ARTS AND EMOTIONS - NURTURING OUR CREATIVE POTENTIAL

Botín Foundation Report 2014

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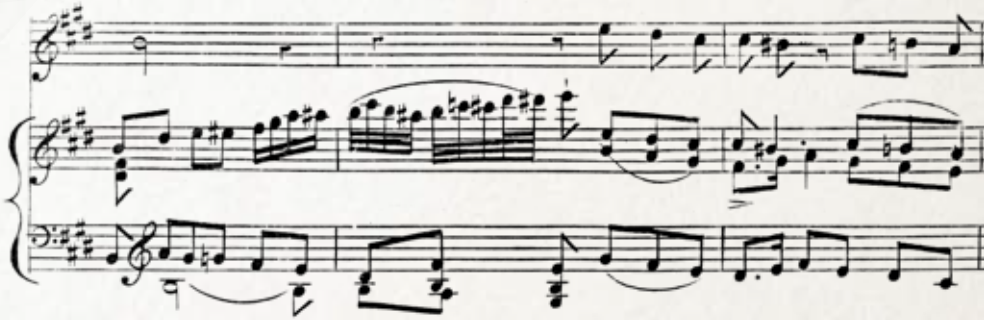

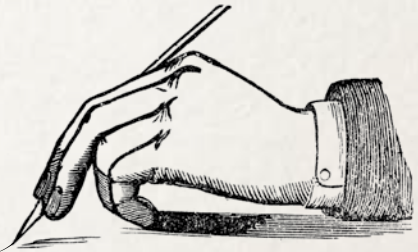

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The Botín Foundation is Spain's number one private foundation both in terms of the investment capacity and social impact of its programmes.

The Botín Foundation's objective is to stimulate the economic, social and cultural development of society. To achieve this, it acts in the fields of art and culture, education, science and rural development, supporting creative, progress-making talent and exploring new ways of generating wealth. Its sphere of action focuses primarily on Spain and especially on the region of Cantabria, but also on Latin America.

The Foundation is committed to an education that promotes the healthy growth of children and young people, fostering their talent and creativity to help them become autonomous, competent, charitable and happy.

There are three areas of focus for this: **Intervention** (*Responsible Education* Programme), **Training** (scholarships and programmes such as the *Master's Degree in Social, Emotional and Creative Education*) and **Research** (the *Platform for Innovation in Education*).

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PREFACE

“Every work of art which really moves us is in some degree a revelation - it changes us”.

LAWREN HARRIS

In 2012 the Botín Foundation published the international report *Good Morning Creativity!* which demonstrated the importance of creativity in our society and, in particular, in the realm of education.

The aim of developing our creative abilities to the full is a crucial challenge, given that they can allow us to see things differently, to imagine new possibilities, to invent new solutions to our problems and to create, in short, new ways of doing things in order to evolve and progress.

Consequently, the Foundation has gone one step further in this second report *Arts and Emotions – Nurturing our Creative Potential*, which has two main objectives:

- To make the educational community as a whole aware of the importance of the arts in education. The arts are important not just for artists, but for everyone, thanks to the beneficial effects they have on people's personal and social development. In addition, the arts also have the capacity to enhance imagination and creativity.

- To build and design a working model, developed in partnership with Yale University, to be used by the Botín Centre in Santander (www.centrobotin.org) as the basis for its educational programmes focusing on developing creativity via the arts and the emotions produced by them.

The Botín Centre will help people to be more creative in their personal lives, in their social relationships and at work. This will build the foundation for a more creative society and greater wellbeing, which will be transformed, in turn, into economic and social wealth.

But... What will spur us on to be more creative? What will help us to see and think differently? What will drive us to take risks in order to activate our ability to be creative and innovative? Evidently, to create something requires a particular attitude, knowledge and thinking-skills, but emotions are responsible for facilitating or hindering the process – reason and emotion go hand in hand. Our moods are crucial when it comes to directing our thoughts and actions. They can paralyze or enliven us, help us to excel or lead us to defeat, especially when we are unable to adequately manage our emotions.

Our emotions and our ability to manage them, in other words our emotional intelligence, help us, for example, to deal with the frustrations and difficulties that crop up during the creative process, to identify problems, to generate ideas, and so on. Accordingly, the Botín Foundation, in partnership with Yale University, has set in motion a study in which we have closely observed the role played by emotions in the creative process – to produce a theory that explains how and why they affect our creativity.

