given that has been devastated intellectually across the disciplines (more of which later). Yet maybe such persistence is not as surprising as it might seem given that the dominant history in the west is one of rendering the body invisible if not defunct. It is much easier for an idea to be 'merely academic' - for it to be accepted intellectually as opposed to being a fully embodied, *practical* philosophy.

In my own academic context of critical theory, scholars have long examined what Alison Jaggar (1988: 40-44) calls the 'normative dualism' permeating Western cultures: the notion of a mind/body split as a defining characteristic of the self that has taken hold in liberal thought, cultures and societies since Descartes' *Cogito*. Within such a dualistic view of the mind/body relationship, 'the view that what is essentially valuable about human beings is their "mental" capacity for rationality' (Jaggar 1988: 40), the mind has been privileged as the superior component of the duality and knowledge considered an emanation of individual minds. For Jaggar, such normative dualism was still evident in contemporary liberalism and, given recent scholarship across the disciplines, it seems that it still persists.

We might take the university as an example of 'the over-intellectualised, somatically impoverished' institution of which Claxton speaks. Across the globe and in every level of education, commentators have long found evidence of normative dualism within academic practices. In 1984, the American thinker and activist, bell hooks, published her well-known work *Transgress: Education as the Practice of Freedom*, one of the earlier texts to highlight the mind/body dualism evident in the academy and decry the omission of the body from teaching practice: 'Trained in the philosophical context of western metaphysical dualism, many of us have accepted the notion that there is a split between the body and the mind. Believing this, individuals enter the classroom to teach as though only the mind is present, and not the body' (bell hooks, 1994:17). In the 21st century, writers have seen it necessary to reissue hooks' reminder that academic practices are embodied acts. With regard to teaching, for instance, Freedman and Holmes (2003:7) have argued that we need to 'discard the fiction that the teacher has no body', and acknowledge that 'visible and/or invisible, the body can transform both the teachers' experiences and the classroom dynamics'. In New Zealand Iisahunter (2011) set out to 'reposition the body and its presence in teaching and learning'; in Australia, Barnacle (2009) argued that mind/body relations needed to be re-thought to counter 'the purchase of rationalism within educational discourse and practice', whilst in America Jones (2010) calls for 'a way of thinking and doing that responds to the bodies before us' and Seow (2008), analysing Geography teaching in Singapore, reminds us that 'teachers have bodies, and that bodies matter'.



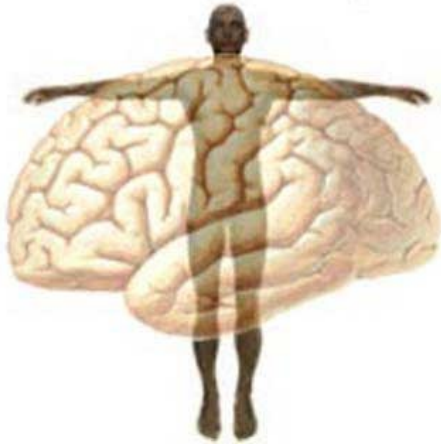
Teaching is not the only academic practice to have received such global attention. Academic writing and indeed general literacy cultures have been subject to recent critique concerning the erasure or downplaying of the body in their pedagogies and practice. Such is this omission, in fact, that Peter Elbow, the eminent US composition theorist, was occasioned to say that: 'Our culture of literacy functions as though it were a plot against the (...) the human body' (Elbow 2012: 6-7). In the UK, O'Connor and Petch (2012) have found a similar eradication of the body in literacy cultures, claiming that 'From the perspective of UK higher education (HE), the simple truth is that we have a tendency to forget about the embodied writer when we teach'. Clughen has similar fears and calls for 'an embodied writing pedagogy that would both recognise and nurture the body's central relationship with writing' (2014, 295).

Yet despite the persistent erasure of the body railed against by critics such as those above, throughout the academy, the mind/body split has been devastated intellectually. Talking about the field of neuroscience, for instance, Claxton (2016, 3) himself says that '[Neuroscientists] do not think that minds and bodies are different kinds of stuff. The idea that bodies are dumb vehicles and minds are smart drivers is old hat.'

Academic disciplines have long argued for the unity of the mind and body. Explorations of 'embodied cognition' and 'the embodied mind' - the ways in which the mind is shaped by the body - are key areas of research in many disciplines from feminism, philosophy and education to the sciences, psychology and fields of technology (see Shapiro 2014 for an introduction to this). In Western cultures at large, the idea that cognition is embodied is evident in the ubiquity of mindfulness meditation as an approach to the unruly mind by using the body (for example by using the breath or the still body) for a range of activities from eating to parenting. The Headspace App, for instance, has millions of followers and is reportedly worth £25 million (Cooper 2015) and mindfulness colouring-in books regularly feature in Amazon's top ten bestsellers (Shapland, 2015).

How all this relates to university concerns is obvious in that knowledge production and its creative application are the core endeavours of the university. More generally, it opens up discussions regarding how knowledge is produced in an embodied fashion and turned into an object for consumption (such as an academic paper or an artistic piece of work). In terms of cognition, downplaying the role of the body is a severely lacking approach to knowledge production. In this regard, neuroscientific work is presenting compelling evidence of the inseparability of the mind from the body. David Eagleman (2015, 32), for instance, presents a scientific critique of Descartes: 'The idea of an immaterial soul is easy to imagine; however, it is difficult to reconcile with neuroscientific evidence. Descartes never got to wander a neurology ward. If he had, he would have seen that, when brains change, people's personalities change'. Educationalists also develop neuroscientific work for learning and teaching (Kiefer and Trumpp 2012; Black et al. 2012; Goswami, U. (2006), or use it as a way of challenging the over-rationalising structures in modern education systems, such as performance-based funding or quality

assurance systems (Barnacle 2009, 22). Others have explored the political and ethical implications of the mind/body split and the subsequent devaluing of the body. Some speak to university agendas of equality and diversity, arguing that it leads to the eradication of certain types of bodies from the academy and the privileging of the white, middle class body (Jones 2010; hooks 1994). Others explore what it means to have a body as a teacher (Seow 2008), especially with the incursion of technology, or what McWilliam and Palmer (1995) call 'the disembodied campus'. Teachers' embodiment is also explored for issues of recovery from work and performance at work. Psychologists argue that non-work creative activity (such as knitting or dress making) enhances performance-related outcomes (Eschleman et al. 2014). And in the Arts, academics frequently talk about the importance of the body for creativity (see Clughen 2014), leading many to argue that academic practices such as writing (Clughen 2014) or art appreciation (Booth 2016) are embodied acts. Suggesting that the body is fully implicated in academic practices is not new, however. Indeed, the historian Mary Carruthers (1998, 109-10), drawing fascinating parallels between walking, writing and reading, describes how the influential medieval French Abbot, Peter de Celle used to encourage the monks in his charge to see reading as akin to journeying through a landscape and advise them to walk through their reading, see the content as they read, slow down and speed up at different parts of the text, just as they would stop off on a journey, or hurry themselves along.



There is, then, no shortage of scholars advocating the mind/body unity and the importance of the body in all sorts of educational contexts and for all sorts of purposes. As Shaun Gallagher (2005, 248) stresses below, human embodiment is a fundamental element of all aspects of human experience. It follows, then, that our embodiment impacts in all sorts of ways our academic and other creative practices and this is what is explored in this edition of *The Creative Academic*:

I hope that I have furthered the realization that nothing about human experience remains untouched by human embodiment: from the basic perceptual and emotional processes that are already at work in infancy, to a sophisticated interaction with other people; from the acquisition and creative use of

language, to higher cognitive faculties involving judgment and metaphor; from the exercise of free will in intentional action, to the creation of cultural artifacts that provide for further human affordances.

Themes of this Edition

In this edition, contributors give testament to the body's active role in creative processes. In different ways, they highlight the symbiosis of body and mind in creative acts and discuss how tutors might embrace the body to stimulate the creative process in teaching and learning.

The ways in which our bodies are fundamental to the meaning-making involved in creativity is, perhaps, the leitmotiv of the collection. Many writers discuss how their bodies are fundamental to their thinking - to making sense of their experiences and of their disciplines.

Whether drawing on phenomenology, enactivism, or educational theories such as Imaginative Education, the importance of first-hand, embodied encounters with the world to understanding and knowledge creation underpins many of the articles in this collection and different writers take this in different directions. Michael Wride discusses how Johann Wolfgang von Goethe's scientific method co-mingles the creative, intuitive and imaginative awareness of art with the rigorous observation of science and proposes: "*an intimate firsthand encounter between the student and thing studied.*" Tom Shakespeare describes how this approach might be woven into different aspects of course design and pedagogy. Involving real people with the course not only makes it more ecologically valid, but turns the abstract objects of academic textbooks into living, breathing subjects with tales to tell. Lucy Biggs, a lecturer in Design, continues this theme and also builds first-hand encounters into her Creative Landscapes course structure and pedagogy. Describing her walking trip to Grasmere with her students, she finds a powerful metaphor for the design process and a way of helping them to understand, or rather to *embody* what design is about. For further information, see: <https://vimeo.com/182758248>

Other ways of harnessing the creative affordances of the body in the classroom are through activity. Colin Beard issues a critical defence of movement, gestures and visual aids for learning and describes '*Walk the Talk*', a technique adopted across the globe to support international students studying the evolution of the British environmental movement. Maria Kefalogianni also employs walking in the classroom to help students to reflect on their personal development in her course in counselling and psychotherapy training. Describing a 'swimming pool workshop', she appeals to the students' 'felt sense' as a way of promoting deep reflection. Emphasizing the 'making' component of meaning-making, Julia Reeve describes 'Reframing Research' and 'Swollage' - hands-on learning activities that she created with her colleague Kaye Towson to support the research and writing processes. Gillian Judson offers five imaginative ways of using the body in the classroom: employing gesture; seeking & appreciating patterns; engaging the senses; through play and by tapping into students' emotions. What distinguishes the work of these writers is their emphasis on positive emotions for learning and creativity and the impact these can have on the emotional domain of learning, improving such as student confidence, motivation and resilience.

So active is the body that some contributors simply cannot produce their art or conduct their research without the body's feedback. It is the feel for her pot as she makes it that forces Camilla Groth to readjust her conceptions of the end product. Similarly, Christina Kobb describes how hearing her music as she plays further feeds her imagination and fundamentally affects its development. A crucial part of such feedback from the body is intuition. Norman Jackson acknowledges this, speaking of the intuition required for a geologist to make her/his hypotheses about, for example, the relationship between rocks. Michael Wride also explores the relationship between feelings, knowing and learning through his discussion of Goethe's phenomenological, intuitive approach to creation.

That the body is wholly imbricated in the development of their practice raises another point of interest for our contributors: the role of the body in establishing their professional identities. Emma Davenport turns her gaze most specifically on this here in her discussion of clothes as part of Lecturer identity. Much more than 'rational objects that serve a specific purpose', clothes, she argues, are embroiled with lecturer subjectivities and are the visual material of complex ideas about how lecturers position themselves as academics and their relationships with the academy.

Taken together, the thoughts expressed in this edition point to the fundamental importance of the body in thinking, creative production, to the building of a sense of one's identity as an artist, practitioner and academic, and simply in making learning more enjoyable. They demonstrate the different ways in which embracing this awareness in creative processes, whether one's own or in one's teaching, makes the experience richer, more creative and often more enjoyable. And bringing joy, or as bell hooks put it many decades ago, bringing 'eros' into the classroom, can serve to unleash an engaging, motivating, invigorating and inspiring force.

I hope each of the pieces here stimulate your thoughts and imagination, but, equally important, I hope you enjoy your reading and are as surprised, excited and energized by the ideas presented as I have been. Here, you will find out about Goethe's intuitive scientific method, how enactivism, phenomenology, insights from Counselling and Imaginative Education can bring the classroom to life. You will learn about the eyes on your finger tips and how changing bodily movements produces different results in music. You will encounter discussions of using first-hand experiences for teaching and learning; learning in action, teaching without language and knowing through making. And you will also hear about the 'dance your Phd' competition. What would your entry look like?

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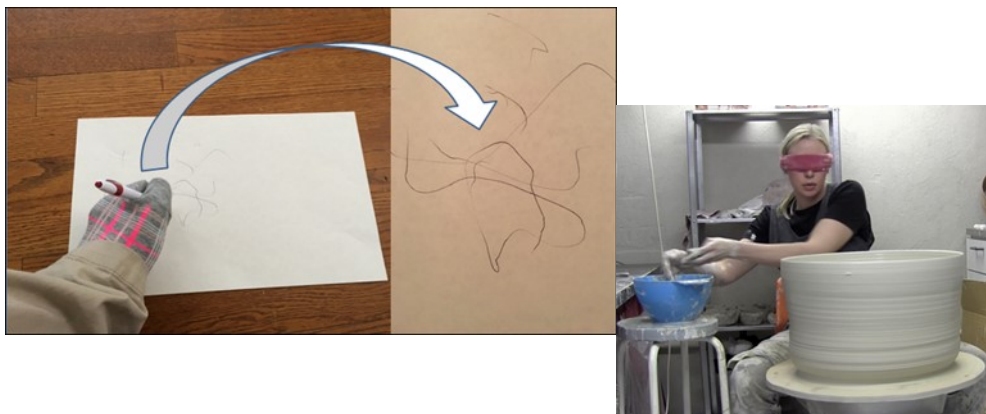


Image credits

<http://pressedbutnotcrushed.com/wp-content/uploads/Emotional-Detox-The-Seven-Deadly-Sins-IV-1995-246x300.png>

<https://www.simplypsychology.org/body.jpg>

Images from #creativeHE Google conversation

How the human body shapes the mind: navigational tools used to support learning

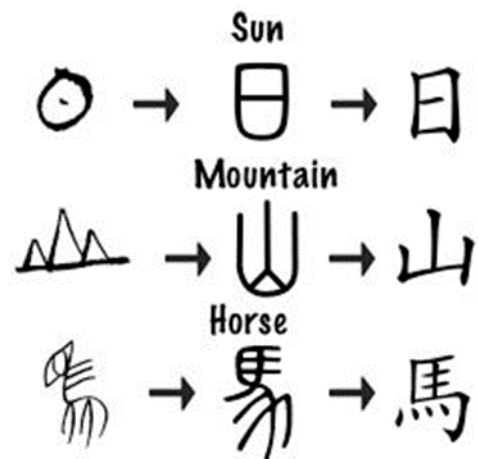
Colin Beard



Colin is a professor of, and holds a PhD in, experiential learning. He is internationally recognised for his multi-disciplinary work in human learning, and has delivered lecturer programmes for many UK and international HEIs. He is much sought after by many corporate bodies and governments in the UK and abroad on individual and organisational experiential learning. He has written numerous international books, book chapters and journal articles on experiential learning. He has also delivered over 60 international keynotes. His current research interests and publications lie in understanding the complexities of human learning. More details can be found on his website <https://colinbeardblog.wordpress.com/>

The importance of language

Our human written and spoken language is complex and it has evolved to support how we understand things through our brain processing. The Chinese written language is particularly powerful in that it is picture based or pictographic in form, the language is essentially stylised pictures. At one time in China's history there were over 40,000 characters and these were relatively easy to work with as these were pictures. The English alphabet has only 26 letters: why is the number of letters so small? The answer lies in the fact that these letters are not associated with pictures but rather the generation of sounds, known as phonics. There are some 40+ basic units of sound and these have to be created by using only 26 letters and combination of letters. It was the Hebrew scribes that originally invented the alphabet. The development of written and spoken English however has played a key part in the divorce of our language from the beautiful and sensorial world that we humans have occupied for millions of years - the original pictorial relationship with the earth is lost - but not totally. Some of the English letters do have the remains of the pictographic system, so for example the q is derived from the Hebrew term 'quoph', which means monkey. The letter Q is a stylised pictograph of a monkey!



But at times language alone is problematic in that it is linear; spoken words come out of the mouth one word at a time. Such a linear language struggles at times to explain complex or abstract things. Spatial (space) and temporal (time) concepts are difficult for the brain to comprehend, and so language can help the brain to grasp these concepts. A simple example is the use of the word *higher* education: the term highlights the requirement for 'higher' (abstract) thinking in our institutions that encourage and support study, such as universities.

Spatial-bodily metaphors are extensively used to understand time (temporal reasoning): **time for example is often explained in our language in relation to our own bodies**. We say things like: you have your whole life *in front of you*, you need to put those worries *behind you*, I am really *looking forward* to that day, *forward planning* is essential. Language also uses other bodily metaphors: I feel *burdened* by the pressure of work, mathematics is usually a matter of understanding the *step-by-step* logic, the law was *rushed* through by the government. Thus we can 'see' or derive spatial and temporal meanings from this *language of the body*: the words offer clues to the brain and so help the abstract reasoning/understanding.

Bodily learning and gestures

Movement is an essential principle in the design of effective learning. People should ideally move around at times as opposed to sitting, passively. It is easy to reconfigure a room for different interactions if we can move the furniture and so furniture needs to be moveable. Data, when moved around, can be explored; and *sticky post-it labels* are extremely popular simply because they can easily be moved and so information can be *reorganised*. It is also interesting that new gesture-based technologies are emerging very fast, and these involve bodily movement: we swipe, slide and interact with our bodies, and so we develop a range of movements to control our IT devices.

Gestures are bodily movements and they too shape the mind, and are vital to communication and social interaction. The body supports the brain and has done since before the creation of languages. This period before languages is often referred to as a pre-linguistic period. However the period during the development of language might also be referred to as a post-kinetic phase. Gestures can support cognitive processing, and sign language of course is gesture based: become self-aware of your gestures, your use of your hands and facial expressions (there are about 7,000 facial expressions).



Learning can also be supported, and memory enhanced, by encouraging learners to construct and then *walk and talk* through sequences and complex learning scenarios. Physically walking through concepts and talking through the experience can support enhanced learning and memorisation. It is interesting that in both the Eastern and Western world some of the great philosophers of the past used walking as a key method for learning. Socrates would often walk whilst asking numerous questions about a variety of topics. Charles Darwin who published the theory of evolution of the species had a 'sand-walk' developed in the grounds around his house, and he regularly walked to get away from his desk where he was studying specific species, and in particular barnacles. It is said that this walking helped with the synthesis of much of the complex information he was trying to deal with when progressing his thoughts about the evolution of the species on earth. The rhythmic routine of walking or swimming is said to clear the mind and make way for new thinking.

'Walk the talk'

These principles can be used to facilitate the learning of highly complex material. 'Walk the Talk' is just such a technique, involving a difficult topic that has complex spatial and temporal underpinnings that make navigational aids particularly important. Walk the talk was developed as part of a teaching programme to support international students studying the evolution of the British environmental movement. The global environmental campaign movement is said to be the biggest worldwide social movement. However the history is particularly difficult to learn as it involves a complex number of events, influencing a complex set of laws under British legislation, and the interaction of many voluntary organisations, key individuals and political lobbying. Government departments were all involved in this evolution. There is also the question of designated sites and these

too are complex: these would include the designations of National Parks, Areas of Outstanding Natural Beauty, Sites of Special Scientific Interest and many, many other formal and informal designations. Unfortunately for international students complexity was problematized by the fact that there was no one correct answer to this evolution of a powerful force in British environmentalism. There were multiple interpretations and the students had to produce a piece of work at the end of their studies that offered a number of historical perspectives. In order to help students interesting lectures and seminars were developed but ultimately the technique of 'Walking the Talk' proved to be a powerful teaching tool and it is still being promoted around the world in the 21st-century. It works by asking people to lay out colour coded, laminated cards for laws, not-for-



profit organisations, government departments, significant events in a way that looks like a much more complex version of a Metro, Train or Underground Map. More significantly the students walk through this history explaining specific parts of the history that they have studied for several weeks, and so each specialist team contributes to the whole. These are recorded and placed on the virtual learning site for download, and the final assignment is a written narrative essay holistically exploring this environmental evolution.

Why does this method of learning work so well? Our roads and airports have many signs that typify this idea of a concept within a picture: the restaurant, the toilet, the luggage collection point, and so forth all have simple images that are often used internationally. Also the actual road maps 'exaggerate the sizes of highways and streets so that they can be seen and used'^{1:110} If we are walking through a forest we can see the details of the plants and we can observe many animals. We can't see however, is the shape of the forest: if we were in a helicopter then we would be able to see its shape from this unique perspective, and we would see things that would have been impossible to perceive whilst walking directly on the ground amongst the trees. It is bodily **perspective** that is important in helping people to learn, particularly when we attempt to understand quite complex things. The layout of a book is quite interesting: divided into chapters, paragraphs, sentences, spaces, diagrams, and lots of other structures that help us to **navigate** and understanding the content. This is how the book is **organised**.

Maps are also a form of organising offering a perspective; they allow us to transcend our direct experience of the world in that they offer a spatial-relational perspective, showing the relationship of multiple locations. Maps also distort spatial information. With maps we can see the big picture, and this allows us to gain visual access to a greater number of spatial relations and will be available from direct experience. However, whilst this will give others an ability to discover new information, much depends on what it is that is presented in the map. Throughout the world what we now see in the many cities is a particular type of map that has been deliberately simplified to help people to navigate their way around the complex reality of built-up areas. These have been largely derived from the design of the original schematic London Underground map in the UK, designed by Harry Beck, a technical draftsman, in 1931. The underground train routes are shown as colour-coded lines, and stations are configured as circles along these lines. The map has little geographical accuracy for the relative positions of the stations and the routes. Places where people can change trains are highlighted where the coloured lines cross over. This simple map, now replicated around the world, has helped millions of people to navigate their way around a complicated city. So if we ask ourselves why these maps are so successful, the answer lies in the simplification of reality: a satellite map would not function in the same way as it would possess too much information. Colour aids the underground navigation process, and stations are identified by simple clear circles with the name of the station adjacent to it. So it is with learning: we need simple navigational tools to help learners to understand complicated abstract things. People who've lived in the cities for many years do not need to follow the maps; they are familiar with the territory. If you are a novice or a newcomer to the city and you will need the map. So it appears that colour, shapes and the simplification of reality are key components to these navigational aids. However there is more that we must consider. Let us explore further how the brain works.



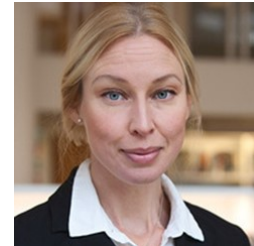
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How design and craft practitioners think, make sense and *know* through their hands

Camilla Groth

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Introduction

Thinking through our hands is not usually what is taught in school, where the body brings the mind to class. However, our mind does not have access to the world without our senses that allow for our whole interpretation of the world and what meanings are out there. Our hands are our interface to the world and body based knowledge is key also in our understanding of more abstract concepts and ideas. Additionally, our imagination and our embodied experiences of the world is needed in our interpretation of concepts as well as making ideas travel further than our bodies. Rather than thinking of the body as separate from the mind, the understanding of the person as a psycho-physical whole is now growing also in education. This article shows some aspects of how the body plays a role in the sense making of design and craft practitioners. These insights are made through studying very basic human-environment interactions, therefore they might shed light on the thinking through hands taking place in other contexts too.

Making knowledge

I recently defended my Doctoral dissertation in the field of Design. In my research, I explored the role of the body in sense making with materials that many crafts persons and designers experience in their practice. My curiosity into the bodily aspect of thinking through hands and material was born in my own practice as a ceramist, in which I had experienced a sense of knowing through making but that I could not conceptualize or theorize as yet. Additionally, I felt that my body-based ceramic practice was differentiated from academic knowledge and not valued as equal to conceptually and theoretically based knowledge. Even within the field of art and design there has been a notion of crafts as being unreflective and material based as opposed to the immaterial and conceptual arts or the planning of the design rather than the manual implementation in materials^{1:18-19}

I knew by experience that crafts persons think, feel, make judgements, plan and theorize *in action* and in a direct relationship and negotiation with the materials, but felt that this way of making sense was not being distributed to the wider audience, perhaps exactly because we tend to differentiate between practice and theory. In the past craft practitioners seldom acquired the double profession of researcher-practitioner, therefore their practice has traditionally been studied by non-practitioners. However, recently due to reforms in the educational system, higher education including doctoral degrees are offered also in practice based subjects. As a result the number of researcher-practitioners has increased rapidly in the past 20 years. Now art, design and craft practitioners describe and reflect over their practice from an insider's perspective, drawing attention to the many different aspects of their practice that have been foreseen when being studied by historians, ethnographers or social scientists. One of these aspects is the experiential and body based knowledge that only the practitioner herself knows (see references 2- 17)



What these practitioners have in common, is that they make something, with their hands using material. We could perhaps describe the act of making something in a material as a conversation, interaction or negotiation between the person and her material environment. By manipulating material, we affect the environment but we are also affected by what we make, or the making experience itself. Making occurs in multiple forms, on many levels and in different contexts. By transforming matter, we even transform society as we make an imprint of our culture and of ourselves on this world. The act of making is thus powerful, as through making we also make meaning, we communicate meaning and we share meaning. In a similar manner, we might think of knowledge as something we create through our interaction with our environment, other people and other peoples' creations of different kinds such as texts, videos, artefacts, performances, plays or films. We *create* knowledge rather than just *receive* knowledge, therefore it is useful to take an active position rather than a passive position both in teaching and being a learner.

Sense-making

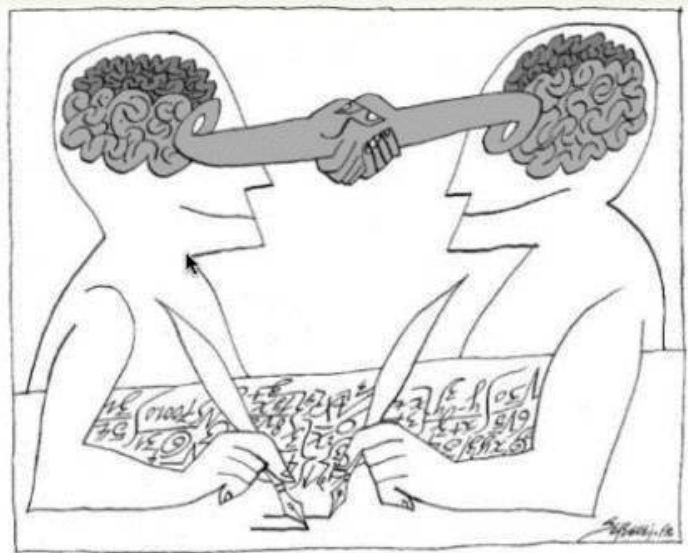
The meaning of *making sense* of things is connected to utilising the senses (the body) in the act of meaning making. Philosopher Mikkel Tin^{18:1} connects sense-making to the activity of making in a material and speaks for the making activity as a sense-making activity that creates knowledge of another kind than ordinary discursive knowledge. Philosophically, Sense-making is a key concept, and it is described by enactivist philosophers in the field of cognitive science, Evan Thompson and Mog Stapleton^{19:25} as the organism's (animal or human) activity of transforming the world into an environment that has salience, meaning and value for it. Through searching and finding we make sense of our environment and of what it has to offer, or what it *affords us*. Environmental ecologist Gibson^{20:127} explains the concept of affordance in a very similar wording: "The *affordances* of the environment are what it *offers* the animal, what it *provides* or *furnishes*, either for good or ill" (Italics in the original). Our emotions are central in this sense-making process as they give us cues or gut feelings of how to react to the information we receive^{21,22}. Emotions also give our experiences meaning²³.

Sensible senses

We use all our senses, our hands and body in our explorations of the unknown but also in confirming what we already know. Enactivists suggest that a person learns in action and accumulates knowledge through her embodied experiences with her environment; thus, the body is integral in all knowing²⁴⁻²⁷. We create our minds through our experiences, and as the brain is plastic it enhances the capacity for what it is regularly exposed to. This means that the more experiences we have of a certain action or interaction, the better we are in anticipating and predicting possible outcomes from future similar actions and interactions. According to enactivist theory also *vision* is an embodied skill, as vision does not make sense to us without our experiential knowledge in relation to what we see²⁴. Noë²⁴ develops his theory around knowing-in-action that concretely ties practice and theory together. The concept of knowing-in-action is also familiar to creative practitioners through the work of pragmatist design theoretician and philosopher Donald Schön^{28, 29} and particularly his book on the *Reflective Practitioner*²⁹ (See also Sennett³⁰).

Knowing requires action

Another reason for activation is the fact that we activate our brains by moving our bodies. When we sit down our brain thinks we are resting and "turns off" as we do not seem to be in any danger and may relax³¹. Making small drawings or being active in other ways by handling material or small crafts such as knitting while listening to a lecture can yield better learning results than just passively listening to the teacher³² as this keeps us from getting drowsy and too relaxed. The activity made in this context should be of an uncomplicated sort that has been embodied and automatized enough not to take up too much attention from the listener. Inactivity and restrictions to use our hands may even lower our mental abilities as a large part of our cognitive capacity is bound to the hands³³. As touching and forming materials such as typically happens in craft activities stimulate these areas of the brain, making in a material or exploring new materials are crucial for developing the brain³⁴⁻³⁸.



Sense-making is facilitated through actions or interaction, but we also learn by observing and mimicking others. For example, we *simulate* in order to understand the mental states of others³⁹. This ability is facilitated by mirroring systems of the brain^{40,41}. Mirror neurons, fire in a qualitatively similar way when a person is looking at someone performing an action, to when the person is performing that action herself⁴². That means we empathise with other people's bodily actions. Mirroring systems that support mental simulation and imitation thus also help us learn tacit manual skill as we mimic our peers³⁵. This enables tacit knowledge to travel through generations of for example crafts persons who work together in craft communities.

Enactivist theory builds on human interactions with the environment. Human geographers study the interaction between human and her environment, thus, research involving perception is also developing in this field. Gibson^{20,43} has been a great influence on researchers that now also link closely to ethnography. Human geographer Paul Rodaway⁴⁴ wrote about 'Sensuous geographies' and the idea of the body being a geographic entity is further developed by Mark Paterson⁴⁵ in his 'Haptic geographies' where he calls for research methods using the haptic modality. Some strands of anthropology and ethnography likewise expand towards the sensuous realm and human geography through Sensory Ethnography^{45,46,47,48,49}. Tim Ingold in particular has advanced our knowledge on learning and thinking through movement and making⁵⁰.

Representation or lived experience?

The above-mentioned strands of research all link to the non-representational theories initiated by human geographer Sir Nigel Thrift (for an overview, see Anderson & Harrison⁵¹). Non-representational theories deal with the un-procedural meaning-making that transcends language and other symbol systems, such as visual representations, and that form the situated personal and embodied knowledge and thinking-in-action in, for example, practice-based domains^{51:7, 52, 53:646}

Our education system is geared towards the audio-visual sense, asking us to sit still and take in knowledge given by the teacher verbally. But a word is always a representation or a conceptualisation of something, thus it is always a translation of the real thing and not *the same* as the real thing. A word can thus not be experienced physically. However, through drawing on our tactile memory, our embodied knowledge of the thing that the word means, we may recall what that thing felt like. For example, the word *tree* does not open up to a person that has never seen, touched, or climbed a tree.

While our educational system has leaned on a cognitivist approach in the past, the enactive approach is now claiming ground and speaks for embodied cognition also in language comprehension⁵⁴ It is not enough to sit on a bench in school and learn about the world outside through language because language is empty without a bodily grounding of the concepts⁵⁵ This is clear when it comes to issues describing the material world, but linguists and philosophers George Lakoff and Mark Johnson claim that also the more abstract concepts are grounded in bodily experiences^{56,57,58,23}

We also need imagination to understand language⁴² and our mind travels outside the classroom as we listen to a lecture, visiting the situations described in the lecture through our embodied knowledge of the world⁵⁵ Researchers in the field of neuroscience in relation to education have already picked up on this issue. For example, it has been found that sensory-motor interaction with the environment during learning results in more durable and richer knowledge^{36:20} (in this context see also^{59,60}). Embodied knowing of materials and their properties were proven essential in the design of artefacts also in my own study that I will describe in the following sections.

Three case studies on tactile experiences

Our hands often form the interface between our mind and the material world. As a ceramist, I use my hands for everything in the studio and the knowledge I have created and stored over the years are embedded in my hands and in my whole body. Thus, when researching my own practice I chose to focus on haptic and tactile experiences in my investigation. The research question of my thesis was: *How do design and craft practitioners think through their hands?* (for a comprehensive description of the study and research settings see my original thesis⁶¹

I used three case studies to investigate the research question from three different perspectives: I first gained inspiration and a deeper understanding from experts in tactile knowledge, by arranging ceramic workshops for deaf blind people. Learning from these experts, I turned my attention to study my own experiences in my practice, focussing on what I knew through my tactile experiences by blindfolding myself while throwing large clay pots on a turning wheel. In the last case I wanted to know what all this means for design students, therefore I followed a Master course in the field of design and investigated how the students used their body based knowledge in their design and making activities. Although quite different settings, they all focused on haptic and tactile experiences and making sense through material manipulation.

Learning from tactile experts

As an example of how embodied knowledge may be transferred from one person to another I will here describe what happened in one of the workshops with deafblind participants. One of the participants wanted to make a pot on the potter's wheel, but to facilitate this I would have needed to communicate verbal instructions for how to throw a clay pot to the participant through his tactile language interpreter. Since the participant normally uses his hands for communicating through the tactile sign language and his hands were now busy with the clay, it was not possible to interrupt his working while giving instructions. I therefore started throwing the clay *with the participant's hands*. I discovered that in the act of throwing clay tactile communication was sufficient to pass over to the participant my embodied and tacit knowledge relating to the throwing practice.

Image 1 Image of myself and the research participant, throwing clay together during the workshop. Screenshot from the video⁶¹



Image 2 Image of the research participant, throwing clay independently during the workshop. Screenshots from the video.⁶¹

Image 1 shows me and the research participant throwing clay together. Even though the research participant could not see or hear anything during the process, he was able to receive my embodied and tacit knowledge of the throwing process. This means: the exact timing and pressure of the hand movements were communicated to him entirely without the use of language. When the research participant had finished this first piece, he tried throwing another piece independently while I was in the next room with the other research participant. The research participant managed to throw a bowl unaided that was almost identical to the first attempt, and I felt that he was unusually successful for a beginner (Image 2).

By utilizing this tactile communication I felt that language was not necessary in transferring this type of body based skill to another person. Visually mimicking another person is normal in transferring craft skills, in this case the research participant was physically mimicking the actions needed to throw clay on the potters' wheel. This shows that also tactile communication methods may be considered in teaching tactile skills, given a mutual agreement between student and teacher. It should also be mentioned that due to his deafblind condition the research participant benefits from his enhanced haptic and tactile sensitivity and his trained tactile memory⁶² (This case study is described in Groth, Mäkelä & Seitamaa-Hakkarainen⁶³).

Practice-led self-study

The second case study was inspired by the deafblind participants who had shown an enhanced tactile ability. In order to investigate whether I could enhance my own tactile skills and understanding I tried to work blindfolded in my studio for a period of time. I recorded my own practice through several methods, using a diary, video recordings with think-aloud accounts and a contextual activity sampling system (CASS-Q). I noticed that my tactile skills were indeed enhanced over a period of five days. From having felt uncomfortable working blindfolded on the first day I felt quite natural in trusting my hands after throwing clay blindfolded for five days in a row (see image 3).

The act of blindfolding as an attempt to augment my tactile sensibility was successful as more attention towards haptic and tactile sensory experiences became available, and I was less interrupted by other impressions. I got used to trusting my hands for information and I became more alert towards my tactile sense and the information coming from my fingertips. I also felt it easier to give verbal accounts of my experiences and what I was thinking while blindfolded.

I noticed that the haptic and tactual feel of the clay and the conditions of the material affected my emotions in either a positive or negative way, especially during critical circumstances. However, I also found that even negative emotions actually helped the process by aiding concentration and focus on solving problems. The heightened alertness, stress and worry about the risky moment of the process involved, afforded extra sensitivity and an attunement to the material that the critical incident called for. This made me aware of emotions as important regulators and moderators in the process of handling difficult material manipulation processes.

Theory related to embodied cognition supporting this hypothesis is linked to the concept of somatic markers²² Our previous experiences are stored in our bodies as feelings that emerge again in new similar situations. These somatic markers give hints on the available opportunities (affordances) and risks related to a situation. Emotions and sensory experiences are thus linked to the skills and sense-making of a craft practitioner and as such contribute to the embodied knowledge of a practice. (This case study is described in Groth, Mäkelä & Seitamaa-Hakkarainen,⁶⁴ and Groth⁶⁵).



Image 3 Image of myself throwing clay on a potters' wheel blindfolded. (Image from the video recording of the event⁶¹)

Design students' learning experiences

The third case study involved analysing design students' haptic and tactile experiences and sense-making during a course that promotes material exploration as part of the creative process. Two students, were studied closely and their material exploration was documented on a weekly basis. Both students were using their touch sense in various situations during their explorative process. The tactile aspect of the materials that they used were important on many levels but especially so in the process of deciding which materials to use for the designs. Their felt experiences of materials were often linked to emotions and shared social and ethical values that they connected to their mental image of the material.



Image 4 Image of students material tests⁶¹

However, also a *mental* material exploration was detected as both students listed materials in their diaries that they tried out in their imagination, before trying them out physically. As I interviewed them, one of the students said that she did most of her material exploration in her mind. As these materials were familiar to her it is assumed that she was reverting to previous physical experiences (embodied knowledge) of these materials, gained in other contexts.

Emotions also surfaced in this case study and was linked to manipulating material as it affected both students' self-esteem and image of themselves as practitioners. As the students experienced new materials in their exploration process, the new and unfamiliar material behaviour disrupted their workflow and made them question their skills and at the same time also their identity as makers. The students' anxiety was soon overcome through resorting to familiar patterns and methods of solving material problems known to them from other domains that were more familiar to them. (This case study is described in Groth & Mäkelä⁶⁶).

Concrete knowing through material interaction

Especially in the third case, I could see that the students moved between representational and non-representational making modes.

The initial mental image of the intended artefact was tested in concrete material and through the resistance of the material the idea was reformed and developed and then re-tested in material again. In the image below (Image 5), I have sketched out the view of embodied sense-making in design and craft practices that emerges from this research. The model describes the difference in the two modes.

The more conceptual or imaginary activities are shown in the *Representational mode* loop on the left. Activities linked to bodily and concrete manipulation of materials are shown in the *Non-representational mode* loop on the right. The arrow shows how the practitioner is moving between the idea mode and concrete mode in loops, where knowledge is reinforced for each loop and the ideas are tested and re-configured through a concrete re-making and re-knowing.

The transition point between these two modes is presented as a narrow passage between the two loops. This proposes that the move from the representational mode into the more concrete non-representational mode may be experienced as abrupt and problematic, particularly for the novice practitioner who might be less experienced with material properties. Similarly, the other way around might be difficult, since the negotiation with the material that goes on in the concrete non-representational mode may sometimes forcefully change the imagined design. On the other hand, the non-representational mode allows for a sense-making process that also includes the voice of the material, the material agency.

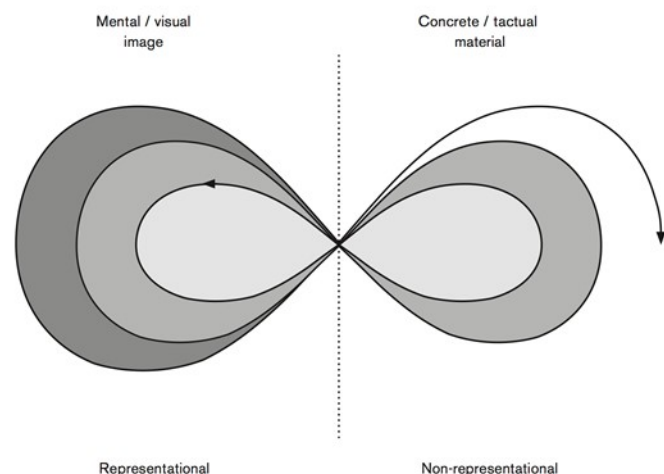


Image 5 Embodied sense-making in design and craft practice⁶¹

The design process is often described as a thinking process that does not involve the manipulation of materials¹ Instead designers work with design representations such as drawings and concepts. The difference in attitude to sense-making in a distant representational mode that is concerned with a more objectifying view of what is visible and on the other hand the more immediate subjective and concrete non-representational mode does

explain the difficulty in the transfer between these modes shown in the model above. In the more concrete mode, the embodied sensory reflection is highlighted and physical constraints are met concretely and physically, allowing “visibilities of the world in the subject’s felt engagement with it”^{53:646}

However, the grounding of the lived experience into the body, stores it in a way that may be utilized even in qualitatively different new situations. This is a vital knowledge, particularly for designers. The students that participated in my research created mental images of their intended designs in their minds even before starting concrete material testing, but these mental images were very realistic and they were based on previous encounters with materials. Thus, they used their embodied knowledge of materials and their constraints in the formation of the initial image of their artefacts. However, some of the other students participating in this course were not as experienced in handling materials as the two that I studied closer.

One student in particular had difficulty in creating any material implementations of his ideas. The mental images that he created were too far away from what was possible to realize in material, thus he had to constantly reformulate and rethink his designs. In one of our discussions he said that he was not very “good with his hands” and that he dislikes materials. He said that he was not able to do what he wanted but had to do something else instead. I understood his inability to create functioning mental images of his designs to be due to a lack of embodied knowledge of material properties.



Conclusion

The importance of touch and haptic experiences in decision-making processes and the link to emotions in this context was one of the key findings. The practitioner seems to gain not only manual skills during a making process, but she also builds herself as a practitioner. Manipulating material may be seen as a way of being in and affecting the world as well as negotiating meaning related to one’s abilities and limitations. The craft practices are safe places to fail, restore and grow one’s self even stronger and more skilful.

Another aspect relating to education was the realisation that tactile skills might at times be better taught by tactile means, as the embodied knowledge of the teacher, including exact timing of movements and limb pressure, are more readily available to the student in such a setting. This case shows that even entirely tactile teaching (without sight or hearing) could produce a beneficial learning experience for the person receiving the tactual guidance.

An overarching finding of the whole study was the many different levels and notions of emotions that surfaced in connection to haptic experiences. In addition to being linked to self-esteem and empowerment as in the case of both the deafblind and the student case, emotions were also regulating risk assessment, decision-making and problem-solving in a making process. Emotions aided the maker in applying the right amount of attention and caution in the management of critical incidents. Previous experiences are stored in the body and reactivated reminding the maker of the available opportunities and risks related to a situation. In the meeting of new material properties, similar previous experiences are related to and a form of re-knowing of previous knowing aids in overcoming new challenges. This re-knowing was seen in all three cases but perhaps especially in the design students’ processes.

When the design is taken from a 2D drawing to a 3D prototype, there is a change in working modality that involves the materialization and externalization of mental ideas. Embodied and sensory knowledge of material properties is especially useful in this transition from the representation to the concrete and lived experience of the artefact. One of the main research results of my study is precisely that this embodied knowledge of materials and their properties in relation to the skills of the practitioner is what design and craft students and professionals rely on in their practice. Therefore, their body-based knowledge works as an informant also in the conceptual and immaterial phases of the design and planning of future artefacts.

Acknowledgements:

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Disability Education and the Power of First-hand Experience

Tom Shakespeare



*Tom is a social scientist, with a particular interest in disability and bioethics. Currently Professor of Disability Research at the University of East Anglia, he formerly worked at the World Health Organization. He has been involved in the disability movement and with disability arts for thirty years. His books include *Disability Rights and Wrongs*¹ and *Disability - the basics*². He broadcasts regularly on BBC Radio 4.*

It's a fact that disabled people, older people and people with chronic health conditions do not always get the best treatment from health and social care professionals. Ignorance and negative assumptions can feed into worse care. Analysis of the World Health Survey in the WHO World Report on Disability³ showed that people with disabilities were twice as likely to find health care provider skills and equipment inadequate to meet their needs; three times as likely to be denied care; and four times as likely to be treated badly by health care providers. A French study found that a fifth of GPs were uncomfortable treating people with mental health conditions or learning disabilities, and nearly a tenth experienced discomfort when treating people with physical impairments. Nearly ten per cent of American physicians felt uncomfortable treating people with Down syndrome.

Poor attitudes may often combine with inadequate knowledge. Primary care professionals cannot be expected to have specialist knowledge about every rare condition - there are ten thousand of them. But when diagnostic overshadowing occurs - meaning that the professional neglects general health needs because of a focus on the primary condition - this is a failure that could easily be remedied by greater awareness. For example, it might be wrongly assumed that people with disabilities are not sexually active, and therefore do not need sexual and reproductive health services. Moreover, if professionals are trained with a narrow focus - attending to a specific problem without seeing the wider social and psychological impacts in a holistic way - then people with disabilities are likely to feel pathologised and their wider needs neglected. Evidence shows that people with disabilities, despite their primary conditions, do feel healthy and can be successful in managing their own health needs if they receive the appropriate support and information. Moreover, there is considerable evidence that people with disabilities report a high subjective quality of life, despite their impairments.