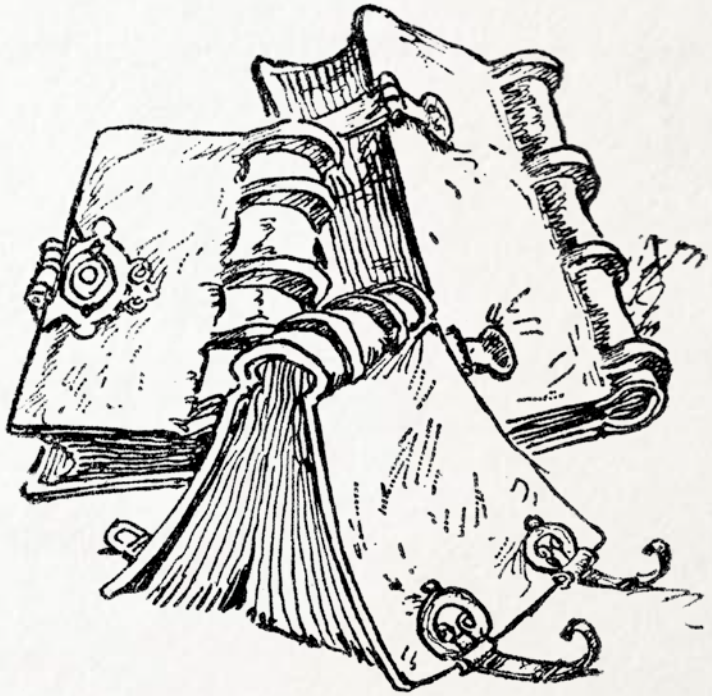
Hence, if well-managed emotions are an important aspect of creativity, then we need tools that help us generate and manage these emotions in order to advance the creative process. We wholeheartedly believe that the arts are the ideal tool. And this is the second stage in our research with Yale: to study ways to develop creativity via the arts and the emotions produced by them.

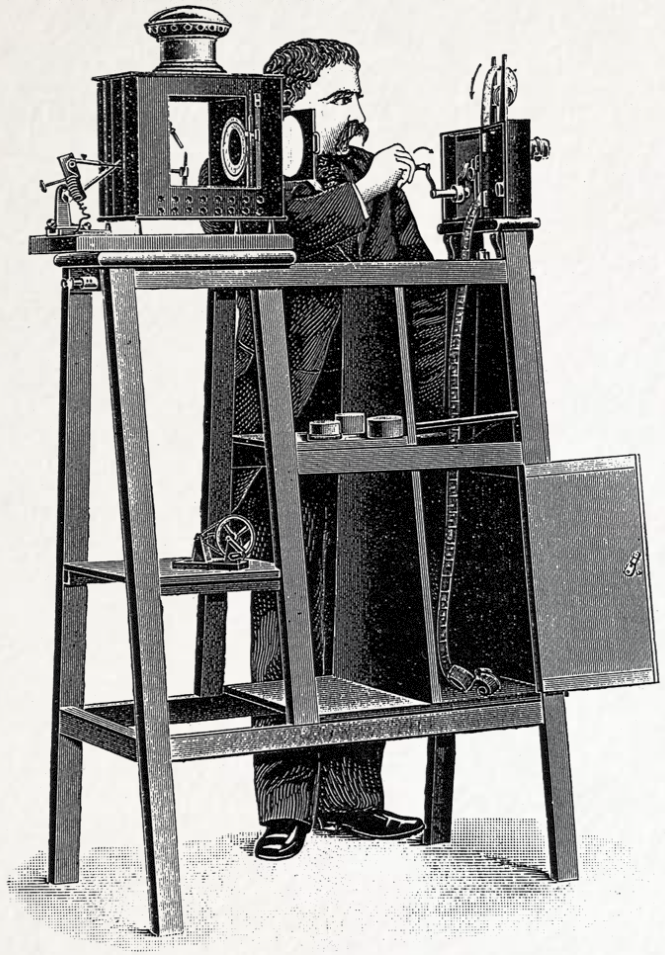
Furthermore, we are going to put these lines of research into practice at the Botín Centre in programmes, activities and workshops that employ the arts to develop creativity at all ages. One example of this will be the use of the visual arts to enhance observation, the production of ideas and critical awareness – all of which are crucial aspects of creativity. These workshops will cater to children, teenagers, adults in all professions, the elderly and families.

We would like to express our thanks to all the international experts who contributed to the report; to Christopher Clouder, who directed this working group, for all his effort and dedication; as well as to Zorana Ivcevic and the researchers at Yale University. All of them have worked shoulder to shoulder with the Botín Foundation on this thrilling and creative project.

We look forward to seeing you soon –among art, emotions and creativity– at the Botín Centre.

Botín Foundation
Santander, April 2014





CREATIVITY, EMOTIONS AND THE ARTS

Zorana Ivcevic
Jessica Hoffmann
Marc Brackett
Botín Foundation

Abstract

This chapter discusses the emotionally complex processes important for creativity and describes the social function the Arts can play in developing creativity.