That's why it's very important to ensure that education of health and social care professionals increases understanding and acceptance of disabled people. In my role at UEA's Faculty of Medicine and Health Sciences, I am responsible for service user involvement. For example, when we interview prospective students of nursing or rehabilitation sciences, we use patients and other members of the public to help us decide who should have a place. When we plan or validate our courses we try to ensure that the perspectives of lay people are included.

Changing hearts, minds and behaviours

There are diverse ways of engaging with patients and lay people, and different universities have used different approaches. Sometimes a disabled person or family member comes into a class gives a talk. This has been found to increase students' understanding and comfort levels. Putting lay people into the role of expert - by experience - changes the social relations between student health professional and potential patient. Community visits have been explored - for example, sending medical students to do life history interviews with people with chronic illness and their carers. One off events, online forums, and visits to community facilities are other options. Medical humanities - for example, cinematic representations of disability or exposure to disability dance - have been used to open up discussion and challenge stereotypes. Literature, by sharing first hand experiences in an imaginative way, can broaden minds and offer insights into the other.

A traditional way of changing attitudes is via simulation exercises - for example, spending time in a wheelchair or wearing spectacles that simulate sight loss. For example, in one course, students were randomly assigned to spend half a day in a role play of being paraplegic, being blind, being deaf, and being unable to speak, with designated tasks - shopping in a supermarket, visiting an art gallery. In another, nursing students took it in turns to wear incontinence, both dry and wet, to engender empathy. The aims of such simulations include developing interpersonal skills, increasing empathy and learning about practical



issues, such as accessibility, and these experiences seem to be highly valued by participants. While these exercises may give some insight into practical difficulties - including environmental barriers - and negative attitudes, there is a danger of seeing disability in very individualistic terms. If the main problems of disabled people result from poverty, prejudice and discrimination, then sitting in a wheelchair for a half-day is unlikely to result in a full understanding, and may even distort perceptions.



Evidence suggests that students are most positive about opportunities to meet and learn from disabled and older people. When I teach about disability or ageing or mental illness, I invite people with lived experience to share their stories with our trainee doctors. I run a ten week module, and each week our medical students have the opportunity to meet one or more people with an impairment. For example, they have training from stroke survivors in aphasia awareness. They listen to the stories of two people who have experienced severe and enduring mental illness. After hearing these sometimes harrowing life-stories, one student came up afterwards to thank the service users: "I used to be frightened of people like you" she said, "but now I understand that you're just like me".

Much of this learning is embodied. My students learn some basic sign language and interact with a young deaf professional man. They learn to be patient and not interrupt our visitor with aphasia, however long it takes her to finish her sentence. They meet a woman with Usher's syndrome, who has an assistance dog, and who talks about losing first her hearing and then her sight. Hearing lived experience, looking into the eyes of someone, seeing her interact with her dog, laughing with a man through signing their own names - it's all a very different learning experience to sitting in a lecture or doing the usual problem-based learning group work.



Most powerfully, the students spend an afternoon with a theatre company of people with learning difficulties, doing drama games. This experience is definitely very embodied - for example, people throwing imaginary objects to each other. The service users have very few inhibitions, so the group of students relax more and became more outgoing - with each other, with their tutors, and with the service users. There is touch involved - for example, linking arms or hugging. It feels like the students start off out of their comfort zone - as outsiders in the well-established theatre company. But through these activities, they become participants in the group and equal to the other participants. This experience stays with the students and has been rated as one of the most valuable parts of the module.



I think a whole range of embodied feelings and experiences - fatigue, lack of mobility, presence of pain, lack of speech or visual or hearing loss - should each be represented within the medical curriculum, if trainee clinicians are to have insight into the lived experience of illness and impairment, rather simply disease pathologies and therapies.

Philosopher Havi Carel makes the case for phenomenology⁴ - the understanding of first-hand experience of the world as a person with illness or impairment. For example, because she herself has the respiratory disease lymphangiomyomatosis, or LAM, Carel is able to offer outstanding insights into breathlessness, the topic of

other multi-disciplinary investigations on which her team are embarked (www.breathless.org):

Service user involvement at my university - and at many others - is more than jargon or box ticking. It's a recognition that the academic expertise which we lecturers have, derived from our research and scholarship, cannot tell the whole story. We use the term "experts by experience" to refer to our partners in the community who have different but complementary insights into illness and infirmity. We have data; they have lived experience. We have arguments; they have testimony. In the words of another medical student, the poet John Keats, "an axiom is not an axiom until it is proved upon a pulse".

"Trapped. That is what breathlessness feels like. Trapped in the web of uncertainty, bodily doubt, practical obstacles, and fear. The deepest fear you can think of. The fear of suffocation, of being unable to breathe, the fear of collapsing, desaturated to the point of respiratory failure."^{4:109}

These interaction are not about pity, or even empathy. They are about growing awareness of the reality of another's experience, particularly their suffering. The outcome, whether the person has experienced stroke or cerebral palsy, or even the Holocaust, is to enable us to gain respect for the other, as a human being, and as a survivor of trauma, or exclusion, or difficulties of body or mind. When our students evaluate their teaching, it's usually the opportunity to learn from someone with first hand experience that they rate most highly. I know, too, that they will remember an individual story long after they have forgotten a sociology lecture. The truth of life is irrefutable.

Further reading

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disability
research @ UEA

Image credits

Students simulating being disabled (wheel chair and blindfolded)

<http://news.fiu.edu/2015/07/students-become-advocates-for-the-disabled-in-europe/89946>

Students signing https://www.mac.edu/oncampus_programs/majors/ipp.asp

Doing drama games <http://www.seesawtheatre.org/blog/>

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Embodied Creativity: Messiness, Emotion and Academic Writing

Julia Reeve

Julia co-ordinates the East Midlands Writing PAD Centre, based at De Montfort University <http://writingpad.our.dmu.ac.uk/>. She has worked as part of the Writing PAD community for the past six years, pioneering creative approaches to the learning and teaching of academic writing and research. Julia's initial career was in fashion design, followed by a decade in Further Education.

Julia has been at DMU for the past eleven years, for most of that time as teaching Critical & Contextual Studies for a range of fashion programmes. For the past two years she has worked for the Centre for Enhancing Learning through Technology, developing online training for research students.



Academic writing is not often seen as a creative act

Academic writing can be hard. Not only do many students struggle with it, some academics don't find it easy either. Lisa Clughen writes about 'typical emotions surrounding the act of writing, such as those of alienation, panic, fear, tears or resistance.'⁽¹⁾ Writing within the academy is often also presented as a purely cerebral activity. As Ken Robinson states: 'The academic life tends to deny the rest of the body.'² As well as being considered a largely disembodied activity, academic writing is not often seen as a creative act.

Writing PAD (Writing Purposefully in Art & Design) East Midlands is based at De Montfort University Leicester.

It provides a focus for events, research and a community of practice based on inclusive, creative and reflective approaches to student writing.

In my teaching I use approaches borrowed from creative art and design practice, and in doing so bring the body and creativity into what is frequently a purely intellectual learning experience. I refer to this as an embodied creativity approach. Guy Claxton summarises current thinking about the relationship between making and thinking: 'Craft is cognition, people are saying. Doing and thinking are not separate faculties; they are inextricably entwined.'³

This focus on tactile processes and physicality means that the production of a piece of writing can be viewed through the lens of David Gauntlett's definition of *everyday creativity*, celebrating the joy of using your hands to

produce something new:

*'Everyday creativity refers to a process which brings together at least one active human mind, and the material or digital world, in the activity of making something which is novel in that context, and is a process which evokes a feeling of joy.'*⁴

This feeling of pleasure through hands-on creativity is something that I try to create as coordinator of the [East Midlands Writing PAD Centre](#), developing learning and teaching strategies, environments, workshops and resources that address fears around academic writing by adopting informal, visual, tactile and discursive approaches. My colleague Kaye Towson and I call our workshops creative interventions: these include Reframing Research⁵, a staged exploration of a topic, written and drawn onto concentric 'frames', and Swollage, the use of free-association collage to deepen self-reflection relating to a student's personal Strengths, Weaknesses, Opportunities and Threats. The workshops that we offer to both staff and students can address negative emotions around academic writing such as fear and self-doubt, providing informal learning spaces where positive feelings can be experienced. You can read more about our work on our blog where we set out our 'Linking theory and practice through creative teaching manifesto.'⁶



This essentially messy work contrasts strongly with the shiny, apparently finished products that are visible within academia, which give no hint of the blood, sweat and tears behind them. Student writers 'experience their own writing in all its messiness, while the work they are reading seems to spring fully-formed onto the page.'⁷ This can make the process all the more loaded with mystery and fearful for those who find academic writing rather an anxiety-laden process.

The emotional side of academic writing isn't always recognised by intellectual approaches to academic writing, but embodied creativity can address (and even celebrate) the often hidden feelings that writing can stir up. Taking a creative and embodied approach can also encourage new connections to be formed and made concrete, as well as offering a space for self-reflection both within a workshop and as a framework for future learning.

Embodied Creativity: connecting body and mind

I was first introduced to the idea of 'Embodied Writing Support' by the guest editor of this issue, Lisa Clughen, who delivered a session at our Writing PAD Making the Textual Visual event at De Montfort University back in 2013. Lisa then expanded on this session by providing an article for our guest-edited edition of the Journal of Writing in Creative Practice: 'Embodied writing support': the importance of the body in engaging students with writing¹. I recognised that there was a strong link between Lisa's embodied approach to supporting students with their writing development and the work that I was involved in to embrace creativity and physicality in my own contextual studies teaching practice.

My interest in academic writing as a visceral and emotive activity, as opposed to the purely rational one that is implied by much study skills literature, then drew me to Lisa's roundtable event, The Centrality of the Body in Learning and Teaching in July 2016⁸. I designed a poster for this occasion, visually summing up the mind/body split in terms of purely cerebral versus creative, emotional and embodied approaches to student writing: using the heart, soul and whole body to write, rather than just the intellect.

This poster celebrated the expressive, visceral and liberating aspects of the embodied creativity approach to learning championed by the East Midlands Writing PAD Centre. It also set out to visually express some of the negative feelings and physical responses associated with academic writing, and the way that the student experience can be enhanced by moving towards a 'whole body' teaching philosophy. Pat Francis, a key influence on my work, views writing from a highly physical perspective with her discussion of the word gesture, 'from the Latin *gerere gest* (meaning: to wield)'... 'Writing is the gesture of the writer's thoughts and of their very being.'⁹

Producing this poster and attending Lisa's event last July¹⁰ clarified the importance of the embodied, physical aspects of Writing PAD workshops in creating a transformative learning experience. Embodied creativity is at the heart of my practice: the affordances of this approach include a greater sense of joy in developing writing, an enhanced ability to make connections and a clearer sense of self.

Embodied Creativity: emotions and environment

An important part of these creative interventions is the deliberate choice of a relaxed, informal environment for learning: music is played in the background, art materials are set out on tables, and talking is encouraged. This can bring a sense of fun and enjoyment to learning, and help to overcome



*'It was out of my comfort zone but it was fun and creative and helped me think about my essay topic in a more structured but free manner, exploring contexts I may not have thought important.'*¹²

negative emotions: 'it is easy to overlook the physical experience of learners when you are planning for a session and yet our physical experience is entwined with our emotional experience'¹¹.

After the initial surprise and, for some, discomfort of finding themselves at a table equipped with coloured pens or collage materials, both students and staff often feel liberated by the sense of play afforded and encouraged by this environment. Some individuals may feel uncomfortable initially, but the vast majority embrace the opportunity to be freed from the restrictions of the purely textual format and discover new ideas and connections.

Alison James writes that 'a large part of student engagement entails creating moments of productive discomfort where expectations are reversed and different faculties are called into play...'¹³: adopting this personal, creative, hands-on approach can engage learners more successfully with academic writing tasks. These creative interventions, which may involve drawing, collage, LEGO, or other art and design-inspired activities within a relaxed environment, can not only address the well-documented fears and anxieties that exist around academic writing, but can actually result in positive emotions.

*'It was very interesting. It made me feel very relaxed. I really enjoyed it!'*¹⁴

*'Helped me collect my thoughts visually which stopped me stressing as much!'*¹²

*'It has made me more confident in setting out to do my essay.'*¹⁶

These feelings of enjoyment and relaxation in relation to academic writing assignments are in stark contrast to the anxiety that some aspiring academic writers often experience in silence:

*'Academic writing is a craft—a set of practices that can be learned and should be shared. Yet for generations we have wrapped academic writing in mystery and shamed those who struggle with it.'*¹⁵

Getting participants to engage with their written work in a tactile, visual and discursive way (as opposed to, say the more formal approach of a lecture followed by solo study) provides a sense of enjoyment and discovery, helping to replace some of the negative emotions with positive ones.

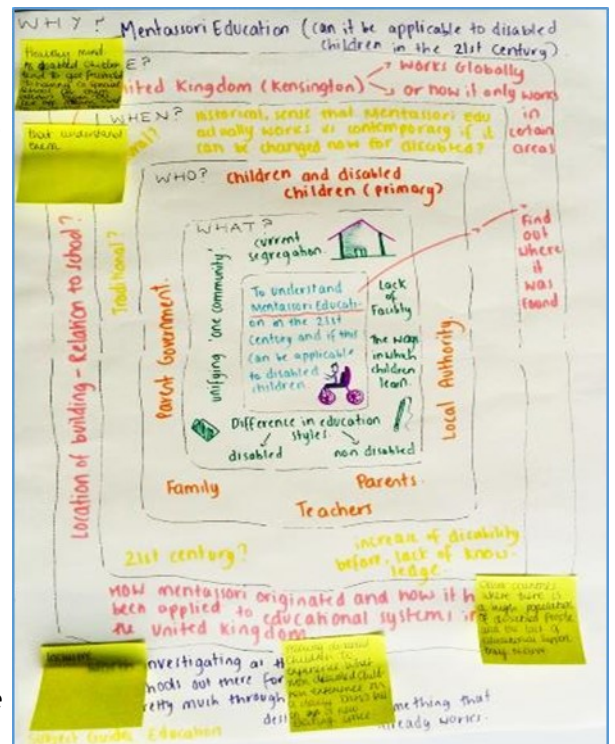
Another positive emotion associated with Writing PAD workshops is confidence: students often comment on the sense of empowerment that they feel at the end of a session. These creative interventions often take place at the beginning of an assignment, as a 'warm-up' or 'way-in' to research and writing. Getting the whole body involved, listening to music, talking to their peers, drawing, cutting, sticking: quite literally getting their hands dirty, offers a sense of self-assurance when tackling the assignment to follow.



Embodied Creativity: capturing connections

Much of what we do at East Midlands Writing PAD is about making connections: whether that is between theory and practice, the textual and the visual or of course the mind and the body. We have a Constructivist approach, and see learning as a 'vast but flexible network of ideas and feelings'¹⁷, recognising that each learner will construct their own meaning from any learning activity, aligning this with their individual prior experiences and knowledge.

This learning and teaching approach is embodied by the artefacts created during our workshops such as Reframing Research (see image), where links between existing and new knowledge as well as connections to the self are made visible. In this workshop, the topic or essay title to be investigated is placed in the centre of a large sheet of paper, and surrounded by concentric frames labelled What?, When?, Who?, Where? and Why? Students work out from the centre of the sheet, responding to prompt questions for each frame by adding text and images. Curiosity about the links between the self and the subject is encouraged during these sessions. These visible links between subject and self can be a springboard for reflection, both during the sessions and further down the academic writing road.



Embodied Creativity: rest and reflection

Reflection 'is often a process of re-organizing knowledge and emotional orientations in order to achieve further insights.'¹⁸ During workshops such as Swollage, students use a written SWOT analysis of their own abilities as a starting point, placing this in the centre of a large sheet of paper. They then develop a collage by tearing out images from the magazines supplied: participants are encouraged to not think too critically about the visuals that they select for their collage, just responding to what appeals to them on an instinctive level rather than trying

*'It was really helpful and opened up new questions I need to answer that I hadn't thought of before.'*¹²

*'Helpful session. Stimulates thinking. New ideas.'*¹²

*'From this I have learnt a lot about myself.'*¹⁴

*'Visualising writing before starting helped break down my usual barriers.'*²⁰

to rigidly match images to the contents of their SWOT. This 'switching off' from the critical, analytical mind can be very restful, and often results in surprising self-discovery once the students are asked to reflect on the meanings behind their choices of imagery.

Harriet Edward's recent Writing PAD PGR 'Draw Out' workshop at DMU¹⁹ had a similar emphasis on moving into a calmer mental space, what Harriet calls 'de-cluttering the mind', in order to encourage reflection and new perspectives. Students were taken on a visual 'journey' where Harriet gave a prompt every few minutes, which the students had to respond to by drawing different stages in their own imaginary journeys such as 'Something to eat' and 'Being lost'. One participant described this as being 'like meditation' - it allowed students who were consumed by the day to day requirements of postgraduate research to take a step back. Being fully engaged with what the body is doing can free up the mind for that contemplative, subconscious space where the mind becomes less frantic and new insights can be gained.

What I am referring to here as embodied creativity is an example of embodied cognition where academic writing is approached using techniques adapted from the creative arts. Bringing a more imaginative and visceral slant to the teaching of writing seems to not only twine together theory and practice, but to support Lisa Clughen's contention that 'The body, then, is meaningful in and of itself, and not as one part of a dualism'²¹. Embodied creativity breaks through barriers that more intellectual learning and teaching approaches cannot, dissolving fears and igniting new ideas. Working with our hands can also simultaneously free and calm the mind. All creative processes involve mess and emotion, so instead of sweeping those involved in academic writing under the carpet, let's celebrate writing with our heart and soul.

English Writing Pad Centre <https://writingpad.our.dmu.ac.uk/>

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I Teach...so how should I dress?

Emma Davenport



Before completing her studies in history of design (MA) at the Royal College of Art/V&A in London, Emma established keen interests in education (BA Hons) at Leeds Metropolitan University (BA Hons) and social anthropology of learning at Brunel University (MSc). With this multi-disciplinary background, Emma's research focuses on general design history/theory, museology, dress studies and fashion theory. Her scholarship is supported by a range of teaching, writing and consulting roles, including positions at London Metropolitan University and University of East London, contributions to a Channel 4 web based game, Bloomsbury's online Fashion Photography Archive and Worn Through, a leading academic blog focused on fashion, dress and textile studies.

Introduction

From a phenomenological perspective, clothes are never merely representational or functional but complex locales for a range of intentions, affiliations, ideals, subversions and practices. In this respect clothes are an extension of our bodies and an integral part of our identity in whatever professional role we are performing. We think, occupationally, through our body and, because it is usually always dressed in most professional contexts, we are therefore required to think and present our thoughts through clothed actions. The practice of dressing is one that involves both our bodies and minds in such intimate ways that it is difficult to perceive either as separate entities. Phenomenologists thought that the mind/body dualism resulted in a reduced understanding of human experience. It was not immediate enough to fully engage with knowledge. These ideas enable us to approach clothes and dress as embodied experiences rather than just rational objects that serve a specific purpose.

The ways in which bodies are clothed are frequently the results of imagined and anticipated audiences that will be encountered throughout the duration of an occupational day. If clothing allows us to imagine future identities, this must be an integral technique when it comes to developing and maintaining professional selves^{1,2}. Clothing becomes both a literal and metaphorical thread between present and future everyday identities. But, also, it becomes a creative technique by which we, in our occupational roles, can embody our professional philosophies and practices. With that in mind, this article explores the role of dress in the context of higher education and the way academics present their teaching practice through their clothed bodies. The discussion will focus mainly on the British higher education experience because this is where I am based, however, I am very interested in applying these ideas to other locales in the future.

A personal story

When I began my career in education twenty years ago, as an undergraduate student, I was required to complete 'teaching blocks' whereby I was placed in a local primary school to be given structured opportunities to practise 'teaching', as taught by my university tutors. It was also anticipated that my understanding of 'learning' would become less academic and more practical, providing me with necessary experience required to fulfil the professional elements of 'teaching' as an occupation.

Alongside all my concerns and anxieties about putting pedagogy into practice was the fact that I would be presenting myself to an unknown audience of around twenty-five people, all of whom would be encouraged to focus on every aspect of my body from my appearance to my voice, from my actions to my intentions, from my knowledge to my experience. Knowing I was to be under such scrutiny and not knowing how that would bear out once I was there left me feeling quite ill at ease.

The only thing I could have some control over was what I would be wearing on the day and so I set myself the task of creating a sartorial identity that would prepare me for the unknown. I began to imagine what kind of 'teacher' I would want to be, drawing inspiration from a range of sources including personal memories of teachers I had had, fictional teachers depicted on screen whom had inspired my interest in education as well as friends of my parents whose dress I took a particular liking to. Yet, these possibilities were also influenced by bodily concerns such as my particular physique, colours I liked, textures I preferred touching my skin, fashionable silhouettes of the time and what I would be doing while teaching. For example, would I be sitting down with children on a chair or a carpet? How often would I be in the playground facilitating games and would it be cold or warm, depending upon the time of year? Furthermore, my notion of what I might look like as a teacher would also be defined by what I could afford, which shops I had access to and how much time was available to create my ideal (clothed) 'teacher'.



As Entwistle ^{2:11} suggests, dress and identity always operate on a situated body, located in time and space, where social, historical and cultural relations are ascribed to both getting dressed and being dressed. We consider both our persona and our physicality as individuals in relation to clothes in the present and experiences in the future. This complex triangulation creates what Entwistle describes as a 'sartorial consciousness'^{2:9} whereby what we decide to wear are also techniques used to create a sense of occupational 'habitus' and capture necessary 'cultural capital' in order to appropriately fulfil our professional roles. Another way of thinking about this¹ is that dress is an occupation in itself rather than just a discrete completed act taking place once a day. This could be described as 'doing dress' thus emphasising agency when it comes to 'the actions that individuals take to manage identities, [and how] these actions contribute to subtle shifts and changes that may occur in the social, cultural world.'^{1:101}

Dressing for the academic world

Yet, throughout my teaching career in higher education, the topic of clothing and its role when it comes to my occupational identity has rarely been discussed or reflected upon further. It has often felt that the role of the educator at university is mainly concerned with activities of the mind and their relationship with their body is always secondary, if not completely ignored. Teachers favour the Cartesian split when it comes to presenting their ideas and knowledge to students, creating a pedagogical hierarchy that favours intellectual activities over bodily practices. As a result, the clothed academic body is made to be invisible, both to itself and others, whether they are colleagues or students.