It is asserted that for increases in creative achievement to happen two things are necessary: people need to have the attitude of openness (looking at the world with interest and receptivity) and that they need to develop skills to manage the emotions that inevitably accompany creative work.

First, different kinds of creativity are discussed; then the role of emotions in the creative process is examined, and finally the chapter proposes how the Arts can be a medium through which people can learn to use and manage their emotions to foster daily creativity.

At the end, this chapter explains how these approaches will be applied in the programmes for the development of creativity through the arts which will be run at the Botín Centre in Santander.

CREATIVITY, EMOTIONS, AND THE ARTS

Creativity is more important than ever. Global climate change is putting demands on societies rich and poor. Need for energy is increasing. Even the developed Western countries are straining under the stress of changing economic realities. None of these challenges can be solved in familiar ways. The challenges of the 21st century require new ways of thinking, making it crucial for educators and policy makers to understand the processes of creative thinking and achievement. In this chapter we discuss the emotionally complex processes important for creativity and describe a social function that the arts can play in developing creativity.

When people hear the word creativity, most often they first think of the arts. Both art making and art appreciation are deeply emotional processes. The arts take us on a rollercoaster ride of sadness, tranquility, and anguish. Pablo Picasso, one of the most creative artists of the 20th century, saw artists as receptacles for emotions and vehicles for transforming felt emotions into tangible works of art (Picasso, 1988). But emotions are not only important for artistic creativity. Invention and innovation in all domains of human endeavor, from scientific research to business entrepreneurship, are filled with frustration at many dead ends, puzzlement at the unknown, excitement about new problems to examine, and the elation of eventual success. In this chapter, we assert that for increases in creative achievement to happen, two things are necessary – people need to have an attitude of openness (looking at the world with interest and receptiveness) and they should develop skills to manage the emotions that inevitably accompany creative work. First, we discuss different kinds of creativity. Then, we examine attitudes toward creativity, the role of emotions in the creative process, and finally, we propose how the arts can be a medium to teach people to use and manage their emotions to foster creativity.

Let us pause for a moment and examine what we mean by creativity. What can be creative? Psychologists study the creative person, creative process, and creative products and throughout this chapter we will refer to all three ways of understanding creativity. When psychologists are interested in studying creative people, they want to learn who are the creators – what they are like or how we can describe their traits, skills and life experiences. The study of the creative process answers how a person thinks and works – how they discover problems worth pursuing, how they approach these problems, and how they address them. Finally, creative products can be ideas, performances or items created by individuals or groups. The generation of products is key in discussing creativity – without it, we are talking only about imagination that does not take flight.

Creative products are both original and appropriate (Plucker, Beghetto, & Dow, 2004). Consider a news report about a new skyscraper in London (Bill, 2013). The building was designed by renowned architect Rafael Viñoly and nicknamed the “walkie-talkie”. Unfortunately, the design included a curved wall of reflective glass, which focused the sun’s rays and melted parts of cars and set things on fire. While the design might have been original, it was not appropriate for the city setting and therefore is not a good example of creative architecture. Meanwhile, engineers have designed solar power plants using the curved glass design, laying fields of mirrors to focus the sun’s light to heat gas, power pistons and create electricity (Walsh, 2013). In the context of energy production, using curved glass panels is both original and appropriate, and therefore deemed a creative innovation, unlike the “walkie-talkie” building.

It is often difficult to tell what makes a creative product. Is it the choice of colors in a work of art? Is it the composition? Is it the subject matter? Teresa Amabile, psychologist at the Harvard Business School, noticed that people tend to agree on whether something is creative

TERESA AMABILE, PSYCHOLOGIST AT THE HARVARD BUSINESS SCHOOL, NOTICED THAT PEOPLE TEND TO AGREE ON WHETHER SOMETHING IS CREATIVE OR NOT

or not. For example, before the release of the iPad, it did not seem likely that it would be a big success. The iPad seemed to be an oversized iPhone; it did not have a keyboard that would be useful for writing documents or longer e-mails, it was not small enough to be carried in one's pocket, and it was expensive. When analyzed feature-by-feature, it did not appear to be particularly original or useful. Still, upon its release in 2010, over 3 million iPads were sold in 80 days and it continues to be the most popular tablet computer around the world. The iPad was deemed to be one of the 50 best inventions of 2010 by *Time* magazine and the "top gadget" by *Popular Science*. It is hard to say what exact features made this product innovative, but there is a clear consensus that it is creative.