So why is the clothed academic body often invisible, unseen, overlooked? This seems to be the most critical question and perhaps a timely one given that with the advent of the TEF, the role of the academic as a teacher will become more visible and arguably more scrutinized from a range of political angles. As previous professional systems and mechanisms are pulled apart, reorganized and re-represented, assumptions about the role of education in society are revealed and revised. Agendas regarding what a higher education institution should provide are contradictory - while there is emphasis on widening participation, there is less and less money to support this. This raises interesting questions about the role of appearance, in particular that of those who identify with academia, with regards to their scholarly production and pedagogical success.



In her article "Frumpy or Chic? Tweed or Kente? Sometimes Clothes Make the Professor" Alison Schneider³ suggests that there are two opposing perceptions regarding the role of dress as it relates to the professional status of those teaching in academia. Firstly, there are those who view their appearance as an unnecessary distraction from scholarly work as well as an inappropriate distraction for students when teaching. Schneider argues that this perception is more widespread, becoming the dominant discourse concerning the professional dress of academia. It explains why academics become apologetic or defensive when discussing their appearance in relation to their work⁴ As a result, this materialises as a kind of anti-fashion stance, where dress is seen as a problem, associated with the capitalist wastefulness and popular conspicuousness of the business of fashion. It is this perception, subsequently, that has led to academia being dismissed as sartorially insignificant by others interested in dress and fashion studies.

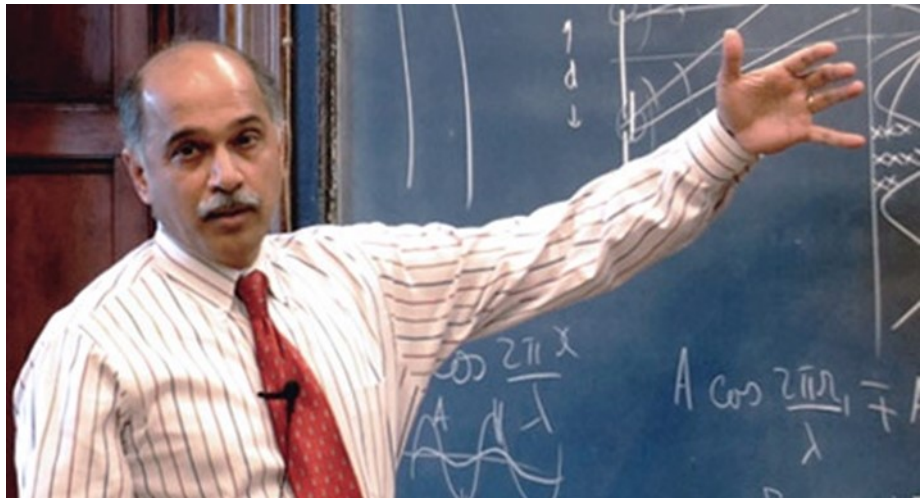


Yet, as Entwistle observes, anti-fashion is by its very nature still *of and related to* the fashion system. But it's more than that. Clothing has an inherent subjective quality as clothes constitute an interface between ourselves and others, making them embody multiple meanings, open-ended explanations and complex social, cultural and political lives. They are so integral to our social identities it is almost impossible to be indifferent to their presence, which means that even in those contexts where dress is considered unimportant, Entwistle's 'sartorial consciousness' is still at work. Hooks⁵ reminds us that a refusal to acknowledge dress is often a way to convey, maintain, social and cultural power in a given context. When Hooks was a student, some of her professors would wear exactly the same clothes suggesting that their teaching was 'neutral, objective facts'. By ignoring their own presence through dress, Hooks argues, they also ignored that of their students and so denied any attempt to literally challenge or debate their body of understanding. In return, the students were unable to reflect upon their own embodied experience and, in the case of hooks, not until she started teaching herself.

For me, it is unsurprising that Hooks became aware of her professors' clothing once she began teaching given that much of its praxis involves the presence of others and is therefore performative in nature. It is this that underlines the other perception identified by Schneider when it comes to the role of dress in the context of

academia. They are those who believe that clothing and the practice of dressing are critical to the success of their pedagogical approaches and scholarly credibility. This discourse is, no doubt, less influential amongst those who teach in higher education and yet it is certainly there. I can recall two esteemed colleagues who both made a habit of wearing certain items when lecturing on gender and design in an effort to engage students beyond the words and images presented on their slides.

Entwistle² suggests that dress is performative when it comes to assembling our professional identity because in the act of getting dressed, we attempt to project ourselves into an imagined future where we will present our bodies to a range of audiences also understood through their own clothed bodies. Those who see themselves as academics/scholars/teachers in universities are always conscious of the 'other' as they carry around the mirror of a student and staff body, which is also informed by social characteristics such as gender, class, sexuality and ethnicity⁶



A university professor will imagine the different roles they will take on in any one day and then dress in relation to how they understand those roles in relation to their own values. They might choose to dress more like their students because they do not desire to be associated with a managerial or authoritarian role⁷. Within academia, we think about appearance all the time, whether interviewing potential colleagues, writing references for doctoral candidates, giving a lecture to students or presenting research at other institutions³. Furthermore, our disciplinary interests influence our choice of clothes so whether we are a historian, engineer or performer, we constantly present these specialisms through our dress. On a very basic level, this has been described as 'enclothed cognition', however I think this barely touches on the practice of 'doing dress'. This thinking is invariably complex and, at times, 'troubling'⁹ because, as professional teachers, we want to both fit in and stand out. I believe that academia's relationship with dress is one of constant ambivalence, however, I would also argue that this is not only necessary but also critical in the context of innovative higher education.

The practice of dressing, whether it be considered fashionable or not, is a potentially highly imaginative and creative process whereby what we wear becomes a liberating experience for both ourselves and others. Rather than perceive of clothes as proponents of judgemental social systems, why not reimagine them as fantastical, magical even, where their value lies in making visible the kind of future world I want to find myself in? I agree with Hooks, who suggests that we need to recognise our bodies when teaching because we are all 'subjects in history'^{5:139}. To claim otherwise is disingenuous and because our bodies are always dressed in the classroom, we ignore clothes at our own creative, pedagogical peril.



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Body language in teacher-student interactions

Education researchers at the University of Graz studied body language in the classroom. An encouraging smile, a sceptical frown, a negating shake of the head: body language is very diverse and effective. With the discovery of mirror neurons, brain researchers corroborated its impact by demonstrating how these nerve cells translate the expressions of another person, such as a smile, into one's own experience.

In a classroom, there is constant interaction between teachers and students. Elements such as gestures, facial or corporal expressions that do not, as a rule, attract much attention are of great



importance in the process. Education scientists from the University of Graz investigated this aspect for the first time in a project supported by the Austrian Science Fund FWF. Bernd Hackl (left), Head of the Institute for Teacher Education, and his team explored the significance of teachers' nonverbal communication, or, more precisely, corporal expressions and physical communication, during classroom interaction. Videos of classes recorded over a period of three years were subsequently interpreted and presented as case studies. "The physical presence of the teachers in the classroom is of enormous importance", says Bernd



Hackl summing up the results of his investigations. "It is teachers' body language which gives them credibility and determines whether learning processes will be fostered, or not, as the case may be", Hackl adds. In a nutshell, successful teaching hinges on the physical presence of the teachers and the learning context they create in the classroom.

A convincing performance on the classroom stage

Principal investigator Hackl compares teaching to a theatre performance. Even though different in several aspects, both the classroom and the stage revolve around a credible presentation of content, he explains. Just like actors, teachers need to fulfil their tasks by being physically present and interacting and by winning over an audience that is hard to predict - all of this within a limited time frame. A challenge which requires teachers to have conviction, a professional understanding of their role and an appreciative attitude towards their students. In order to capture the whole diversity of corporal communications, Hackl and his research team started by identifying four teaching tasks on the basis of video analyses: providing a relaxed setting for learning, integrating the learners in a collaborative school environment, challenging pre-existing knowledge and skills, and, finally, being able to demonstrate such knowledge and skills to the students and thereby make the mastering of them easier.

Contradictions

The education scientist explains that these tasks are based on an ideal standard of successful teaching. In everyday practice they are often hard to reconcile with the formal and social requirements the school system has to meet. "Exposure to such contradictory aspects produces a variety of reactions from the teachers and, in the worst case, stagnation", Hackl notes. In concrete terms, the scholars from Graz identified several typical teaching strategies in this basic research project. Teachers alternate between these strategies in order to fulfil requirements that are impossible to meet simultaneously. This will also become manifest in physical expressions, when teachers, for instance, play down certain things in order to balance the situation. "In such cases, the teachers' words and their body language will drift apart, and the students notice that", Hackl emphasises. As a consequence, both sides are annoyed or frustrated and end up creating distance.

Behavioural patterns

If teachers fulfil the four functions of teaching listed above, they support adolescents in developing autonomy. This is what the researchers call pedagogical engagement, meaning teachers are authentic, convincing and motivated and seek to create an open learning environment - in other words, successful classroom teaching. "This, however, is the exception", Hackl notes when reporting the team's observations. "Today we increasingly find that teachers are inclined to choose opportunistic, administrative or economic strategies." This means that they avoid confrontation, use grades to reward or punish in a kind of barter trade system or stage classroom teaching increasingly in the form of edutainment under the motto: "Don't hurt me, and I won't hurt you". In these cases, precise analysis of the videos often reveals a lack of authenticity in the teachers' corporal communications. Although the students will not be aware of this fact, let alone be able to verbalise it, they can nevertheless sense it and thus withdraw from learning activities in what seems to be a demotivated manner.

Source: Austrian Science Fund (FWF) September 5, 2016

<https://phys.org/news/2016-09-role-body-language-teacher-student-interactions.html>

Five Imaginative Practices that Engage the Body in Learning

Gillian Judson

Gillian Judson is one of the Directors of the Imaginative Education Research Group and a Lecturer in the Faculty of Education at Simon Fraser University Canada. Her published work and teaching show how we can routinely engage students' imaginations (pre-K through graduate school) to ensure effective learning across the curriculum. She is particularly interested in sustainability and how an imaginative and ecologically sensitive approach to education can lead to a sophisticated ecological consciousness. Her recent books include *Engaging Imagination in Ecological Education: Practical Strategies For Teaching* (UBC Press, 2015) and *Imagination and the Engaged Learner: Cognitive Tools for the Classroom* (Teachers' College Press, 2015).



Learners have bodies

Obvious? Yes. But few teachers seem to acknowledge this in their teaching. The fact we have bodies has huge educational implications. It means that wherever we are, we have a set of tools that helps us to learn new things and to make sense of our experiences. **Kieran Egan's** theory of **Imaginative Education** reminds us of this: our bodies are the primary means through which we make meaning in the world around us. Unfortunately, this fact—that all learners have bodies—is far too often forgotten in education which seems only to be concerned with heads!

After elementary school, it is unusual to see educators employing teaching and learning practices that engage the body. When I was a secondary school teacher I rarely saw embodied practices in any classes other than Fine Arts and PE. At that time, I didn't consider how to employ the body in teaching French grammar or History. I heard nothing about the body's role in learning when I did my teacher training. Now, in the context of the university where I teach in a Faculty of Education, I rarely hear my colleagues discussing how to deepen meaning in their graduate/undergraduate courses in ways that engage the body. This is a huge problem across much of our education system.

One of the dangerous misconceptions we continue to hold in education is the sense of the "rational mind" as somehow divorced from the sensing and feeling body. Many educators do not appreciate or understand the ways in which the body's tools can deepen and enrich all learning.

Have you heard of the "Dance Your PhD" contest? This contest challenges PhD candidates to express their thesis findings and conclusions through their bodies. Here we have examples of the most academic and theoretical concepts being conveyed through the body. For example, in the Biology category, Florence Razoux dances the PhD thesis, "Functional MRI to assess genetic and environmental influences on serotonergic neurotransmission in mice." In the Physics category Kiel Howe dances the PhD thesis, "Extending the Supersymmetric Little Hierarchy." The winner of the 2015 contest in the Social Sciences category is Florence Metz who dances the PhD thesis, "Do Policy Networks Matter to Explain Policy Design?" Enjoy:



Dance Your PhD 2015 - Florence Metz

<https://www.youtube.com/watch?v=iRUDC1PiPAo>

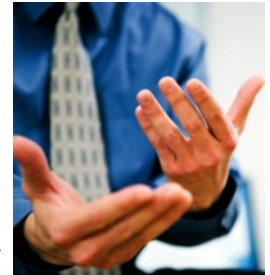
My point is that these academic topics are far from “elementary”—and yet through will, imagination and practice the body can be engaged in expressing and representing these incredibly complex ideas. Furthermore, such acts of embodiment are creative in the sense of enabling this form of physical expression to be brought into existence and engage an audience intellectually and emotionally. Clearly, the body’s role in learning is not just “for kids.”

Note: My interest in the body’s role in all learning has also led me to the work of Susan Gerofsky from the University of British Columbia who looks at embodied ways to learn Math¹.

Of course, dancing isn’t the only way to engage the body’s tools for learning and performing. I have never danced for my students nor do I insist that my students dance. But I do ask my students (graduate studies) to convey complex and abstract ideas from our seminars through postures or gestures. And I do teach in ways that reveal patterns. And I do employ the body’s senses. Read on to discover how to engage the body in your teaching.

Here are five practices that engage the body’s learning tools

#1 EMPLOY GESTURE Human beings are gesturing animals. We use our bodies to show intention and express meaning. We point at things we notice (good and bad). We have body language to express emotions. Use this learning tool in multiple ways through “charades” type games. (But no “sounds like”!) Challenge your students to use the body to express an idea or concept, character, word, event, or process. Students can be asked to justify and explain their movements and how they reflect meaning of a topic/concept/idea.



#2 SEEK & APPRECIATE PATTERNS Human beings are skilled at noticing and making sense of patterns of all kinds. Indeed, we do so all the time; if we didn’t we wouldn’t be able to do



things like speak a common language, do math, or read a map. We couldn’t get by day to day. Sure, you are probably thinking that the dancers, painters, poets, and musicians of the world are exceptionally good at identifying, evoking, and conveying emotion through patterns of movement, rhyme and rhythm. You need not be a virtuoso musician, artist or dancer to engage these tools however. All human beings do so all the time. So, this means that you can encourage your students to seek all kinds of patterns in topics (conceptual, procedural, visual etc.) What cycles are seen in the topic? What is repeated? Why? How? When? Where?

We also identify and appreciate the patterns of sound around us; we enjoy music. We are musical animals. Ideas can be conveyed through sound. How? You can ask students: If this concept or topic was a drum beat or a stomping pattern, what would it sound like? Beyond the drum, how might pitch, tone or

tempo—how might music—reveal and enable exploration of the topic? Students might create sounds that evoke some pattern of meaning or idea.

#3 ENGAGE THE SENSES We are sensory animals and our senses frequently evoke emotional responses. How can we feel, touch, taste, smell, or hear the topic at hand? How would an abstract concept feel, touch, taste, smell, look or sound? What’s important to note from the sensory experience is the feeling tied up with the knowledge gained.



#4 PLAY Some topics get a lot of airtime in education. The value of play for children’s well-being and intellectual development is one such topic. There is ample research to back up this claim ^{1,2} But if I change one word—“For *adults*, play is learning”—then the situations changes. We tend to forget that all learners need to play. “Play”— in the many different forms it takes—*is* learning for humans of *all* ages. Play drives the growth of the adult brain as well⁴. This post provides a set of strategies for employing play and playfulness in your teaching to support learning with examples from colleagues in Engineering, Chemistry, and Teacher Education.

“For children, play is learning” (Keynote, Children & Nature Network, April 19, 2017)



#5 TAP INTO YOUR STUDENTS’ EMOTIONS Perhaps the most important thing to remember for learning is that we are emotional animals. And this is how all the tips I’ve listed are connected. The “strategies” described here are all **“cognitive tools”** that engage our emotions.

The **Imaginative Education** approach to teaching centralizes emotional engagement for learners of all ages by employing cognitive tools. Using these learning tools with the knowledge or skills in your curricula makes that knowledge become more meaningful and memorable. ([Here](#) is a podcast that introduces Imaginative Education.) Our aim as imaginative educators is to *inspire*, to leave our students feeling emotionally connected to topics. Cognitive tools allow us to do that—the tools of the body described here are part of your teaching toolkit.



Final Comments

It’s worth repeating: all learners have bodies. We have a body-based kind of understanding that we can engage and develop in all learning. We are *perfinkers*—we have embodied minds so “learning” involves perceiving, feeling and thinking at the same time. (What is a **PERFINKER?**)

Resources

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Learn more about imagination-focused teaching in your Higher Education context from the Tools of Imagination series: **TIPS FOR IMAGINATIVE TEACHERS**

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gestures <http://blog.deiricmccann.com/2011/07/gestures-body-language-speaks-louder-words/emergence> <https://specialneedscat.wordpress.com/tag/daily-creative-practice/engaging-the-senses> <https://synesthesia.com/blog/index.php/types-of-synesthesia/play> <http://www.imnepal.com/holi-festival-reasons-why-celebration/> tap into your student emotions <http://cutting-edgeeducation.blogspot.co.uk/2013/04/5-ways-to-tap-into-your-students.html>

The Swimming Pool Experience: A useful framework to encouraging students to become more aware of how their thoughts, feelings and bodies are connected

Maria Kefalogianni



Maria is a Lecturer in Counselling & Psychotherapy at the University of Salford. She teaches across MSc and BSc programmes and is a module leader of Bereavement & Loss. Her current research interests are on autoethnographic methods of research enquiry and creativity in HE. Maria also holds a small private practice where she offers therapy and supervision for counsellors but also other professionals (ie. In social work, mental health etc). Amidst all this she is also a mother to a toddler, a wife, dog owner and a curious not grown up child! As if this is not enough she is a member of the Lifewide Education & Creative Academic Team -and what a pleasure that is to be so! J

Who am I ?

We are born to question - that is the nature of being human. Here are some of the questions I have been asking myself.

How do I see the relationship between my mind and body?

Does that affect the way I teach my students?

How much does my perception of that relationship affect how I approach or choose to integrate the role of my body in my teaching encounters?

How much is the use of breath and mindful attention facilitating learning in HE?

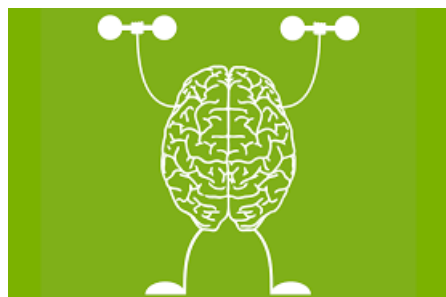
In this article I will describe a recent experience of leading on an experiential workshop called "the swimming pool", for second year students who are studying to become a qualified counsellor/psychotherapist. Before describing the workshop I will share some of the influences on my own pedagogical thinking on the relationship between mind and body and share my own journey of becoming more aware. As an embodied facilitator and educator, using my own body and mind to facilitate this experiential exercise, I offer some reflections on my workshop experience, informed by the feedback I received from students after I had written it.

Using the metaphor of swimming in a pool, students were invited to engage with different skills: imagination, body/ felt senses, cognition, processing/ reflecting skills, noticing/ discerning; using mindful attention and the breath as the anchor during their experience with the aim of gaining new awareness on themselves & their stage of development in their training

My relationship with my body

It is no accident that I so willingly accepted the Commissioning Editor's invitation to write about the connection of mind and body in this issue. I have always had a phantom relationship to my body. As a teenager, I struggled to feel at ease with my body image despite using it to get me anywhere and being very active in sports! I grew up without paying attention to its signs and messages: a mirror/reflecting the culture of my Greek/Cretan society which conditions women to not embrace their bodies let alone use them as means for meaning and learning. Growing up and deepening in my self-awareness, I began to feel more at ease in my own skin. In my early twenties I became more consciously interested in my own development as a person and immersed myself in mindfulness. I became increasingly interested in breath work and aspects of our mind and consciousness.

I always felt and thought that my relationship to my body would change after I give birth and this has come to pass. It's nearly two years since I became a mother and my relationship to my body has changed significantly. In giving birth to my son I felt a profound connection between my mind and body as one function leading to the ultimate creation: his birth in our own home. Since then, I have brought more conscious attention; presence and respect to my own body and have learnt to trust its messages. My relationship with my body has and is changing from one of "having a body " to being in my body¹.



Now, as a practising higher education teacher, I have begun to integrate these areas of personal interest, self-awareness and ways of being, into my own teaching.

Image source: <http://www.alustforlife.com/>

Changing perceptions of mind - body relationships

I share the Hippocratic view that our body is a microcosm of nature and I am leaning more and more towards the belief that mind and body are inextricably linked in a way that goes beyond words. I have a holistic view of mind and body relationship, as I feel that the one agent feeds the other information all the time in an ever unfolding process of meaning making. In psychotherapy we are interested to find and offer the right environment for individuals to achieve psychological integration (mind body and spiritual integration is the ideal goal for me!). Essentially, psychotherapy offers a space where we bridge memories and experience, in a process of meaning making and narrative expression. Talking therapies have dominated in the last 60 years and one could argue that often Reich, a student of Freud, first brought the somatic therapy in light and in his view that our bodies are like stores of energies which are blocked out of conscious awareness due to traumatic experiences² psychotherapy has neglected the use of body. Despite this we know that somatic and body therapies existed for millennia and have drawn wisdom from various cultures (Yoga, Thai Chi, mindfulness practice by Buddha 2000 years ago to name a few). The western dualistic approach to mind and body seems to be changing and there is a progressive shift of attention to a more holistic/integrated mind/body relationship which can be seen in various fields: from Damasio's neurobiology of consciousness³, to phenomenologists⁴, to an integration between traditional body therapies and psychotherapy⁵.

Psychotherapy is also contributing to more holistic/integrated concepts of mind and body relationship. In particular there have been development of models placing the body as the integral agent towards healing and integration e.g.: body oriented psychotherapy ;and techniques particularly developed to deal with trauma e.g. body mapping (in Crawford, 2010). Specialists such as Vessel Van de Kolk pioneering research on how the body is involved in trauma and how it can be used to re-wire memories which are traumatic⁶.

Concrete evidence between our bodies (brains) and emotions can be found in neuroscience with Ledoux's work correlating fear and distressing feelings with activity in the amygdala and our limbic system⁷ The expansion of mindfulness based practice and the use of breath as a means to reduce anxiety is also well documented^{7,8}

And what about Higher Education? If the above modalities/orientations argue for a more integrated person, could higher education benefit from adopting a more holistic and integrated concept of learning and the way body and mind are connected in learning processes?

Our holistic approach to counselling and psychotherapy training

In teaching, I aspire and tend to embrace these holistic ways of thinking about a whole person in which mind and body are intimately connected "and the notion of "being" as opposed to simply "knowing", which aligns perfectly with Carl Rogers' core concept of presence in which our students are being trained.⁹ I am sure a lot if not all of my colleagues would agree with that. A lot of the teaching involved, requires ongoing reflection and introspection on the self, we embrace mindfulness and its run as a separate module by a colleague.

In my teaching I have begun to focus on and pay greater attention to the things that make up our sense of self. This includes memories, images, experiences, body sensations and use of conscious breathing. I have mainly used this approach to teaching and embraced these ways of thinking and states of being through small groups and one to one supervision sessions/tutorials with students.

“ Mindfulness means paying attention in a particular way; On purpose, in the present moment, and non-judgmentally. ”

Jon Kabat-Zinn

But the learning experience I describe below took place in a sports hall with 105 Level 5 students. I had the support of wonderful colleagues who helped with their presence in their way to contain the size of this group and by locating themselves at different places across the room to ensure students felt safe and had a nearby point of contact if they needed it.

The aim of the activity was to identify the stage they had reached in their personal development through -

- their own physical movements in the space, in silence and mindful walking
- focusing attention to their body sensations, thoughts, feelings, and the breath
- involvement in pair work to compare and share their reflections to form meaning
- the sharing of personal perceptions through a whole group debrief

Personal pedagogy

My pedagogical thinking has been grown over many years and been influenced by the experiences and theorists I have outlined above.

For this 'swimming pool' workshop I invited students to imagine the room as a swimming pool. They were to walk around the room, slowly, mindfully and in silence, paying attention to their breathing, immersing themselves in the metaphorical pool.

Students were encouraged to let their imaginations create and bring the imagery, sensations and feelings of the swimming pool into their minds. Some elaborations for what a pool experience might include were suggested - showers, shallow end, deep end, and diving board, whilst also paying attention to their body sensations/felt sense in the different contexts and situations. During the workshop I asked questions to encourage participants to reflect on their personal development and create opportunities for them to receive feedback from their peers, and tutor. For example, "Find a location/place in the pool that represents where you are now in terms of your personal development"; "notice if you have any thoughts/sensations while standing in that place, any body sensations that stand out for you.." and "Find a place that reflects where you want to be in the future". There was sufficient time allowed until students chose a position which "felt right".

A number of themes emerged from the exercise such as: assumptions about other people's positions/ comparisons/ personal significance of space, ownership of space/feelings acceptance of "where I am at". The process raised awareness of how they "felt sense" in a particular position and depending on what interpretations they drew/what conclusions they made, it enabled and opened the opportunity to set goals for the future... to be critical over their chosen position. In this way they were able to engage with higher levels of critical functioning in Bloom's taxonomy. This links with Rogers' theory on aiming to help clients bridge a gap between their external locus of evaluation and come closer to their congruent authentic self⁹. For some students this meant they accepted their position in the "shallow end" as a safer place and as a way of looking after themselves (breaking a habitual pattern of throwing self in deep end or pushing self beyond limits and ultimately sacrificing their self care). Others felt they could move to the "deeper end" of their imagined pool, reflecting their in the moment sense of confidence. This was a mirror of their outside life, and the idea is that once they connect with their agency and feel empowered they can transfer that to other aspects of their student journey and life.

For some students this exercise afforded them an opportunity to feel (on and through their bodies) the impact of their choices and re-evaluate themselves. The aim of the exercise was not to only increase body awareness, but rather awareness of the body being a key mechanism through which meaning making processes are facilitated and supported. In particular, attention to any bodily senses were encouraged by engaging in other functions such as: interpretation, memories, beliefs, and affect/emotions. In that sense, I see body awareness as encompassing every aspect of awareness: physical, the mind, the emotions, the breath. Our bodies are not merely objects to get us to places...This exercise has shown that our perception is not limited to cognition¹¹ and this is echoed in some of the students' stories.

Language and cognition have historically been privileged over emotion and somatic experiencing.³ Higher education particularly values rational and conscious and deliberate acts and functions relying heavily on critical analysis of an argument. Interestingly Claxton argues that even the noise around emotional intelligence is *about emotion as opposed to* trusting the knowledge and intelligence that the emotion holds¹⁴ Our body is clearly a source of wisdom¹⁵ and this swimming pool exercise was concerned with "placing the mind in the body"¹⁶ and I would add, the vice versa is also true; placing the body in the mind. This is evident in the student's story who placed emphasis on intuition ...and their gut leading them to choose where they needed to be.

My personal pedagogy that I aspire to embody when I contemplate and act to help other people learn is drawing on my core knowledge around Person Centred theory, my belief that students have already within themselves the ability to flourish and my values around deep transformative learning coming from the inside than outside. I draw predominantly on experiential forms of learning and it has a strong relational and dialogical nature.

My personal pedagogy, that which I embody, is the result of an amalgamation of various moments of growth in my lifetime; gained through my interaction with significant /people (students, clients other educators and theorists) / spaces/ resources, experiences which I have symbolised to the best of my understanding as well as the learning I have gained through these experiences and in applying this to my own circumstances (including teaching).¹²



During the swimming pool workshop students were invited to notice and observe their sensory and visceral senses, what we call in psychotherapy their “felt sense”^{15,17}. Focusing fosters emotional regulation and some of our students echoed that (see Laura’s story). This combined with the use of breath in calming their anxiety; afforded them a window for deeper meaning in their process. We spent so much time in our lives addressing and being pre occupied with what goes *out there..out side of ourselves*. This begs the question whether we automatically perhaps assume that not much is happening *in here* ...and I believe the opposite is true. As William James says “*we don’t run from bear because we are afraid, we run from bear because we experience palpitation, heat, hollowness of stomach...*” (body sensations) and only afterwards we form our conclusion and name our experience as “fear” (a socially constructed concept). I provide some quotes below to further support my belief in integrating and embracing our whole being in teaching and learning.

“This experience of discovering within oneself present attitudes and emotions which have been viscerally and physiologically experienced, but which have never been recognized in consciousness, constitutes one of the deepest and most significant phenomena of therapy”^{11:76}

This exercise of reflecting has raised for me again the concept of perception and the power of our attention...I agree with Egar’s view¹⁸ that perception is self-perception and that we react to our embodied appraisal of that to which we attend far more than to that to which we attend “as such”...This concept of embodied perception (as part of an inner curriculum as Egar calls it) is determining factor in the ways we act and interpret the world around us. If we feel that such a concept has a place and value in HE, then a whole reconstruction of education is needed to position the mind at the centre of the curriculum and pedagogy would need to embrace practices which nurture this and shift the attention to here and now awareness of mind and body.¹⁸ This will be challenging as it will challenge taken for granted assumptions, our views about what knowledge is, what is meaning and what is worth attending. However, in my opinion, it is a worthwhile journey.

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Image credits

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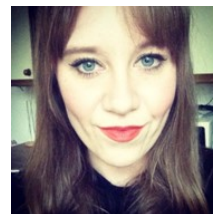
Acknowledgements

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Sink OR Swim- Laura's Story

Laura is a second year student studying Counselling and Psychotherapy at the University of Salford



I sat and wondered where this was going. “Breathe deeply, focus on your breath, feel the earth support you, feel your feet - grounded”. What was this about? Little did I know that what I was about to experience would be a major light bulb moment and impact my development in huge ways.

“Imagine the room is a swimming pool”. I was advised which end of the room represented the deep end of the pool, and which end of the room represented the shallow end. Without thought, without hesitation - I walked straight over to the deep end, and stood there in anticipation of what was going to be asked of me next.

“Reflect on why you have chosen that area of the pool”. Wait! I’m in the deep end, why? So you can imagine, I am stood in a large room with about 100 others. Some people are in big groups, others in small. And I am alone. I am confused. Why had I chosen this end? WOW! It hit me. It hit me in the face, like a wet kipper struggling for air on land. What made this moment so intense was how quickly thoughts and feelings passed through my whole being, as though electric. It was as though this experience had awakened a dormant part of me that had the capacity to truly feel without fear, with acceptance.

I was in the deep end. Only for me it was not a pool, it was an ocean. I was isolated, surrounded by sharks. I was treading water, but I had cramp. I couldn’t keep my head above water, it took my breath away. I was drowning, but I wasn’t going without a fight. This was me in the moment I was reflecting about why I was in that deep end. This had also been me for a long while. These feelings and this exercise, represented the anxiety I had been experiencing, and the stresses and pressures I had been facing.

I had instinctively gone to that deep end of the pool. My thoughts did not take me there. My body did not take me there. My gut took me there. But what does that mean? I thought my instincts were just feelings, but I think it goes deeper than that. For me, it was my mind and body working as one. My being was on a different level of existence in my world. And this significantly enhanced my process, my realisations, and my reality. Thinking back, the voice of the facilitator, the mindful experience, the safety in the process - it made me emotional. I wanted to cry. It was as though my mind and body, now one - were being held in a moment of complete security. A truly beautiful moment for me.

Has anything changed in me though? Do I feel the same? Are my perspectives the same as they were before this experience? I feel that before this, I was looking through a dirty window. Although, it seems as though now the window cleaners have been I get a sense of things more clearly. I am more open to my core feelings, and the feelings of others. I feel I am more connected to myself, and the world around me. My reflective process has deepened, and I allow myself to express this in more creative and meaningful ways.

Thinking With The Body - Matthew's Story

Matthew is a second year student studying Counselling and Psychotherapy at the University of Salford

“Imagine the room is a swimming pool and position yourself where you feel you are in your development”.

I put myself exactly in the middle of the shallow end - where the white ball would go on a pool table. It felt right. The facilitator asked us questions to flesh out the meaning of where we’d put ourselves in relation to the deep end, and I suppose to each other. It turns out that we all had our own unique understanding of this model. Some identified the deep end with feeling out of their depth, rather than mastery, which is what I’d assumed. For me the deep end symbolised the end of my journey. So I chose my position because I’ll always be at the beginning. There’s no end. There’s no final destination. You never get there. It just continually recedes. It moves with you. The facilitator asked us to move to where we would like to be in the future. I stayed where I was. Again, it wasn’t really a calculated decision as much as a feeling. It’s only afterwards, when you do a cognitive analysis that you realise the gut feeling is smart. I can’t go back and I can’t go forward. I can only get better at being where I am.

Maybe the physicality of this exercise made it different? Feelings are, after all, physical. Perhaps ‘doing’ activate different neural pathways than thinking? For me, getting up out of a chair and moving the body is great for dissipating anxiety but also makes concrete a process which would otherwise remain abstract - and perhaps a bit limited for it. Maybe engagement with reality requires the body. Real action in real space. Children learn through play, acting out their daydreams rather than just dreaming them. There was something exciting about mapping out a metaphor in the real world, which could symbolise my career development, my life in general or my psych, It reminded me of the temple in Luxor in which every room corresponds to a part of the body. Initiates could enter, for example, the heart chamber, when they wanted to rearrange something or promote a healing. This exercise has increased my confidence in going with what feels right. Although I might not know exactly why a choice is right when I make it, something in me does, and I can trust it.

Natasha's Story - Diving into the Imaginary Swimming Pool...



Natasha is a second year student studying Counselling and Psychotherapy at the University of Salford

The swimming pool exercise encouraged my mind to engage with my body. Physically exploring and mentally imagining the pool, I discovered a fitting space in which I felt emotionally at ease. Engaging my eyes by keeping them closed enhanced the experience. Standing on the edge of the pool did not scare me, but instead allowed me to experience an excited sense of anxiety, like butterflies fluttering in my stomach, uncertain of but eager to explore the depths below. My adventurous nature mixed with the golden glow I imagined across the surface created a warm and welcoming feeling to the water. As the facilitator invited us to take each mindful breath, I felt my body prepare itself to hold the breath, move forward and dive in.

When invited I closed my eyes, explored the feelings surrounding the water, and settled standing on the edge of the deep end, gazing into the tranquil abyss below.

The water appeared warm and welcoming, glittering like the reflection of the sunset over the still evening sea.

I connected the sensation of my feet confidently grounded on the floor, with a feeling of anticipation in my mind. Led by the voice, I inhaled the exhilaration, and exhaled the doubts of the mysterious depth.

I was ready to dive in.

Reflecting on my feelings using this imaginative exercise offered a valuable insight of where I am in terms of my learning process in a way that I would not have gained otherwise. Observing where I placed myself in comparison to other students gave me a new awareness of the independence I have built through my journey of becoming a counsellor. Physically locating my lone body in the space I chose, with an awareness of others around me, I felt a sense of reassurance recognising them as mirrors to my own development.



Currently at the end of the second year of my degree with two challenging placements just around the corner, I believe my physical position looking over the entirety of the pool from the deep end is a reflection of how far I feel I have come in terms of personal and professional development. I interpret being on the edge of the deep end ready to dive into the unknown as the anticipation and enthusiasm I have about seeing my first clients. The confidence experienced in the way I anchored myself to the floor, combined with the passion I felt about diving in, has transformed into feelings of self-belief, allowing me to operate from my internal locus of evaluation and trust in my abilities.

This exercise encouraged a creative way of reflecting, connecting physical, emotional and mental aspects throughout, which together allowed me to discover a new perspective of myself and my learning experiences. In particular, mindfully breathing while visualising the surrounding environment encouraged the muscles in my body to relax, allowing realisation of my present felt sense. It was this aspect of breath that best generated the coalition between my body and mind.

Natasha's paintings to re-live her experience and enhance her reflections.



The Value of Body in Understanding Design Process

Lucy Biggs

Lucy Biggs is a graphic designer, educator and researcher, with a ceaseless love for typography and walking. She is a Senior Lecturer in Graphic Design at Manchester School of Art and committee member of the Graphic Design Educators' Network.



The value of a walk

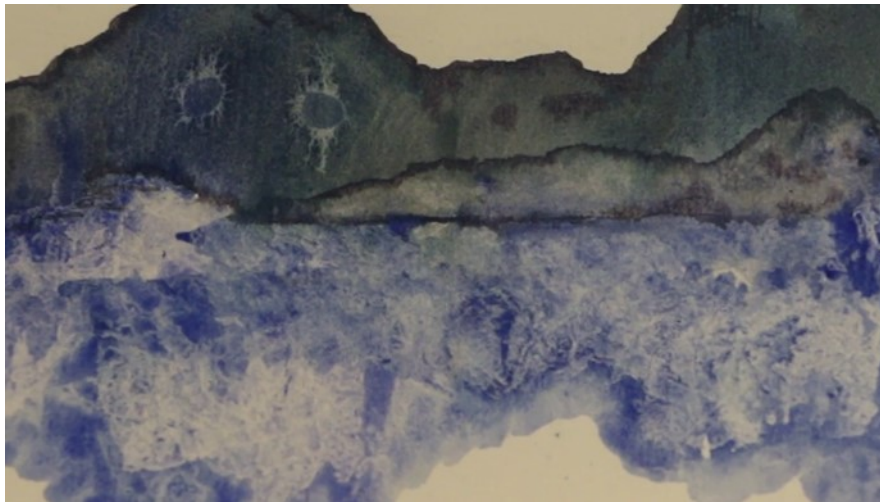
For the past 5 years I have been taking degree-level graphic design students on walks.

At first I considered this act as simply an opportunity to show them the world; a chance to stretch the legs and take in an extraordinary view. Yet, through the steps that we took over time, I began to realise the metaphorical relevance of the act itself relative to the development of an understanding of design process.

I have taught many undergraduate graphic design students who struggle to fully understand the nature and breadth of design process, or more broadly, the creative process. They have grown up in an age of linear immediacy - of the digital Google map that tells them where to go. Our 'digital native'¹ cohorts rely upon the connected, digital space for virtually all of the information they need. They ask direct questions and hurry along the surface of immediate answers² yet design process is opposed to this.

The act of walking is very much aligned to the process of designing. Design is a cyclical, iterative process that includes the exploration of a starting point, the definition of a brief, the development of ideas and the delivery of appropriate solutions. Certeau³ writes, "Walking affirms, suspects, tries out, transgresses, respects [experience]." It is a suitable metaphor for the value of trying, failing, moving, stepping, pushing, looking, seeing, exploring - all vital within design.

If we introduce the physical act of exploratory walking as a metaphor for design process, students begin to understand the potential of design as opposed to a limited, surface-level or Google-led approach. Certeau writes³ "Walking manipulates spatial organisations, no matter how panoptic they may be: ... It creates shadows and ambiguities within them ... it is like a peddler, carrying something surprising, transverse or attractive compared with the usual choice." These exploratory characteristics are required within innovative design practice.



Designers need to be fully aware of design process from a sensory, often physical, exploratory stance in order to make informed judgments. Without this level of engagement, poor design solutions reign. Lynch⁴ writes of the presence of the senses within the context of physical exploration, further enhancing the connection between walking and design: "Many kinds of cues are used: the visual sensations of colour, shape, motion, or polarization of light, as well as other senses such as smell, sound, touch, kinesthesia, sense of gravity and perhaps electric or magnetic fields."

The **Creative Landscapes** workshop series proposes that an active exploration of physical environments provides an appropriate metaphor through which to enable a better understanding of the design process. The workshop series runs over one full semester and includes a field trip to an unfamiliar location.

The contents of the workshop series and students' responses to the walking activities is presented in this short film: <https://vimeo.com/182758248>

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Eyes on your fingertips: change perceptions, cultivate creativity, enhance performance

Christina Kobb

Imagination - is the most important tool for creativity. I imagine a sound, a chord, a phrase in my head, then practise to be able to play exactly what I imagine. When I read a score, I 'hear' and 'feel' the music in my head and work out how I want it to sound when I play. A good pianist connects the notes and chords in uniquely particular ways drawing on a large spectrum of timbral nuances to phrase the music in ways that express my creativity beautifully. My imagination informs my fingers. But the opposite is also true: hearing my fingers produce the same sounds over and over again conditions and changes my imagination. In order to supply my creativity with a wealth of raw material, I consciously stretch the reach of my imagination.



Norwegian pianist Christina Kobb studied piano pedagogy at the Norwegian Academy of Music (NMH) before she shifted her focus to historical performance practices. After studies in Germany, the Netherlands and the US, her doctoral research at NMH on 19th century piano technique was featured in the *New York Times* and presented at places like Harvard University and Duke University. In 2013, Christina was appointed Head of Theory at Barratt Due Institute of Music in Oslo, but left the position last year to pursue performance and research. Currently, she teaches occasionally at the Norwegian Academy of Music and is co-founder and editor of the Open Access journal *Music + Practice* (www.musicandpractice.org). Her Carnegie Hall recital in February of 2017 was reviewed by Michael Miller of *New York Arts* as “an especially rich debut concert for New York—rich in

scholarship, thought, sensitivity, musicality and maturity”.

Introduction

Piano technique consists of a number of finely tuned movements and interactions of movement by my arms, hands and fingers. When researching piano playing in the early 19th century I realized that the basics of piano technique were quite different back then: they were more explicitly articulated and more rigid. In other words, the instructions concerning basic posture and movements were significantly different from any modern approach to piano playing. I was already playing historical keyboard instruments, but now I became curious. Would my playing change if I changed the actions of my basic technique? I decided to try this in order to explore how 19th-century music might have sounded when played at that time. By consciously changing my technique, I forced myself to explore the music through my body in ways I would not have conceived of otherwise. It was like getting another pair on eyes, on my fingertips!

Creativity and rules

In this article I will address a particular and systematic approach to creativity that I have developed in my own practice. Counterintuitive as it may seem, it involves applying rigid rules for the interaction between my body and my instrument. As in many other practices, the basics of technique are typically learned at a young age, and becomes habitual, somewhat automated. After 25 years of playing the piano it was quite drastic to start all over again and relearn all the basic movements of piano playing. However, quite differently from learning as a child, I did it this time with my conscious, analytical mind to guide the process. I will explain how I identified and changed all the basic motions of my technique, how I was “troubleshooting” to clarify my own improvement potential and what kind of results I experienced. Although there are mental and emotional (as well as music theoretical) aspects to address in this process, my focus this time - chiming in with the overall theme of this issue - is the role of the body in my own creative processes and practices.

Please do not mind my nerdy historical approach! The possible gain for others who want to develop their creativity is to be inspired by my research and consider establishing a system for themselves that *upsets* their established norms and habits. If you think that creativity blossoms the most in complete freedom, think again! Creativity may actually have a better chance at producing an attractive result if you consciously “train it” (like you train a climbing rose on a trellis) along some sturdy support structures. The restrictions are there to channel all the energy for growth in the direction you want. Simultaneously, “cultivation” implies adequate attention towards promoting and steering growth. In my work, I restricted the freedom of motion to obtain a different result. This quote by composer, pianist and conductor Leonard Bernstein points to another such restriction, namely time. Any restriction, and this holds true for a wide range of artistic and innovative endeavours, may force you to prioritize and “prune” your work. It makes me think of the plants which never flower, only produce rich foliage, if the conditions are too good.

To achieve great things, two things are needed; a plan, and not quite enough time.
- Leonard Bernstein

19th-century learning and the principles of cultivation

In 19th-century thinking, the body and mind are like a tree, which you grow and prune over a period of time, in order to harvest good fruit later on. First, you are to learn the general principles of the art, and then you apply these in your work continually. Johann Nepomuk Hummel, the most famous and expensive piano teacher in Europe in the 1820s, wrote - after having explained the main principles of his teaching - that “By this method, the pupil will play well what he attempts, and in the end reap the best fruits from his labours”.

19th-century method books in piano playing contain detailed rules for the physical interaction with the instrument, in other words: how the fingers are supposed to press down the keys. I had already specialized in historical keyboard instruments for several years, but nobody paid much attention to the 19th-century rules or even realized that they could be important. I would say that we all played on these old instruments with a modified modern technique, having already been used to modern grand pianos for at least 20 years before we encountered the more feeble historical pianos. Now that I discovered these other rules, I asked myself: If I train my body differently, will it “produce another fruit” - in my case, different music?

To explore this idea, I first engaged in a cognitive exercise. Through careful research my analytical brain identified all the basic instructions on piano technique described in 200 year old German and Viennese treatises, taught them to myself and observed how the phrasing of the music changed under my fingers (I also studied period music theory, but the physical aspect is easier to explain). As soon as I had figured out my technique and my fingers started to adhere to the new movements, I got a kind of dialogue going on between my head and my hands about how to optimize the actions even further. These fine-tunings became obvious as the interaction with the musical material continued, in other words, as I tested the new technique on a greater number of examples.