In spite of the challenges in defining creativity, psychologists have devised ways to study creative individuals, their creative process of creation, and the ideas and products they create. This research points to four ways people can be creative (Kaufman & Beghetto, 2009). At the most basic level, there are creative moments which might only be original to the individual, such as when a child experiments with building blocks. Then, there is everyday creativity which is evident in interactions and activities of daily life, such as when one is playing music with friends or when devising a way to help a child struggling with homework. More skill and knowledge is necessary for professional creativity. For instance, a teacher who develops a curriculum to teach kids how to resolve conflicts with peers or your cousin, who opens a restaurant fusing Spanish and Italian cuisine, both show professional creativity. Finally, eminent creativity describes individuals who change a domain of work or even a culture at large, such as Albert Einstein or Bill Gates. We are especially interested in creativity that both contributes to society and is accessible to large numbers of people – everyday and professional creativity.

Who are these creative individuals? They are individuals working in various domains, from an innovator designing a new smart phone, to a scientist developing a new treatment for depression, and a manager improving her team's productivity. Creative people have a number of personality characteristics that set them apart from others. They are open to new experiences, curious, and unconventional (Feist, 1999; Ivcevic, 2007; Ivcevic & Mayer, 2009; King, Walker & Broyles, 1996; McCrae, 1987) and they often have artistic and intellectual interests as children (Helson, Roberts & Agronick, 1995). These personal attributes are shared by creative individuals in diverse domains, from the arts to sciences and technology.

CREATIVE PEOPLE HAVE A NUMBER OF PERSONALITY CHARACTERISTICS THAT SET THEM APART FROM OTHERS

We have asked an even more fundamental question in understanding who is likely to be creative – how people see the world and whether they want to be creative. When facing a choice about how to approach a problem or task, people, either consciously or not, ask themselves whether they want to be creative and whether the benefits of being creative are greater than the risks associated with it. By way of example, when a social entrepreneur realizes the need to develop children's critical thinking skills, she has to decide that she does not want to look away from this problem. She has to decide to make a commitment to work on this problem and look for innovative solutions. Similarly, a marketing executive who sets out to create an ad campaign to promote a new clothing line has to decide whether to do something similar to previous campaigns or to be original and expose herself to the risk of the campaign not being well received.

Our studies with secondary school and university students show that there are three kinds of attitudes towards life and work that are relevant for creativity. One kind of attitude focuses on anticipating negative emotional consequences of creativity. Students are concerned that people might think original ideas are silly, that sharing creative ideas exposes them to ridicule, and

they worry about being perceived as disrespectful or angering others if they suggest original ideas. The second kind of attitude focuses on preventing negative consequences of sharing creative ideas. This is an "it is better to be safe than original" attitude. Students believe that they should be creative only when they might feel psychologically safer, such as when they are more senior or have fully mastered a domain of work. Many teachers encounter this attitude when students ask about the exact steps they need to follow in order to get the highest possible grades. Finally, the third kind of attitude is welcoming to creativity and emphasizes that working on open-ended projects feels important and meaningful. We found that when students hold this open attitude, they are both more motivated to work on creative projects and willing to work hard. Thus, if we aim to increase creativity, it will be necessary to shift people's attitudes toward creativity from apprehension to curiosity.

... THERE ARE THREE KINDS OF ATTITUDES TOWARDS LIFE AND WORK THAT ARE RELEVANT FOR CREATIVITY

EMOTIONS IN THE CREATIVE PROCESS

How does the creative attitude – observing the world with curiosity and receptiveness – translate into creative thinking and doing something creative? Knowledge and thinking skills are crucially important in the creative process. People have to be able to come up with many different ideas and imagine possible solutions to challenging problems. To do that, they usually need extensive knowledge of a domain of work. Knowledge of electrical engineering, for example, is necessary if one is creating a design for an electric car. But the creative process is also fraught with emotion. Josephine Cochrane was frustrated at her housekeepers chipping valuable china while washing the dishes. She decided that if no one else was going to invent a machine to wash the dishes, she would do it. Indeed, she transformed this frustration and eventually came up with the first workable dishwasher (Fenster, 1999). To another person, frustration will not be a source of inspiration in identifying important problems and will instead lead to anger. Thus, emotions can both be beneficial or detrimental to the creative process.

HOW DOES THE CREATIVE ATTITUDE – OBSERVING THE WORLD WITH CURIOSITY AND RECEPTIVENESS – TRANSLATE INTO CREATIVE THINKING AND DOING SOMETHING CREATIVE?

... EMOTIONS CAN BOTH BE BENEFICIAL OR DETRIMENTAL TO THE CREATIVE PROCESS

Scholars agree that there are several common steps in the process of creation (Amabile, 1996; Wallas, 1926). A person has to identify a problem, gather the relevant information and resources, generate ideas, evaluate the value of the ideas, and finally decide whether the process is complete, needs to be repeated or should be abandoned. These steps are not linear and occur in varying orders, such as when learning or preparation leads to recognizing a problem. For example, a teacher might realize that her students do not read a lot and that this is not good for their education and development. The teacher has thus identified a problem and committed to it. In her frustration, the teacher could resort to simply requiring students to read more for class or just give poor grades to students who do not do the required reading. Instead, the teacher decides to be creative. She gathers information about students' interests and finds books that address these interests. She generates ideas about how to interest children in these books by having them act out different characters, invent games inspired by the books, and write new adventures of students' favorite characters. The teacher tries out these ideas in class and observes whether students start reading more books. If there is a group of students who still do not read much, the teacher talks to them and comes up with additional ideas of how to engage them.

To date, most research studying emotions in the creative process has examined how different moods help or hinder idea generation. Alice Isen and her colleagues at Cornell University (Estrada, Young, & Isen, 1994; Isen, 1999; Isen, Daubman, & Nowicki, 1987) brought university students to a lab and induced either positive or negative moods by playing upbeat or gloomy music or by asking them to think of happy or sad events in their personal lives. Then, the participants were asked to complete tests of creative thinking. In one test, they were asked to find something that was common to a set of three concepts. For example, what do "salt", "deep" and "foam" have in common? The hidden link is "sea". In another test, people had to devise a way to fasten a candle to a corkboard wall and light it without the wax dripping on the floor using only a candle, a box of tacks and a book of matches. People had to figure out that they could take the tacks out of the box and use the tack box as a candleholder. In general, these studies showed that people who were made to feel happy were more flexible and original in their thinking than those in neutral or sad moods.

TO DATE, MOST RESEARCH STUDYING EMOTIONS IN THE CREATIVE PROCESS HAS EXAMINED HOW DIFFERENT MOODS HELP OR HINDER IDEA GENERATION

If being happy is key to coming up with creative ideas, how did all the eminent artists and scientists who are not known for being very cheerful manage to be creative? Some researchers have suggested that rather than looking at the influence of positive or negative emotions, the focus should be on which emotions energize a person to act (Baas, De Dreu & Nijstad, 2008). For example, a painter in a positive mood may feel content with his painting and choose to end the creative process, missing out on more original ideas that could have come about later if he had continued to work on the painting. On the other hand, a painter who is feeling dissatisfied with a project might be pushed to put in more effort and persist longer, leading him to be more creative. It may be that a person must first experience a negative emotion that causes them to act, which is then replaced with more positive emotions as the creative process unfolds (Bledow, Rosing & Frese, 2013).

... PEOPLE WHO WERE MADE TO FEEL HAPPY WERE MORE FLEXIBLE AND ORIGINAL IN THEIR THINKING THAN THOSE IN NEUTRAL OR SAD MOODS

ONE EMOTION THAT CONSISTENTLY INHIBITS CREATIVE THINKING IS UNMANAGED ANXIETY

One emotion that consistently inhibits creative thinking is unmanaged anxiety. As stated by the renowned Spanish theatre director Albert Boadella:

> "I have a pen and I write something but as if I didn't have a job. I try to be as relaxed as possible. When I am feeling tension, I block. So I try to be as a sponge so that things flow through me".

Yet, despite the harmful effects of unmanaged anxiety, embarking on a creative process is often filled with anxiety. Facing music in need of lyrics, an empty computer screen, or a new business venture can be unnerving. A person can imagine the difficult process of creation, uncertainty of success, and anticipate others' reactions. Others' reactions to one's work can range from being irritating to devastating to infuriating. How one handles these emotions can make the difference between giving up and achieving something significant. A group of Dutch researchers (Van Kleef, Anastasopoulou & Nijstad, 2010) studied the effects of receiving angry feedback on creativity. Participants were asked to complete a test of creative thinking and then were given feedback before working on another creativity test. Among the participants who received angry feedback, some did better on the second task, while others did worse. Some people have the ability to channel angry feedback into motivation to work harder and better, while others become paralyzed and disengage from the task.

The fact that some people are better able to overcome anxiety or channel their frustration shows that people have influence over how their emotions impact on their thinking and work, and that some people are more skilled at managing their emotions than others. Based on the assumption that people can harness and influence their own emotions, our research asks how people can use their emotions to enhance creativity. Thus, we are not asking what emotions lead to creativity; rather, we are interested in *how* different emotions can be harnessed or transformed for greater creativity.