In this video, you will get an idea of how I worked to re-learn piano playing:

Editor: every teacher should watch this video clip
<https://www.youtube.com/watch?v=INh84SP6DiA>

Understanding your own practice

There are two paradoxes of my practice that I would like to address. First, it is possible (even common) to have developed highly specialized motor skills, yet be unaware of how to explain them. This may also be the case for any athletic or manual practice, because our body is able to perform complex tasks without much conscious knowledge at all, once the movement patterns have become habitual. We just *know*, we don't know *how*! The second paradox is related to the first: despite the required dexterity, pianists commonly speak about musicality, interpretation, style and personal sound without addressing the actual motions involved. Maybe we want to focus solely on the artistry and we feel like the magic is lost if we attempt to reduce it to a matter of finger motion? This is, to a certain extent, understandable. Nevertheless, it is interesting to notice that piano teaching in the early 19th century had a much stronger emphasis on the craftsmanship, yet without losing sight of the artistic aim. My exploration of 19th-century teaching manuals changed my perspective on how to use my body.

It is truly rewarding to invest in understanding your own practice. You must not only know it by automated habits or movement patterns, but also become conscious of how every action works. Most importantly, you must be motivated to improve your performance in whatever field you operate. You need motivation, determination, patience and tenacity because it takes time and concentration to break old habits and to consciously control motions that have been largely automated for many years. Additionally, you need to establish an ideal or a blueprint for your desired outcome, by which you measure your own progress against. When you have a clear vision, you will soon begin to see what actions you can take to improve on your performance.

A practice system

Activities that depend on physical execution, like sports or music making, consist of a number of coordinated movements. In the 19th Century they were loosely referred to as the “system” of any practice. I like to consider the technique as consisting of a “set of interdependent actions”. There are many possible combinations of arm, hand, leg and foot movements, but at the same time, our physical body sets limitations. For instance, when operating a piano (or any machine), not any hand motion is possible, or expedient, in combination with any arm motion; the actions have a high degree of interdependence. Hence, the number of basic actions - and combinations of actions - are limited. Despite the seeming “magic” of a great pianist or sports champion, the complexity of the physical actions is not beyond comprehension; the execution relies on a basic “set of interdependent actions”. In piano playing, each motion of the arm, hand, wrist and finger is such an “action”, where each depends on the other actions required for pressing down the keys and playing the music.



We should understand how the interdependence of actions affects the learning process: Firstly, since we usually learn a skill as an embodied whole, it is often hard to pin down specific weak spots, or perform each action separately. If everything works “just fine”, it may be hard to find the motivation to bring it from “fine” to “excellent” by consciously looking for improvement potential. Further, since you can hardly change one action without upsetting the system, more adjustments are usually required once you alter *one* thing. Conversely, the interdependency may cover up some less than ideal actions - and thus conceal any improvement potential from your view.



Figure 1: Imagine the “set of interdependent actions” like cogwheels of your practice. There is no room for slack if the system is to run really smooth!

How to spot your own improvement potential

After some time of paying much attention to my technique, I started to think in less abstract terms and become more concrete. Reduced to its most basic element, the core question of my practice - piano playing - is: How should the keys be pressed to achieve the best effect on a particular instrument? As the keys and the mechanic construction of a Viennese grand piano of the 1820s is significantly different from a modern piano, I figured it would not be senseless to consider changing my key-pressing method when playing on these historical instruments.

In my case, I had long felt a discrepancy between what I thought I could do and what I actually proved myself capable of. I did not reconcile the way I *wanted* to play with how it sounded! Laziness was not the problem, nor was dedication. As a student, I would always get up early, practise before the classes started in the morning, and keep going until the late evening. I had opted for a “narrow path” of music and scholarship, and I moved between four countries to study with the right people and give myself a chance to succeed. I did not exactly know what my problem was, except I suspected that I had too much tension in my playing and a few other subtle flaws obvious only to a highly trained ear. Despite these things, I operated at a high professional level, but to be honest, I did not really like my playing because I knew it must be possible to do better.

In hindsight, I conclude that my imagination was better than my fingers. In musical terms, we could say that my physical performance was in dissonance with the performance I was able to imagine. Alas, I did not know how to let my fingers create what I vaguely thought should be possible! Likewise, you know your practice and your abilities better than anyone. Therefore, when you feel this “dissonance”, however minor, between what you imagine and how you normally perform, investigate it!

Fig. 2: The flower is able to flourish beautifully because the rigid trellis guides and supports its growth!



Take a close look at all the movements and bearings involved, and ask yourself whether each action is expedient for performing at your peak. In the worst case, a wrong action is actually threatening your potential to perform at your very best. I figured out the entire “set of interdependent actions” of piano technique by oscillating between theoretical reflection and practical exploration. I got a clear picture in my mind about the various constituents by inspecting each action and gaining an understanding of its overall function. In this process, I explored the *improvement potential* for each action with the goal of enhancing the practice as a whole. I constructed different exercises to practise better ways of executing each action, transition or sequence to optimize the interaction between myself and my instrument. To a large extent, this step actually meant weeding out much unnecessary movement to make the desired actions more effective. This approach gave me insight about *why* something - big or small - works or does not work. Hence, it allowed me to improve my performance systematically, instead of just “hoping I would get better”.

The eyes on the fingertips

I think of the ability to imagine or envision something in your mind as one of the foremost tools of creativity; it is like seeing, hearing and feeling inside your head to anticipate the desired outcome of your actions. When I read a score, I “hear” the music in my head and work out how I want it to sound when I play. Usually, I imagine a sound, a chord, a phrase in my head before practising the execution of what I just imagined. In my imagination (in my “inner ear”), I establish a blueprint to hold onto when I practise and perform.



Hence, my imagination informs my fingers. But the opposite is also true: hearing my fingers produce the same sounds on the piano over and over again conditions my imagination. A good pianist bring out a large spectrum of timbral nuance, and phrase beautifully (i.e. connect the notes and chords nicely). The downside is that what I cannot imagine, I will not pursue. It may happen by chance occasionally, but it will not be something within my conscious reach. In order to supply my creativity with a wealth of “raw material”, I consciously stretch the reach of my imagination.

Consciously applying a suitable technique was like getting a new pair of eyes right where the action unfolded. The new eyes were able to communicate with my cognitive faculties in a way that had not previously been the case. I was able to match my musical ideals with my performance and it became quite effortless to give the music a beautiful shape when I played. When confronted with the material of your practice (music scores, in my case), the “system” of bodily movements is the lens through which you envision and imagine its shape. Changing the “system”, i.e. the “set of interdependent actions”/the motion patterns, is a way to get a new lens through which you see its shape. Other solutions surface, within the reach of your imagination.

I think of playing music as making sculptures of sound. The creative ability is to “see” a sculpture in a piece of rock, see a possible route on a map that allows you to travel from A to B through a challenging landscape, see a solution to a problem even if no one else sees it. Your eye is unique. Your eye is not “just “ the ability to discern colours and contours and recognize persons and objects (even that is miraculous in itself), your eye is also all of your experience which is uniquely yours, allowing you to look at and perceive a problem - look at the material of your practice - and see ways and solutions no one else may see.



http://bigbrowser.blog.lemonde.fr/files/2013/05/Apache_head_in_rocks_Ebihens_France-530x353.jpg



<http://www.vitamin-ha.com/wp-content/uploads/2013/06/Human-Faces-in-things-02.jpg>

Be it the route on a map, a solution to successfully and gracefully performing a prelude by Chopin, the able to envision and cut out a sculpture from a rough rock - your “eyes on your fingertips” have a unique combination of knowledge, skills, intuition (accumulated from hours and hours of close contact with material, tools and technique) and imagination (ability to “see” possibilities inherent in the material). The eyes on your fingertips in close collaboration with your conscious mind make a fantastic team!



Figure 3: Frédéric Chopin at the piano. Silhouette by F. Phillip.

Reflecting on the outcome

Instead of just letting my fingers run over the keys in any way they wanted, I began holding them accountable for sticking to the 19th-century regime of posture and motion that I figured out from old method books. This made me realize everything that went on in my body during playing in a new way, and it became as important to make the correct movements as it was to avoid the incorrect (unnecessary) movements. (Like in the garden, we both need to cultivate the good and weed out what is unwanted!) Among the two foremost advantages is 1) being able to plan my rehearsals much better, thereby learning the pieces much faster 2) knowing how to succeed; I know how I must prepare in order to play well. This requires much work, but eradicates all the frustration I experienced when I had no idea why my concerts would at times be very good and at other times quite bad.

By consciously changing my technique, I got what seemed like another pair of eyes, namely those of my fingers. Prior to this, I would imagine the sound of the music through my mind's ears - but this imagination was inevitably limited by earlier memories of sound, as it is hard to imagine a sound you have never heard. But now, with the eyes on my fingertips, I saw things differently. The eyes on my fingertips saw new routes for moving from key to key and shaping phrases. The new-learned movement patterns brought forth sounds and phrasings I had not previously heard with my physical ear, and therefore not been able to imagine or require my fingers to produce. The reconstructed 19th-century technique - a very strict movement regime - had created a brand new alley for musical freedom: one which was not limited to what my ears already knew.

A trail for my creativity to climb on, grow and bloom, had been laid out. I found a new way of creating musical raw material for the interpretation of musical masterworks of the 19th century.

As both our physical and cognitive habits have become firmly established over time, changing them requires much deliberate, conscious effort. How can we be sure that the unknown land we are entering when we try to change our practices is in fact better than the one we already know? We cannot. We have to accept the risk. But when you feel that dissonance between what you can imagine and what you actually produce, it may be worth looking into - perhaps even with the eyes on your fingertips.

I would be fascinated to know if the approach I have shared from my own practice as a musician is used by others in their contexts for practice. Did you discover eyes on your fingertips or other parts of your body through which your practice is manifested? Please let me know!

Editor : You can find out more about Christina, her research and her playing by visiting her website <http://www.fortepiano.no/en/welcome/>. She has also written a companion article in which she explores some of the mental processes as well (see below, endnote 1).

Image sources

Figure 1: http://www.imcberlin.de/fileadmin/Public/Downloads/Application_notes/Zahnraeder_01.jpg

Figure 2: www.commercialsilk.com

Figure 3: Chopin. Silhouette by F. Phillip. <http://weknowyourdreams.com/image.php?pic=/images/fingers/fingers-03.jpg>

Supplementary notes

1 See also my article which touches on exploring improvement potential on the mental and emotional level as well: Kobb C (2017) 'Keys to systematic exploration - a pianist's perspective'. *Lifewide Magazine* #18 available at: <http://www.lifewideeducation.uk/magazine.html>

For more on learning in the 19th Century, please see Kobb C (May, 2016): 'The true art of sitting on a piano chair - and other useful hints for 19th-century living', in *Fowl Feathered Review* no. 18, available at: <http://online.anyflip.com/fdyt/yijz/#p=8>

2 Hummel: Anweisung zum Fortepiano-Spiele (English translation, 1829), p. V. Conversely, an English colleague, Bernhard Logier, was judged as for his lack of good fruit: "The system" has not produced one good harmonist, or one eminent performer. "The tree is known by its fruit." (The *Philomatic Journal* (1825), pp. 443-44). The assumed reference is Luke 6, 43-44: "For a good tree does not bear bad fruit, nor does a bad tree bear good fruit. ⁴⁴For every tree is known by its own fruit. For men do not gather figs from thorns, nor do they gather grapes from a bramble bush."

3 I share Theodore Schatzki's postulate that "a practice is, first, a set of actions". (Schatzki: 'Practice mind-ed order', in Theodore R. Schatzki, Karin Knorr Cetina and Eike von Savigny (ed.): *The practice turn in Contemporary Theory* (Routledge, 2001), p. 48). However, my focus is in more minute than his, as I like to dissect each activity of a practice into their respective set of actions, whereas Schatzki's take is more general; he looks at the establishing of social order, or by seeing practices as consisting of many general actions: "A practice is, first, a set of actions. For instance, farming practices comprise such actions as building fences, harvesting grain, herding sheep, judging weather and paying for supplies". (ibid.)

4 One example is elbow position vs. angle of the hand and, consequently, fingering, discussed in my video above.

5 Interestingly, my concept of dissonance is quite parallel to how Norman Jackson discusses "disparate pieces of information" in his article in this issue 'Ecology of a Geologist's Embodied Creativity'.



An Ecological Perspective on the Role of the Body in Creative Processes and Practices: being a Geologist

Norman Jackson

Over the last few years I have come to realise that personal creativity is a matter of connection and integration: of connecting and integrating perception, imagination and reasoning to connect and integrate existing ideas to produce new thoughts, and of connecting and integrating thinking and action, mind and body.

The questions posed in the #creativeHE on-line discussion¹ on the role of the body in creative processes and practices encouraged me to consider something that I had previously often taken for granted - the role of my own body in my own processes for learning that also enable me to use my creativity.

As the conversation unfolded I surprised myself by focusing on the early part of my career when I trained and then practised as a geologist. Being a field geologist involves quite a lot of physical effort and labour as the body is used to physically interact with the landscape and the rocks in it, or in the case of a mining geologist, interacting with the rocks and structures deep underground (right), so perhaps this made it easier for me to visualise how a body might be involved in a creative process in a disciplinary context.

In this short article I want to explore 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 create what I call a learning ecology that enables us, as a whole person to physically, intellectually and emotionally interact with a complex environment that is also physical, intellectual and emotional in its nature.

A learning ecology is simply the interactive relationship between a person and the things in a particular physical and/or mental space that exists or is created by a person in order to learn, develop and achieve². The idea encourages us to think more holistically and more dynamically about the way we inhabit and relate to the world - real or imagined. Applying the idea of ecology to learning, personal development and achievement is an attempt to view a person their purposes, ambitions, goals, interests, needs and circumstances, and the social and physical relationships with the totality of the world they inhabit, as inseparable and interdependent. Figure 1 shows the important components of a learning ecology.

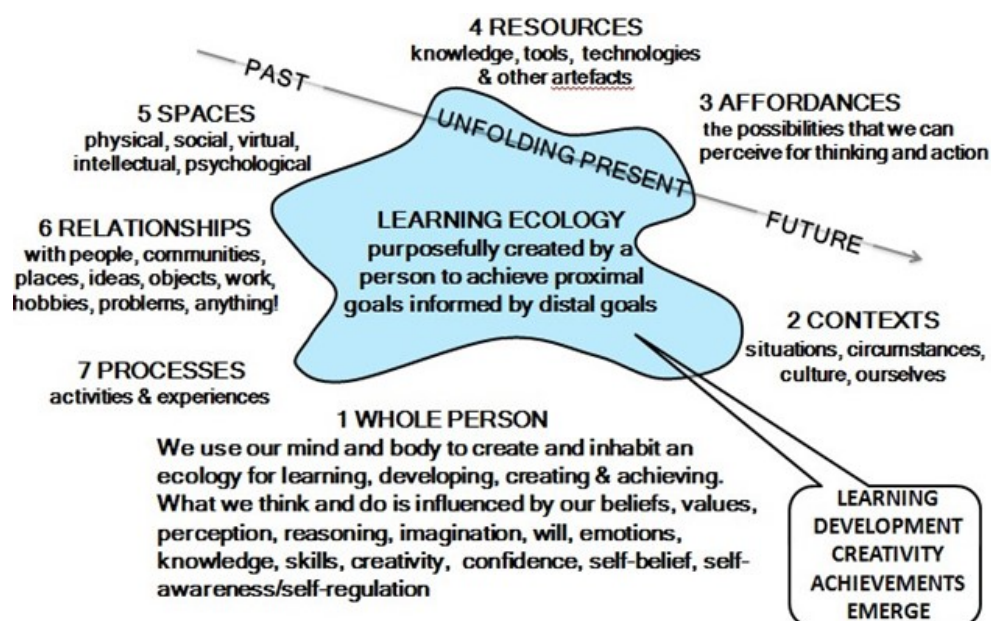
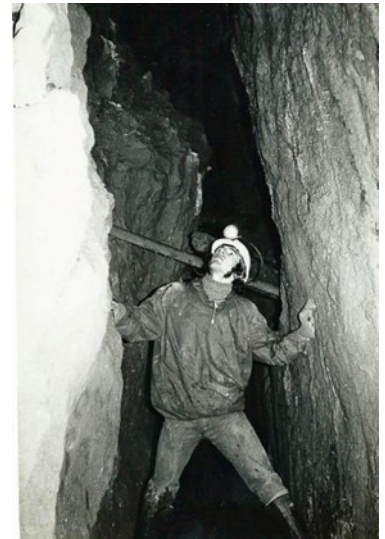


Figure 1 Important components of a learning ecology (Jackson 2016)

So what does the idea of a learning ecology mean in the context of being a field geologist? and how does the idea of embodiment feature in a field geologist's ecology for learning?

A geologist will be employed to develop knowledge and understanding about the geology of particular areas. Creating geological maps to show what rocks, structures and mineral resources exist is something that all countries must do to create their own mineral resources inventory. You cannot build or create infrastructures and industries which exploit the resources of the natural environment without this knowledge.

Geologists are 'knowledge workers' in the sense that their role involves developing particular sorts of knowledge to understand the geology of a particular area. Such meaning making can be an academic exercise but often it has practical value, for example to explore for economically useful rocks or minerals. While a certain amount of knowledge can be gained through remote sensing techniques the only way of ascertaining what is on the ground is to physically go into the field (the environment) and walk over the ground, observing, recording and making sense of what is encountered. Because geologists are knowledge workers they develop a foundation of theoretical and practical knowledge and skills relating to the use of such knowledge before they are able to practise. This foundation knowledge is drawn upon when conducting field and post-field laboratory investigations.

A geologist might be given the task of creating a geological map where none exists or creating more detailed maps where they do exist. Ecologically, we might represent this scenario through a map of the geologist's interaction with his field area (Figure 2).

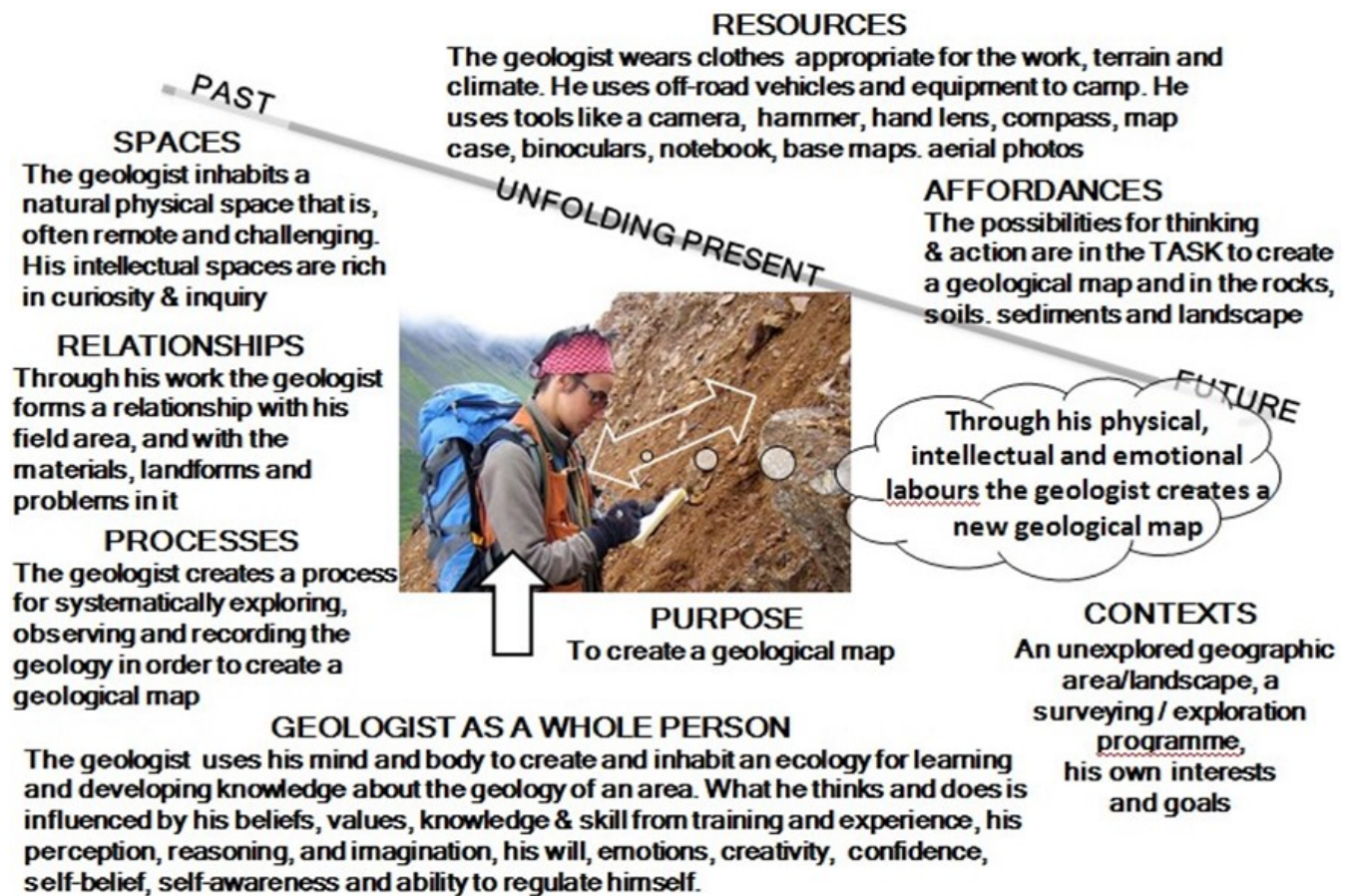


Figure 2 Mapping a field geologists ecology for learning and producing a geological map

In order to create a geological map the geologist creates an ecology for learning. He uses all his past experiences and knowledge how to tackle his problem. Prior to going into the field he gathers existing information about an area he intends to map. He acquires relevant resources, like geographical maps if they exist or aerial or satellite photographs if none exist. These are the essential resources and tools he needs to record observations about what is found to enable such information to eventually be turned into a map.

He will develop a strategy for tackling the problem and plan logistics like how and where he will live in the field, how much food and water he will need, how he will get to his field area and how he will move around once there, how they will communicate and many other things he will need to consider.

Once he is in the field, the feedback he gains from interacting with the landscape, rocks and soils will shape his further actions. His body has to work hard in order to find rock outcrops and identify boundaries between different types of rock. His ability to perceive the geology is dependent on his physical and mental ability to see the rocks he is interested in, to see and measure the structures and the relationships between different types of rocks, to take samples for further analysis, and to record his observations (perceptions) on a map.