... WE ARE INTERESTED IN HOW DIFFERENT EMOTIONS CAN BE HARNESSED OR TRANSFORMED FOR GREATER CREATIVITY

A person who is able to use their emotions to help them achieve goals in their daily life can be described as emotionally intelligent. Emotionally intelligent people are able to recognize when they are feeling an emotion and label it accurately. They can tell the difference between related emotions, such as boredom and annoyance or serenity and happiness. Because they have a more nuanced understanding of emotions, emotionally intelligent people are better able to interpret the meaning of their emotions, understand the causes of emotions and manage emotions more effectively. They understand that the creative process can be emotionally difficult and they can accept these challenges. Creative work is usually complex and difficult. There are dead ends and false starts. Writer Mercedes Cebrian describes the persistence and work ethic necessary for creativity.

> "In art, you have to spend a lot of time alone and you have to be prepared to work as in any other job. It is not constant fun by any means. First of all, there is this jotting down of notes about all kinds of aspects of the real world. Then you need to sit down and to know that a lot of time will pass during the process in which nothing useful or definitive happens".

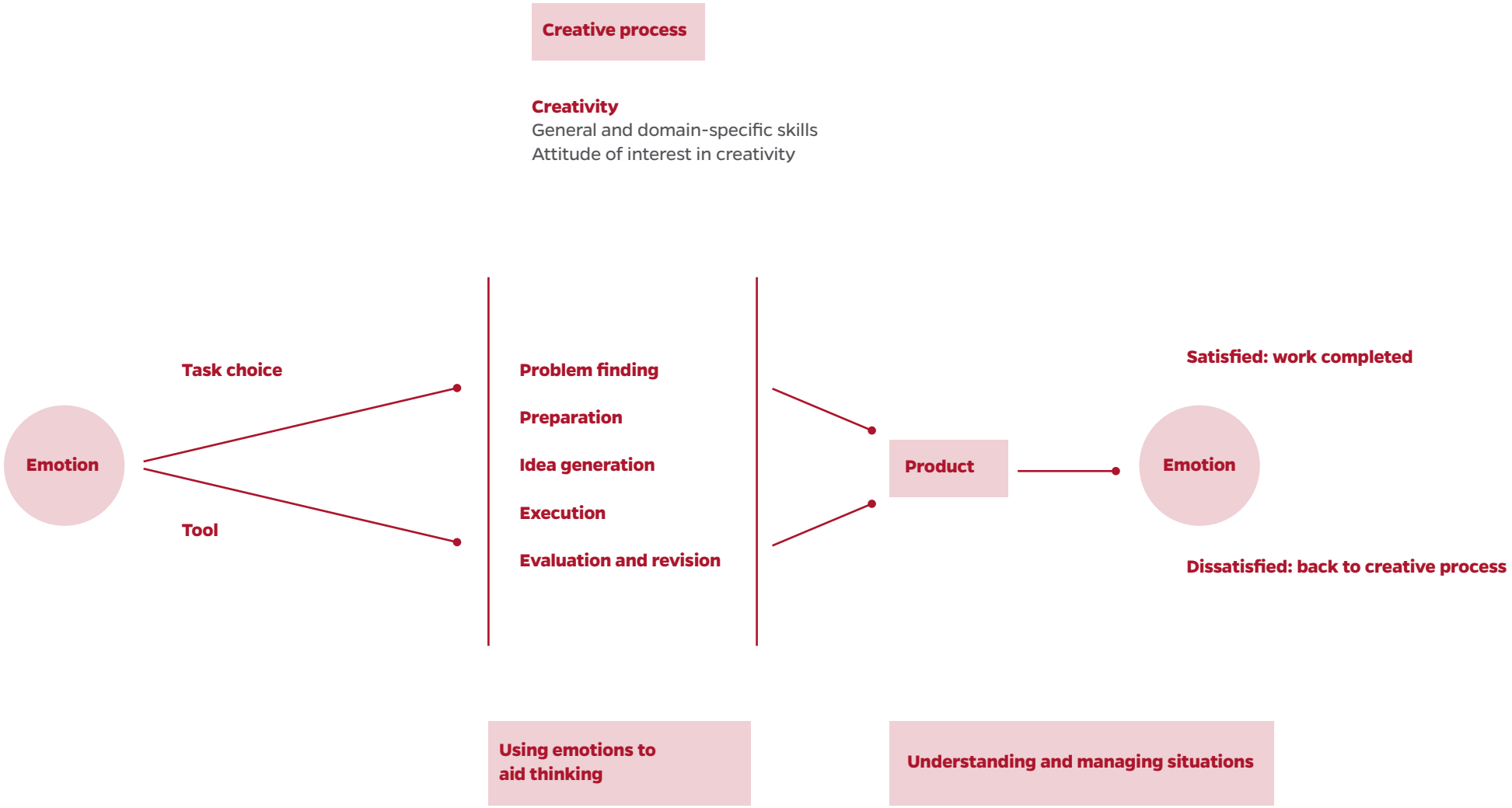
Emotional intelligence abilities have a role throughout the creative process, from finding important problems, to coming up with original ideas and persisting in solving problems despite frustration or obstacles. In other words, emotional intelligence abilities are important in how individuals navigate through the challenges of creative work. Figure 1 depicts the role of emotions and emotional intelligence abilities in the creative process. The model starts with the assumption that the key to creative production are traits, attitudes, and skills, such as openness to experience, beliefs about the importance of creativity, and a commitment to creativity. When these traits, attitudes, and skills exist, emotions can be tools and motivators of creativity and they can direct people's actions.

EMOTIONAL INTELLIGENCE ABILITIES HAVE A ROLE THROUGHOUT THE CREATIVE PROCESS, FROM FINDING IMPORTANT PROBLEMS, TO COMING UP WITH ORIGINAL IDEAS AND PERSISTING IN SOLVING PROBLEMS DESPITE FRUSTRATION OR OBSTACLES

What does the emotionally intelligent creative person do when facing a lifeless lump of clay or a new business project? Artist Carsten Holler described how he gets started on a new project and pointed to the importance of a balance between allowing his mind time to wander freely and being attentive to potential ideas or sources of inspiration.

> "You see somebody going by with a dog and then watch this person. Then you start to think about him and his dog and what kind of food the dog eats. Then you start thinking about dog food. And then you go on like this into infinity. But then, suddenly, there is another thing, an idea coming in and it is not possible to say in words what it is".

Figure 1. Model depicting the role of emotional intelligence skills in the individual creative process



More often, working around constraints leads to creativity. For instance, when people are asked to design a toy, they are more creative if they are constrained by having to use all of the specified building blocks than if they have more freedom to choose how many and which building blocks to use (Moreau & Dahl, 2005). Both allowing the mind time to wander (and thus putting off active work) and having significant constraints can induce anxiety. Emotionally intelligent individuals are better able to manage unpleasant emotions arising during the creative process, which can lead to new problems or redefining old problems. In turn, the way one frames the problem can lead to creative solutions. In one study, school-aged children were asked to make a drawing entitled "Playing Tag in a School Yard". Some students took the title literally, whereas others viewed the prompt as a starting place and reformulated the problem to allow themselves to be more creative. For example, one student drew ghosts tagging the school with various labels, while another student handed in a blank piece of paper with the modified title "Playing Tag in a School Yard – During a Blizzard" (Getzels & Jackson, 1962).

MORE OFTEN, WORKING AROUND CONSTRAINTS LEADS TO CREATIVITY

In another study, Getzels and Csikszentmihalyi (1975) set up an art studio in their laboratory at the University of Chicago and invited art students to create still-life drawings by choosing from among 30 available objects. The researchers observed the artists as they picked out objects, arranged them and completed the drawings. Some artists spent more time than others picking up the objects, feeling their weights and textures, and trying to work mechanical parts of the objects. Researchers called this process problem finding – artists spent time playing with objects and ideas of what to draw before they committed to a specific still life. These artists remained open to how they would structure the still life and delayed making a decision about what to draw. In the end, the artists who spent the most time problem finding made the most creative drawings.

Engaging in prolonged problem finding can be emotionally challenging. The unknowns of what to work on or how to approach a task are often disconcerting. People differ in how much of this discomfort they are willing to endure. Psychologists call this willingness to endure uncertainty "tolerance of ambiguity" and find that it is closely related to creativity (Helson & Pals, 2000; Lubart & Sternberg, 1995). Emotionally intelligent individuals can anticipate the emotional discomfort during problem finding, but are also better able to cope with these feelings. In a fast moving world where most people work on multiple projects with significant time constraints, substantial skill is needed to manage anxiety in the face of deadlines and allow oneself time for problem finding and idea exploration.

IN A FAST MOVING WORLD WHERE MOST PEOPLE WORK ON MULTIPLE PROJECTS WITH SIGNIFICANT TIME CONSTRAINTS, SUBSTANTIAL SKILL IS NEEDED TO MANAGE ANXIETY IN THE FACE OF DEADLINES AND ALLOW ONESELF TIME FOR PROBLEM FINDING AND IDEA EXPLORATION

Emotional intelligence abilities are also necessary to transform emotions into motivators of creative activity. For example, boredom can lead to a desire for passive entertainment or even destructive behavior, such as drug use (Csikszentmihalyi, 1993; Hunter & Csikszentmihalyi, 2003). Alternatively, boredom can inspire a person to seek challenges in creative work, as illustrated by writer Mercedes Cebrian:

> "I suffered from great boredom, but I think that's quite positive. Now as adults we don't get as bored, there isn't time for boredom. I spent the months of my summer school holidays as a child really

> bored. This is where you had to be inventive to find things to do. [*As an adult*] Other situations, like weddings or funerals, are moments of real boredom. There is no way to escape. So I take advantage of this for my writing. Boredom doesn't need to exist if one can take advantage of it. But I also think it's negative, and most importantly, unrealistic to avoid boredom because I suppose it's really the fear of being alone with oneself and with one's own thoughts. In my opinion, boredom puts you into contact with your own self".