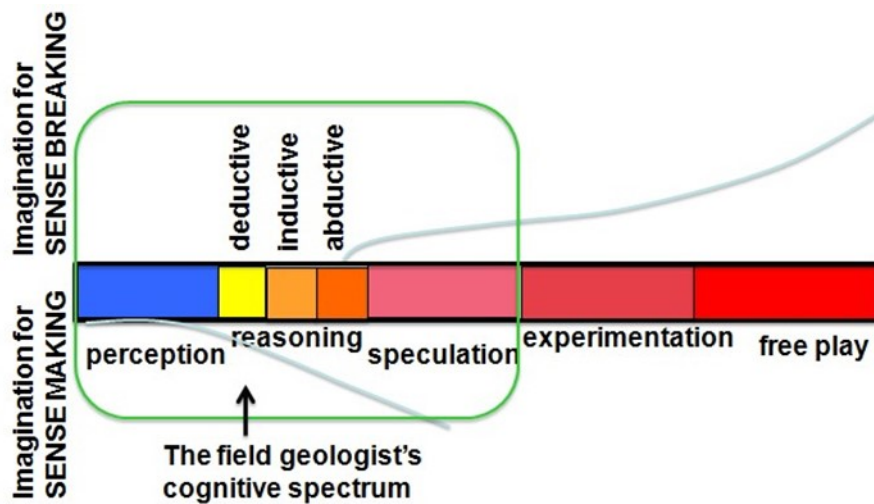


Figure 3 The cognitive spectrum 3
The typical cognitive spectrum of a field geologist is represented by the green domain

The thought processes of a geologist (any natural scientist) move backwards and forwards along the cognitive spectrum³ (Figure 3) of perception (observation informed by knowledge gained through study and experience), imagination (conceptualisation of what is observed in order to create possible meanings) and reasoning

(the critical evaluation of what is observed in order to evaluate possible meanings and make judgements). He also reflects on what has been seen and understood to try to make more or different senses of it. Making a geological map is like solving a giant jigsaw puzzle where most of the pieces are missing. His 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 in order to make sense of his puzzle. This is the nature of the intellectual space he creates for himself.

Being a geologist involves quite a lot of physical labour and performing particular routinised actions - like locating the position of a rock outcrop on a geographic map or aerial photograph (now made easier with GPS navigational aids), measuring the dip and strike of bedding or other structures in rocks, breaking rocks and examining fresh surfaces with a hand lens, photographing and sketching rock outcrops and annotating sketches with observations, and where there is little outcrop examining the soils. The mental processes of perceiving, imagining and reasoning are intermingled with the physical process of finding the pieces (rock outcrops and structures) and sensing (observing, feeling, measuring) the materials, and recording (often sketching or photographing and making notes) of what has been perceived possibly with associated imaginative speculations. These complex and intense interminglings of the physical, mental and emotional states of being enable the geologist to form deep relationships with his work and the objects of his work - his landscape and the rocks in it.

The intellectual, emotional and physical enterprise 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 relationships between one type of rock and another and develop understanding of the geological history of the area. So conceptualisation - the building of working hypotheses to explain the geology goes hand in hand with the perceptual- observational process. And as a hypothesis forms the body is involved in testing it. His body gets his senses and his mind to the places he needs to be in order to find the evidence that confirms his hypothesis or not. He has to get himself into the physical spaces that have the highest potential for solving his problem. Past experience has shown me that there is much intuition involved in this process. Sometimes it just feels right to do something without really being able to explain why.

The geologist's observations and recording enable him to relate and synthesise disparate pieces of information to create a bigger picture. And after the day, back at camp, there is the pondering and reflection on what has been seen as the day's observations in notebooks, digital photographs or video, are revisited and plotted on the base map. These analytical and conceptual processes continue after the field experience as samples are analysed and understood better. These elements of cognition, acting and being work together in a merry dance and the knowledge and understanding that is created, together with new artefacts through which this knowledge is communicated (maps and reports) is the creative outcome of this process.

The final process of making a map is the geologist's way of communicating his understandings to other geologists or people working in related professions like civil or mining engineers. The map is the creative artefact resulting from the learning ecology described above. Producing the map is essentially a drafting process in which information is carefully transferred from field maps and notebooks onto a new map. 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 about the geological history of an area. The map is also a tool that can be used to make decisions about how a landscape and its resources might be used.

Acknowledgement

This article was developed from a blog post made 23/04/17 <http://www.normanjackson.co.uk/creativehe>

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The Human Being as the Most Exact Scientific Instrument: Reclaiming the Embodied Role of the Senses through Goethean Science

Michael Wride



Mike trained as a developmental biologist and currently works at Trinity College Dublin. He is an Adjunct Associate Professor in the School of Natural Sciences and an Academic Developer in the Centre for Academic Practice. He is a visiting lecturer at Schumacher College, Totnes, UK and a fellow of The Higher Education Academy. His passion is to make learning more enjoyable and he has a particular interests in creativity in science education, science, spirituality and creativity. In this article he shares insights into another of his interests - Goethean science.

Intuitive consciousness

Johan Wolfgang von Goethe (1749-1832) was famous as a politician as well as an artist, poet and novelist (he is the author of *Faust*). It is not widely appreciated that Goethe also produced a large body of work in science investigating topics such as plants, colour, clouds, geology and meteorology.^{1,2} Goethe used a phenomenological approach in which the scientist actively engages with the phenomenon of study using the intuitive mode of consciousness to gain creative insights³

*“Next, you must trust your senses:
They will show you nothing false
If your intelligence keeps you awake.*

*Keep your eyes fresh and open and joyful,
And move with sure steps, yet flexibly,
Through the fields of a world so richly endowed.”*
Goethe - ^{in 4:29}



Using this approach, for example, Goethe intuited the developmental relationship between leaves and flowers long before plant geneticists confirmed this⁵.

Goethe’s ‘way of science’ offers a creative alternative to the mode of Kuhn’s ‘normal science’, the linear elaboration of existing paradigms, towards an acknowledgment and indeed an explanation for the “*logically unscripted*” moment of creative insight⁶. Although Goethe believed that there is no exclusively ‘right’ approach to the study of nature^{4,37}, Goethe’s science brings together the creative, intuitive and imaginative awareness of art with the rigorous observation of science and is truly experiential as it is based on embodied experience.

Goethe’s science emphasised a participatory approach to nature, a phenomenology of nature⁷, in which there transpires “*an intimate first hand encounter between the student and thing studied*”⁸ and in which the human being is “*the most exact scientific instrument*”⁴. This approach also leads to a metamorphosis or transformation of the scientist in the process of doing science⁶.

Embodied feelings of phenomena

The personal development of the practitioner is fundamental to the methodology^{9,10}. The method is accompanied by an embodied feeling of the phenomenon ‘coming to presence’ within the practitioner. For example, one Goethean scientist described a dynamic, spreading, shining sensation associated with a ‘star’-like quality of a nettle plant^{11:175-76}

“After having spent time observing various nettles, going to and from them, eventually returning to them and feeling like I was meeting an old friend. One day I sat down with a particular nettle, sat in a patch of many others, and I felt a really strong ‘star’-like quality. It is very hard to describe but it felt like this enormous spreading, shining sensation - like an expanding force of intense energy. I intuited it as a gesture of the wholeness of the plant. A wholeness that I could then recognize in parts of the plant such as the force of the ‘sting’ that you feel when touching the small syringe like ‘stinging hairs’; the shape and expression of the thousands of tiny hairs seemingly bursting out of the plant with this immense energy; the pattern of ‘spikes’ on the leaf edges which feel like they are dynamically spreading outward with purpose. The whole plant felt like a star that was ‘shining’.”



This quote highlights the relationship between feelings, knowing and learning ^{12:48}. The quote also demonstrates that Goethean science is an inherently participatory, reflective and creative process, since it uses the imagination to play with the phenomenon and to intuit new meaning.

Goethe called this participatory approach a “*zarte Empirie*” or “*delicate empiricism*” (science as a conversation)¹³, which legitimises and organises the role of the body as well as imagination, intuition and inspiration in science and makes these qualities systematic ³

“There is a delicate empiricism that makes itself utterly identical with the object, thereby becoming true theory. But this enhancement of our mental powers belongs to a highly evolved age.” ¹⁴

Furthermore, Goethe’s approach was able to develop so-called embodied “*new organs of perception*” that allow for an appreciation of the ‘wholeness’ of the phenomenon under study, the inter-relatedness between the parts and the dynamic processes that lead to the development (or metamorphosis) of form ¹⁵. So, the three important capacities, which distinguish Goethean science from modern science, are intuitive perception (*Anschauung*), perceptive imagination (*exact sensorial imagination*), and synthesis - all of which contribute to creativity. Recognising that such intuitive thinking, imagination and feeling have a place in the scientific method, provided that they are deployed in conjunction with exact observation and clear thought, allow for a much fuller and more complete experience of nature ⁴.

New possibilities in science education

So, the question arises about how it might be possible to develop these “*new organs of perception*” in science students so as to develop their abilities of intuitive perception, perceptive imagination and ability to synthesise? One problem is that science students are generally removed from the ‘lived experience’ of being immersed in nature and when they are, such as on field trips, it is generally for a relatively short period of time.

The focus in academia is usually on textbook explanations and theoretical knowledge, so that students do not develop their skills of observation, for example through prolonged immersion in nature and drawing the objects of study. So what practical methods are required? Goethean scientist Craig Holdrege describes his experience of “*a conversation with nature*”, in this case skunk cabbage, in the woods where he lives in the North West United States:

“After I go out and observe, I make a point of actively re-membering the observations. With my mind’s eye I inwardly recreate the form of the leaves, I inwardly sense the colors and the smells, and so on. This process of conscious picture building is what Goethe called “exact sensorial imagination”. It entails using the faculty of imagination to experience more vividly what I have observed. I try to be as precise as possible - and will often notice where I haven’t observed carefully enough, which I try to do the next time I’m out. When you do this kind of conscious picture building, you grow more and more connected to what you’re observing.” ¹³.

Subsequently, active perception is suspended and as much as possible the scientist ‘receives’ from the object. The phenomenon is ‘seen’ in the dynamic awareness reached through the use of the imagination, thereby allowing the ‘thing’ to express itself through the body of the observer. This stage corresponds to ‘seeing in beholding’ - being one with the object of study. This allows the content or meaning of the object to be appreciated, as well as the form itself. So, the outer appearance of the ‘thing’ and its inner content are combined by conceptualisation ³. However, this process is not without its challenges - moving into new modes of perception and knowing can be disorientating for the student, who is trained through their prior education to expect, strive towards or look for a specific ‘outcome’.

Maura Flannery describes a Goethean approach to the analysis of proteins¹⁵ and points out that this is a method that scientists routinely use, even though it is unlikely that most would label it as such. Moreover, the following has been said about the Nobel Prize winning plant geneticist Barbara McClintock (1902-1992), so this approach is by no means limited to the distant past:

“[she] gained valuable knowledge by empathizing with her corn plants, submerging herself in their world and dissolving the boundary between object and observer” ^{9:28}

Mindfulness and attention are also utilised in the Goethean method. Interestingly, Marshall has an approach to first person action research through her ‘intentional disciplines’ as a way of attending to how practice relates to context. She posits that inquiry requires making judgements about when to be focused and directed and when to be open and receptive ¹⁷. Indeed, she describes her method of inquiry through moving between what she calls ‘inner’ and ‘outer arcs of attention’, and cycles of action and reflection that have their own momentum and



that avoid static or repetitive modes of thinking. Thus, similar to the Goethean method, there is a rhythm or discipline in moving back and forth between action (agency) and reflection (communion) such that, as Marshall says, “my inquiring is unfolding of its own volition”^{17:437}. The Goethean practise might end up with an action that we feel compelled to take or a call to a modification of future behaviour, without this necessarily being mediated by a rational understanding, but it may be associated with an embodied feeling.

The development of the Goethean way of ‘seeing’ is a different mode of participation than we are generally used to, owing to the spread of the analytical, reductionist mode of thinking, which has prevailed in western science¹⁸. This contrasts with Goethe’s work, ‘conscious picture building’, using the faculty of the imagination to create images in the mind, thereby activating the ability to participate more fully in the phenomenon and to gain insights and feelings about it, which arise within the body of the practitioner. Thus, we need time and space for reflection and to develop the quiet mind and still body required for such practices, so that we can truly participate in the phenomenon we are hoping to understand more fully. I can certainly relate to this approach to science having spent hours at a microscope studying embryonic development. Many of my insights and intuitions, which were subsequently tested by experimentation, came from periods of such stillness and receptivity.

Thus, the ‘official’ scientific method appears not to be the true or complete scientific method that scientists practice day by day. Goethean science is at work in modern science, though it will take pointing this out and discussing it with science students to truly bring it out into the open and to expand students’ perceptions about the roles of creativity, imagination, insight, intuition and embodied feelings in science.

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Image credit

<https://i0.wp.com/blog.goetheanscience.net/files/2014/04/BodyMindSpirit-320px.jpg>

The Role of the Body in Creative Processes & Practices

#creativeHE conversation April 2017

Jenny Willis



Jenny Willis' career has involved many dimensions of teaching, educational management and research. She first worked with Norman on aspects of professional and personal development, creativity and lifewide learning as a Fellow at the Surrey Centre for Excellence in Teaching and Learning. She is a founder member of Lifewide Learning, conducts research and writes for its publications. She edits Lifewide's quarterly magazine and is also executive editor for CAM. Jenny has a PhD in socio-linguistics and is a Fellow of the Royal Society of Arts. For more information about her go to <http://no2stigma.weebly.com>.

Introduction to the Google conversation

Creative Academic's contribution to World Creativity and Innovation Week 2017 was to hold a Google discussion on the role the body plays in creativity. Norman Jackson explained the significance of this theme:

The central premise of the embodied approach to creativity is that bodily sensations influence our mind and therefore our creative processes and practices. The central tenet is the body and mind are indivisible. (...) Yet embodiment - the way in which our whole body is involved in the creative process of teaching and facilitating students' learning - is something that is rarely talked about in higher education teaching and learning practice.¹

The conversation was led by Lisa Clughen (Nottingham Trent University), supported by Norman Jackson and Maria Kefalogianni (Salford University). It was structured around 5 daily issues:

- DAY 1 April 18 Introductory activity
- DAY 2 April 19 The role of your body in helping others learn
- DAY 3 April 20 Your body and the way you inhabit particular spaces that encourage your creativity
- DAY 4 April 21 The role of the body in disciplinary or work contexts in which we are creative
- DAY 5 April 22 The challenge of enabling learners to become more aware of the ways in which their bodies are involved in their own creativity



Supplementary resources such as reading and videos were provided, and participants also shared some of their own.

Participation in the conversation was open to anyone interested. The activity attracted interest mainly from UK academics. The Google tool does not facilitate easy analysis, but a small set of consistent participants emerged as leaders of the conversation.

This article highlights some of the emergent ideas from the conversation. It cannot do justice to the richness of the discussion, so readers are encouraged to visit the site itself to experience the exchange and evolution of responses to the daily themes.

DAY 1

To start our conversation, would you please share an illustration in the form of a photo, a sketch or doodle, a video or animation of how your body is, or was involved, in a process through which your creativity emerged. Please include an explanation about context, tools and artefacts and, if you can, share how your bodily sensations, thinking, feelings and actions are or were connected.

Lisa Clughen introduced this first task and seven strands of conversation resulted, accompanied by illustrations of the individual's creative process.

Meditation and breathing were the focus of three conversations. Giskin Day explained how she exposes her dance students to sculptures of the body as sources of their, and her own, inspiration in a cycle of creativity:

Unlocking students' creativity and gazing on the creativity of others, brings out my own sense of creativity which I try to apply by making my teaching more imaginative.

Mar Kri describes herself as ‘an activist in the power of breathing for my own sanity, wellbeing, curiosity and growth’ and offered a detailed account of how she achieves this.

Breath for me, is the conduit between my rational logical analytical mind - that can get me in trouble often- and my playful loose, trusting, loving mind/body (...) My conscious use of breath often leads to creative outcomes and stronger connections both with myself and other people (that for me is creative relating) (for eg: I am sure it plays its role when I am in practice with clients.

She concluded with a proposal that we apply such techniques in the classroom:

This leads me to share my belief that this very birth right of ours, our breath, gets forgotten as we grow older (we disconnect from a natural breathing and perhaps disconnect from our inner experiences due to traumas, changes). What impact would it have on learning if we allowed its space back in our bodies, then in our classrooms, then in our Institutions?

For other contributors, meditation is less structured and comes through engaging in a specific activity. Paul Kleiman finds taking a break when he is struggling for ideas is an almost magical experience. He moves to his piano then:



Usually I just place my hands on or over the keys, and I wait to see what happens. I have no idea of what is going to happen before it takes place. Something stirs. Something starts. A note or a chord is played. And off I go. Or off 'it' goes, because I feel I'm not in conscious control of my fingers. I have a sense of my hands making music by themselves.

This leads to creativity in his original task:

Often an idea or 'creative solution' forms in my head when I am playing, and I return to my workspace (though perhaps the piano is part of my workspace!) ready to continue. I've lost count of the times a creative solution to a 'wicked problem' has revealed itself at the point when I've turned away from the task in hand and engaged in another activity.

Another example of using the body in an unrelated activity comes from Sandra Sinfield, who heard about ‘blind drawing’ and adapted it for water colouring. She built this in to her daily routine and,

After a while I discovered 'blind drawing' - which involves looking at what you are drawing but not at your paper while you are drawing. My routine shifted - and I started to blind draw - and water colour.

She, too, found that the action changed her profoundly, and increased her sense of creativity:

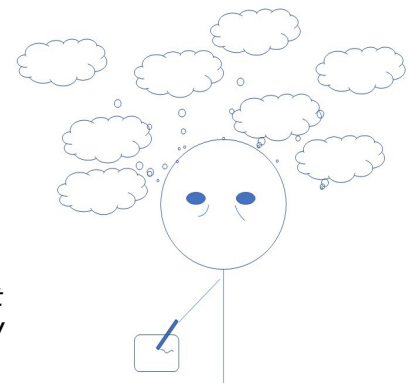
After a year, I noticed that my self-confidence had increased - my creativity had increased. I enrolled on my first MOOC, Edinburgh's [#edcmooc](#), and from there I enrolled on a couple of [#artmoocs](#) - each time thinking, how can I bring this back to my practice.

Like Mar Kri, she ends with a suggestion:

my tip is to make space to draw - without censorship or self-criticism - for the sheer embodied joy of it...

Jenny Willis’ response to the first task focused on the dissociation between body and mind when in the process of creativity:

My image represents how I feel when I am manically caught up in creation. I use the adverb advisedly, because it is as if I am in a dissociated state, where my body is neglected and I am totally absorbed with, in my case, writing. I represent this through the bags under my eyes and my emaciated body.



Lisa Clughen recognised this phenomenon, replying:

in some of the focus groups I ran with undergraduate students about their writing practices, many spoke about the way in which they neglected their bodies as they studied.

The final two conversations on Day 1 showed how the body was used in a specific context. Micky LeVogeur shared this beautiful image and explained how she had instinctively joined in with the tussle between the two infants, who were competing for possession of a toy. Without realising it, she had intuitively defused the conflict, as she explains:

There is something about being embodied that is below words and certainly beyond the words of those two small children at that time. Something about pushing the boundaries that is literally about pushing and being pushed, in this case.

Finally, Kevin Byron related his experience of rock climbing and bouldering ('a much more skilled form of climbing usually on quite short routes.') He soon learnt that the body does not work as we would expect when faced with problems of this nature, and describes the joy of physical achievement:

I discovered the counter-intuitive in physical actions in some of these bouldering problems. With these counter-intuitive bodily problems your common-sensical mind would tell you to move in a way that would end up in a crumpled Nonsense Asana on the crash mat below. However when you learnt to over-ride that initial thought or instinct and do the opposite, it was like a physical Eureka moment as you surprisingly found yourself gliding upwards on to the next hold. This physically constructed Eureka moment had the same refreshing and uplifting feeling as a mentally constructed one.



DAY 2: The role of your body in helping others to learn

One of the ways in which people have potential to be creative is in helping other people to learn, whether you are a teacher, trainer, supervisor, manager, parent, grandparent, or colleague, you have an opportunity to do this.

Think of a situation of how you have encouraged and helped others to learn and create an artefact to represent the centrality of your body (and/or the learners' bodies) in the process. It can be a sketch, a physical model, a photographic or video image that conveys a sense of how your body is or was involved in encouraging that creative process. Please provide a brief explanation to share your understandings.

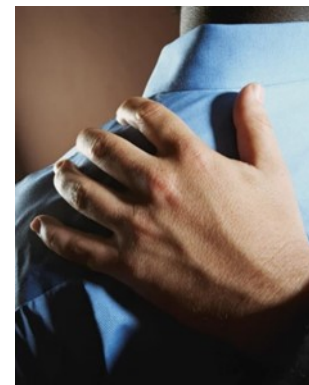
This task invited individual experiences, which by definition are unique; they nevertheless share some common themes. One of these is trust.

Paul Kleiman has learnt that 'we ignore our bodies and how we use them and how they affect others'

the weight of the responsibility to honour the trust placed in you as the teacher; the willingness and trust to be guided; the strong sense of anxiety when left alone; assuaged somewhat when the other was near, but heightened when they moved away; the relief when they returned....etc.

The notion of trust is implicit in Norman Jackson's story of riding down a slide with his grandson. He likens it to a journey of discovery:

I thought here was an example of accompanying the child on his journey doing what he was doing and where appropriate showing him how to do it so that he it together. By doing it with him we both had more or less the same experience at the the same space sharing similar feelings aroused by the same sensory information. most definitely involved the whole of me and the whole of him. For him it will be ence on his developmental journey, for me it will be an experience I will always



learnt by us doing same time in exactly This way of 'teaching' just one small experi- remember.

Trust is also apparent in the relationship Micky LeVoguer has established with her students. As a teacher, she shares her experiences with her students. In this account, she finds how rewarding such relationships can be.

One weekend, my lovely cat Mitzi had died so I told them this story. And when it came to acting it out, one girl, Nafisa, acted out the story of Mitzi dying. She gave the role all the gravitas and solemnity it needed as she very slowly and evenly faded down to stillness as she acted out the peaceful passing of Mitzi. She knew that my cats were dear to me and their exploits were well known. Through this story telling we had, as a group, got used to the important themes in each others' lives. This was over 15 years ago and I still remember the gift Nafisa gave me in embodying this sad but poignant event in my life.

Sometimes, things are best communicated without words.

Another emergent theme on Day 2 was bodily awareness, physicality.

Christina Hesford's art involves using her body but, as she explains in this abbreviated reflection, she has discovered that she has underestimated the importance of her body for creativity:

As a weaver, my body allows me to physically make the objects which I imagine. I find this process of making is not necessarily creative, although an object is produced at the end. The object is novel, but the ideas which underpinned its creation already existed. (...)

I do find that in the process of making, the tools, the machines, and my body's responses, such as a hand flick, all contribute to the outcome in unexpected ways. (...)

I do find that when I am in the flow of making a warp or weaving, I start to have new ideas about ways of weaving, materials to use, outcomes I would like to see. I also find that I think about myself and often have revelations about my own state of mind of beliefs and so on. It is also a very peaceful process, with its own time-scales. (...)

This reflection has shown me that the physical process is creative too, and should not be undermined, or placed below the creative thinking aspect of the process.

Another person whose body is integral to her creativity, here her teaching, is Sandra Sinfield. Her words express the sensual enjoyment she derives from being barefoot.

I use my body a lot when I teach. I run around the room - I move amongst the students - I move from the front to the back to the sides of the room. I feel like I am using my whole body in the situation - and a three-hour teaching session leaves me exhausted (two 3-hour sessions a day nearly kills me!).

I've popped this picture in because it shows me studying bare foot... I also teach bare foot. My feet get hot and shoes give me blisters... but that's not really it. For one thing, I have been teaching for such a long time that I feel confident enough to just pop out of my shoes and wander around barefoot - but more than that, I love that contact with the floor - I love the curling of my toes - and the feeling that the real me is in that room...



Teryl Cartwright recalls how she was forced to think about inclusivity when designing a complex activity for a class, combining humour and creativity. Her tutor had insisted that everyone, including a blind child, Mary, should be able to tackle it. Teryl spent many hours painstakingly creating a cartoon in raised glue that Mary could 'read' with her hands. The impact is captured in her account.

Mary's face lit up when her hands went over that piece of paper. The other students were intrigued too because the glue dried clear, almost like a new way to make a secret code. She still had her aide help write in the words of the cat comic she decided to make to share with the class, but the joy that she could share something like everyone else in the class was infectious. I don't think it matters that the kids didn't learn as much about creative writing as I wanted. Instead they learned about as the possibilities for feeling a comic strip as if seeing it with their eyes. Laughter is whole body learning and I'm glad for it.



In his response to Day 2, David Middlebrook began to synthesise the discussion to date, observing

As I read along, I'm thinking that at least one common factor is the turning away from the issue at hand – whether it's writer's block, duelling toddlers, hitting a golf ball, or wrestling with one's own thinking – and allowing redirection and play to free the mind, with the hope that in the process, a fissure will open through which the creative will emerge.

He goes on to describe how he first discovered the usefulness of scrolls as a means of engaging children in reading. The photograph illustrates the physicality of this approach.

DAY 3

What physical spaces encourage and facilitate your creativity and how does your body, when you are being creative, inhabit this space? If you create the space yourself, what do you do to create an environment conducive to creativity? It will be interesting to hear about the different climates you create for yourselves in order to create. Please comment, sketch, or send an image and explanation that captures the relation between your chosen space, your body and your creativity?

The task for Day 3 turned to the locus of creativity, and the body's response to its environment. Eight conversational strands ensued. One of these took up the issue of going barefoot, which led to consideration of the role of clothing. Richard Bromhall reflected:

Wearing shoes (and then taking them off) forms an important part of my working process, depending on the environment. When I go onto campus and work in the library, say, I take my shoes off and walk around shoe-less for most of the day. I feel more relaxed; it's as if I'm working from home (or that I think I own the place), and it makes me feel more comfortable when I'm working in more formal environments. When I work from home, I do the opposite, and deliberately seek my shoes out and slip them on. When it comes to work, shoes help me focus and work better.

In response, Norman Jackson reminded participants of the role clothes play in our identity, and speculated

I wonder to what extent the clothes we wear contribute to the overall climate within which we feel we can be at our creative best?

Open spaces and movement were a common theme on Day 3. Paul Kleiman wrote of his enjoyment of walking at night:

But something happens at night, that turns the ordinary into extraordinary, and I'm aware my senses are heightened as I walk. I'm also aware that changing the pattern of my walk, such as turning down an unfamiliar street or alleyway, often changes my thinking. A new idea forms, and I sense I'm heading down a new path.

Simon Rae provided an illustrated description of his garden retreat.

Kevin Byron introduced the Open Space approach to meetings:

For those who are not familiar with 'Open-Space' meetings they are designed so that a number of sub-themes for discussion are decided on by all present, and everyone chooses their own agenda - ie which meetings they wish to attend. The small group meetings do not have a facilitator but someone acts as convenor and scribe. They also involve a bit of walking too - so that must be good! The three rules of Open-Space are: 1. Whoever turns up are the right people. 2. It's over when it's over! and 3. (The Law of 2 Feet) - If you are no longer learning or contributing in a meeting, walk away and join another one.

This implicitly touches on issues of power and control, which also emerged in the discussion of clothing: uniforms may typify censure of individuality/creativity.

Some participants described the space they had created for themselves. Whilst the previous examples favour open spaces, these people had made inside refuges though, as Norman Jackson observes, he is able to adapt to any environment:

Focusing on the spaces in which I work which, over the years have probably been the main site for my creativity, I have always thought I can work almost anywhere, but being productive, comfortable and contented or inspired in a space requires a bit more.

Nevertheless, he believes the nature of a space will have different effects on his creativity:

Buildings create an entirely different artificial environment containing man made things like furniture, lighting and ambient noise. I behave quite differently in them - more mental and far less physical labour bound by the social conventions of the spaces and the roles I am expected to perform. (...)

work spaces in buildings I have some control over them. I don't like busy open plan office spaces which I find too distracting, Neither do I like to share an office if I have the option. I like light airy spaces..I like to be able to play music and have tea or coffee whenever I want it. It's nice to be able to look out of a window onto something other than a car park. These are all very basic things. I also like open spaces where I can walk or do some physical labour: my garden is a fantastic space for this. When the





weather is fine I enjoy working outside although I often have to stick my laptop in a cardboard box so I can see the screen. I have an office in my home, a converted garage, but I continually move around the house and occupy different spaces.

Because I work from home I am able to inhabit my spaces in an informal, but disciplined way. I dress in jeans, T shorts and socks. I often listen to music, I work long hours but take breaks as and when I feel like. The one thing I miss is people. I miss the interaction with colleagues and students in my work environment I think that this has a negative impact on my ability and motivation to be creative.

Kieron Devlin brings us back to the notion of reflection, with a piece on labyrinths:

Walking them gives opportunity to focus in on yourself, a calming experience and one which can provoke deep inner reflection.

He explains:

You can't get lost as there's only one path to follow, into the centre and out again; you are more likely to find yourself. Walk at whatever pace feels right for you; let others overtake you or overtake them if you wish. Walk with "soft eyes" - un-focussed and keeping a downward gaze - and an open mind, accepting whatever thoughts come to you."



Two participants question the validity of creative spaces. For Simon Rae, they assume a certain affluence, bringing us down to earth with the following comments:

But I have also been struck by the privilege that has been written about ... all this walking around to stir the juices - the cosy workspace, the garden, the time. (...)

I guess we are all fairly privileged, all able to afford a space of our own, a view, time ... the rewards of working hard at what we do/did. But we represent only a small percentage of the country, and it's the rest that concerns me. How do we encourage students to 'identify with their bodies' when many will work in open plan offices with their time monitored and optimised, or behind counters, or behind the wheel of a delivery truck with less than a minute to make the next delivery, or in a job so prescribed as to deter creativity? Well, there's always after work, after that slog back home through the rush-hour, in that free time between eating, housework, 'family time', and sleep. They can be creative then.

Meanwhile, Paul Kleiman senses that it is the individual not the space that matters, and he goes on to compare how he responds creatively in different spaces:

My own immediate reaction to the task was that it's not so much the creative space as the creative (or not) people in it. Certainly, when I'm working on my own (e.g. writing) I like a quiet relatively uncluttered environment. (...)

But when you're in a group, and creating work together, certainly the space is important. You must have room to move around, there should be good light and lighting, chairs and tables must be movable, controllable temperature, breakout spaces, access to outside, etc. As long as those are met, it matters not whether it's a room in a grand old house, a modern conference centre or a dance studio (see below, one of own workshops). It's the dynamics of and between the people in the space that matter.

To conclude Day 3, Teryl Cartwright offered this poem:

*Creating a Creative Space:
A place to go
A choice of direction
Outside scenery
Inside the box on wheels
The willingness (not the time, the WILLINGNESS) to stop
Rain
Drive*

DAY 4

I'd like to make this a free-for-all and invite you to add anything to the debate you would like to in any form you would like to. Maybe you could post a sketch, or a physical model, photographic or video image or make a comment that:

- Conveys a sense of what the body's relationship with creativity means to you.
- Explores the affordances in your teaching & learning contexts for helping learners to become more aware of the ways in which their bodies are involved in their creativity and the practices linked to the subject they are studying. You can illustrate an existing teaching and learning situation or imagine an entirely new situation.

Lisa Clughen opened up the final day of conversation with these words and inviting contributions on discipline-related creativity. Nine strands of discussion followed, neatly developing the themes of previous days.

Movement was an important dimension. For some, this is related to music. Sandra Sinfield recalled some of her teaching experiences:

These sessions were joyous - embodied - alive. We would bang and shake and sing - even those much worried about the premise in the first instance.

There was such an obvious connection between our bodies - the musical energy - the increase in creativity and self-confidence...



Lisa Clughen shared this, replying

We often build music into modern language teaching - it's so great for vocabulary recall.

The notion of Health Humanities was introduced by Giskin Day, and illustrated with a photo of the workshop:

I'll leave you with a picture of a yoga-flamenco workshop that I went to at a Health Humanities conference in Seville.

This was just the sort of disciplinary juxtaposition that Lisa had hoped to see emerge from the discussion:

What an excellent concept- exactly the meeting of disciplines so many people in this conversation have spoken about.

Movement, or kinaesthetic creativity, led Teryl Cartwright to research alternative programmes to her own in the United States. She likes to 'pace out a story or blog' and thought she might now be able 'to dance step out an article from this.'

Kevin Byron took up two strands of the conversation (labyrinths and Open Spaces) and proposed bringing them together through motion:

What about combining labyrinths with the Open-Space method whereby the meetings are held at the centre of labyrinths? If you follow the 'Law of Two Feet' you are required to leave via the labyrinthine path and join another group the same way.

Movement led Paul Kleiman back to the theme of reflection. Speaking of his recent canal boating, he reminded us of the need to take time to think:

It reminds me that one important thing travelling on the UK canals forces you to do is to SLOW DOWN. Walking is actually quicker! And in that slowing down there is plenty of time/space to think. It makes me think that an interesting future topic might be creativity and time.

Several posts returned to the importance of meditation. David Andrew produced his mind map of embodied creativity, incorporating the themes and references that had emerged in the conversation (pictured on next page).

He confessed to having mixed feelings about mindfulness, and its current popularity as a panacea:

Basically my ambiguity is similar to a lot of discussion involving terms like MCMindfulness being used to describe the negative, quick fix aspects of the craze for mindfulness.



This prompts Kevin Byron to propose

other dimensions to the mind than the sense that it is resident in our skull. The discussions we are having this week relate to this bigger picture of the mind, and these ideas refreshingly fly in the face of what quantitative, evidence-based physical science tells us, without at the same time, appearing 'flakey'.

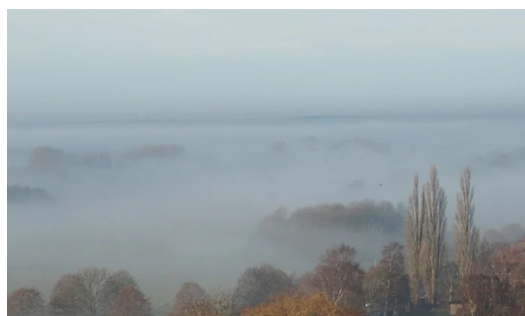
He goes on to argue that

Science has hi-jacked just about everything in our culture, and has ambitions to become our dominant way of knowing and learning..(...) we - the human - are slowly being reduced to nothing more than a seething mass of carbon polymers and chaotic electro-chemical activity with a very finite occupancy in space. (...)

Science can't tell us much about what we are discussing here about the body, and its relationship to creativity which is why these anecdotes and narratives are so important and useful.(...)

Our inner life is a constantly shifting landscape, and that we can't really distinguish between that, and what we sense in an extended external world.

I feel I'm inside my head as I write here, and then I turn my gaze to the view outside my window (photo below), and feel that I'm seamlessly, if not fleetingly connected to something greater and unbounded outside of myself.



Summary of key themes

At the end of the four days' conversation, what has emerged about the role of the body in creative processes? The two key themes appear to be creativity through movement of parts of the body, or through being physically in touch with something (be it a written scroll or the floor beneath our feet), and making emotional space for reflection.

Sometimes, the two combine to create a mystical space where 'magic happens'. Some participants consciously use this liminal zone to distance themselves from the task in hand when they encounter a 'block' in their creativity.

We have seen that space can also be physical, and that the environment appears to have an irrepressible impact on creativity. Spaces can be natural or constructed, messy or tidy, and individuals may create differently as they move from one space to another. The mesmeric effect of repeated movement such as in weaving, can be fruitful, as can the movement of fingers on a piano keyboard, bringing together the physical and emotional once more.

As Norman Jackson remarks,

It has been a fascinating conversation and it has made me think about things I have not thought about before. The conversation does not have to end here you can continue posting and the team will respond.

The website¹ remains open. Do join us in the conversation!

Reference

1 Preparation for #creativeHE Jackson <https://plus.google.com/communities/110898703741307769041>

Images

All images are from the Google conversation, where their creators can be found.



Conference Report

Creative is as Creative does: UK Creativity Research Conference

Ian Hocking

Nobody is sure, quite yet, where ideas come from, but we know that the idea for the UK Creativity Researchers Conference emerged over burgers in Barcelona, where Lindsey Carruthers, Shelly Kemp and Gillian Hill were attending last year's BPS Cognitive Section Conference. Their feeling was that a creativity-specific gathering was needed for researchers to bring together their work and ideas. They imagined forty or so people might turn up. There were considerably more than that, and the conference was a great success. The organisers were particularly concerned with generating impact, and judging by the emails I've received this morning from potential collaborators, together with some of the emails I fired off yesterday, the impact should be resounding.



Like intelligence and the Cornish pasty, creativity is difficult to define. That was one of the threads running through the talk by the keynote speaker, Giovanni Emanuele Corazza, which also included an impressive array of research projects underway at the Marconi Institute for Creativity. He conjectured that creativity might be the single most important research area for the remainder of the century, simply because artificial intelligence is encroaching into so many other domains of human performance; our creativity, and perhaps related higher-level processes, might be last bastions to fall to AI. Parenthetically, one of Giovanni's papers on eye tracking was suggested to me by a colleague last year when I was presenting similar work at the BPS Cognitive Section Conference, so it was interesting to see where that work is heading (Agnoli *et al.*, 2015); just another example of the links that can be made at such gatherings.

Incubation was a feature of the talks that followed, first by Ken Gilhooly ('Incubation: Past, Present and Future') then George Georgiou ('Incubation: Facilitation of Creative Problem Solving'). Incubation is the idea that people perform better on a problem when given a distracting break, as long as they know that the problem is waiting for them when they get back¹. One of Ken's points is that unconscious work can be better than conscious work; from George, I learned that the effect of incubation is larger if the break is taken immediately. Kathryn Friedlander finished off this session with a description of her work on cryptic crosswords as a way of generating insight experiences ('The Problem with Insight Problems'). Other talks included one from Paul Sowden ('Exploring and Influencing Creative Thinking Processes'), in which he looked at dual process thinking in garden designers, and another from Alison Pease, which looked at the use of computers to investigate creative solutions to things like mathematical conjectures.

Overall, it was a great conference—fun and well organised. It was even worth flying there and back in one day, though waking up at 4:30am and getting to sleep at 1:30am, together with a bit of exotic food (haggis) seems to have given me jet lag. There's some research suggesting that non-optimal time of day can improve divergent thinking (Wieth & Zacks, 2011), so no complaints; I certainly have plenty of ideas, without even needing a burger.

Citations

- Agnoli, S., Franchin, L., Rubaltelli, E., & Corazza, G. E. (2015). An Eye-Tracking Analysis of Irrelevance Processing as Moderator of Openness and Creative Performance. *Creativity Research Journal*, 27(2), 125-132. <https://doi.org/10.1080/10400419.2015.1030304>
- Wieth, M. B., & Zacks, R. T. (2011). Time of day effects on problem solving: When the non-optimal is optimal. *Thinking & Reasoning*, 17(4), 387-401.

Source CCCU Psychology Programme Blog May 19 2017

<http://cccuppsychology.com/blog/2017/05/19/creative-is-as-creative-does-uk-creativity-research-conference/>

¹ Executive Editor's note: this was a key finding in our own #creativeHE research. See my article above on our Google conversation

Creativity in Teaching, Learning and Student Engagement

Higher Education STEM Conference

The HEA Annual STEM Conference returns in 2018, focusing this year on *Creativity in Teaching, Learning and Student Engagement*. The conference is an ideal opportunity to collaborate and learn from other higher education professionals within STEM disciplines and to share best practice.

Student success in higher education depends on a careful balance of factors including engaged learning, environments conducive to learning and the desire to develop in students the knowledge, skills, behaviours and attributes expected of graduates.

This two-day conference, featuring a mix of peer-led workshops, presentations and respected keynotes will provide a forum for each of the individual STEM disciplines as well as opportunities to learn from cross-disciplinary practice.

This year's conference themes focus on those aspects of pedagogical practice within STEM subjects that support, nurture and improve these factors:

- **Driving teaching excellence:** How can we improve our practice to ensure the best learning experience for our students?
- **Cross-disciplinary practice:** What can we learn from successful initiatives undertaken in other disciplines?
- **Creative pedagogies:** How can we enhance student engagement through creative practices?

The 2018 call for papers will open on 6 July 2018.

Conference Date: January 18th
Venue: not announced

<https://www.heacademy.ac.uk/training-events/hea-stem-conference-2018-creativity-teaching-learning-and-student-engagement>

THINKING CREATIVELY OUTSIDE & INSIDE BOXES!

Creative Academic recently interviewed Tony Dias and Julius Dobos two experienced teachers working at Cosgrove College in California. Over the last few years they have developed an approach called MediaWorks through which digital media students work with business and industry clients on a significant project with commercial value. The interview is published in the latest issue of Creative Academic Magazine (CAM7 April) and it's well worth a read.

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

One of the points Julius made was that it's no good encouraging students to think outside the box (whatever that is). when working for clients they have to use their imaginations to think inside the boxes that the client defines. Seems like an important principle to master before we can change the box that the client (or institutional manager for that matter) wants us to think inside.

We wondered how other teachers interpret and work with this principle.



NEWS ITEMS



Cogswell College @CogswellCollege · 3h

So cool to see @academiccreator publish in-depth review of MediaWorks!
Hands-on + teams + clients = learning laboratory

creativeacademic @academiccreator

April issue creativeacademic.uk/magazine.html is out with interesting example of project-based learning involving clients MediaWorks @CogswellCollege



creativeacademic @academiccreator · May 13

thank you @duhring for suggesting mediaworks would make a good case study we learnt a lot @lifewider1 #creativeHE #projectbasedlearning

John Duhring @duhring

Replying to @CogswellCollege @academiccreator

@jseelybrown So good- How does MediaWorks work? p. 53, A 'Real World Challenge': A Project-based Ecology for Learning p. 62

Throughout March & April Creative Academic's support for World Creativity & Innovation week was recognised



WorldCreativityWeek @WorldCreativity · May 12


Thanks @LeilaOliva @IKUinnovation @academiccreator for being top engaged community members this week :)

More from Creative Academic

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

CONTACTS

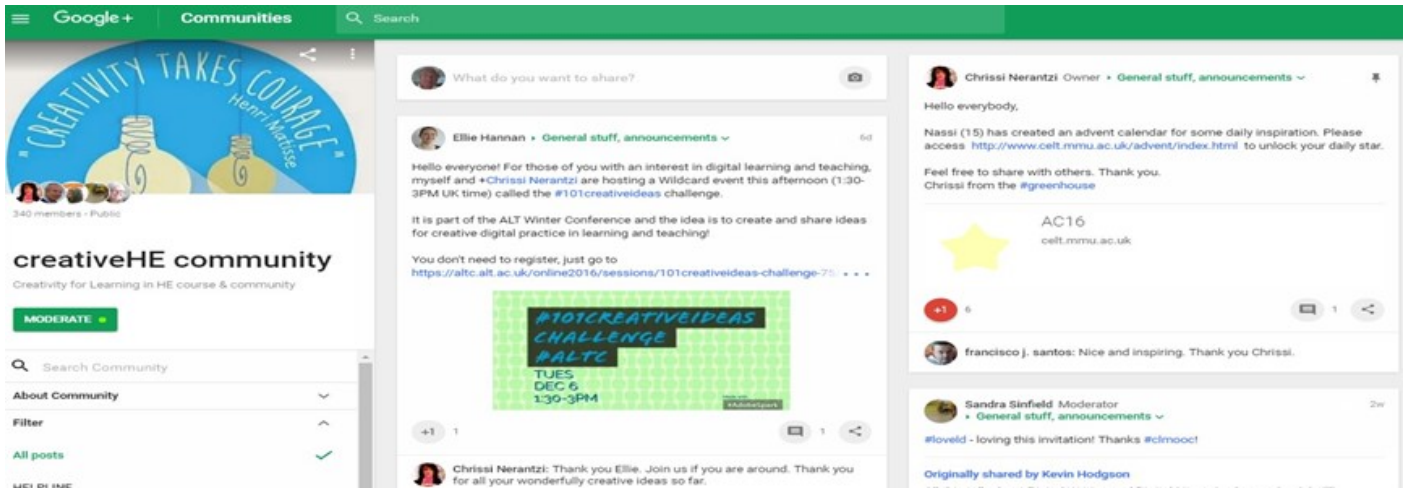
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Creative Academic champions creativity in all its manifestations in higher education in the UK and the wider world. Our goal is to support a global network of people interested in creativity in higher education and committed to enabling students' creative 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>



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