Another way that people can use emotions to help creativity is by matching their emotional state to the tasks that would benefit from a certain mood. People in sad moods tend to think more critically; thus, sad moods can help with tasks that require critical and analytic thinking. On the other hand, people in happy moods are better able to quickly come up with interesting and playful ideas; thus, happy moods can help with brainstorming tasks that require original thinking in a short amount of time. In a series of studies, Cohen and Andrade (2004) demonstrated that some people consciously match their moods to benefit the tasks they face. They brought university students into the lab and showed them various video clips to make them experience different emotions. Participants were then either told they would be performing a task requiring precise analytic thinking or a task generating creative and imaginative ideas. Participants were given a choice to listen to happy or sad music before working on these tasks. By listening to music, people could make their mood either more positive or more negative. Many people decided to listen to upbeat music when they were told they would work on a brainstorming task and sad music when they were told they would work on an analytical task.

ANOTHER WAY THAT PEOPLE CAN USE EMOTIONS TO HELP CREATIVITY IS BY MATCHING THEIR EMOTIONAL STATE TO THE TASKS THAT WOULD BENEFIT FROM A CERTAIN MOOD

This study showed that people do not manage their moods only to make them more positive, but that they also consider how useful different emotions are for what they have to do. Some people decided to change their initial mood and make it more negative because sad moods are helpful in performing critical thinking tasks. Others chose to make their mood more positive because happy moods can help with generating original ideas. However, not all people matched their emotions to the tasks awaiting them, demonstrating that not everyone has an understanding of which moods benefit different tasks. The theory of emotional intelligence posits that individuals who have the ability to use emotions to help thinking understand the influence of moods on performance and can apply this understanding in their work (Salovey, Mayer, & Caruso, 2002). By intentionally choosing to work on tasks that require critical evaluation or editing for quality in sad moods and tasks that require coming up with new ideas in happy moods, people should be able to complete their tasks more successfully.

After engaging in a creative task, people can feel a range of emotions, and these emotions can signal future actions. Emotions related to satisfaction signal that the creative process is over; the person solved a problem and feels good about the solution. Alternatively, emotions related to dissatisfaction or anxiety can signal that there is a problem and direct one back to the creative process. If the frustration or anxiety is too high, the person may choose to give up rather than return to the creative process. The skill of accurately labeling one's feelings and understanding the source of those emotions is helpful in this process. For example, imagine a teacher who feels frustrated at the end of each school day. If she has the ability to understand that her frustration is a result of not having all the students engaged and participating in class, she will act differently than if she cannot identify the source of her frustration. If

she decides to approach this problem creatively, she can generate possible solutions to engage students. She thinks of many solutions but decides to try offering stickers each time students raise their hands. After a few weeks there are no changes in students' participation. The teacher continues to feel frustrated. Finally, the teacher pairs disengaged students with those who are struggling and students become more engaged when they feel responsible for helping others. The teacher was able to use her frustration as motivation to identify a problem and also to continue working on the problem until it was resolved successfully.

ENHANCING EMOTIONAL INTELLIGENCE SKILLS AND CREATIVITY THROUGH THE ARTS

Pablo Picasso talked about artists being receptacles for emotions and vehicles for transforming emotions (Picasso, 1988). Similarly, the renowned director Stanley Kubrick likened film to music in that they both should be a progression of moods and feelings to which the theme and meaning are added later (Kogan, 1989). Emotions are central to all art forms, from painting and sculpture, to music, film, theatre and other arts. For some artists, this process might be unconscious and feel automatic or natural. However, emotional intelligence skills can be taught, practiced and developed (Brackett, Rivers, Reyes, & Salovey, 2012; Rivers & Brackett, 2011) and people can learn how to deliberately use their emotions as aids in the creative process. Engagement with the arts, both as art appreciation and art creation, can be a powerful teaching tool in increasing emotional intelligence abilities and creativity in one's everyday and professional life. This is the thesis central to the mission and philosophy of the Botín Centre and it is a thesis that will motivate the development of educational programs and the research on their effects.

ENGAGEMENT WITH THE ARTS, BOTH AS ART APPRECIATION AND ART CREATION, CAN BE A POWERFUL TEACHING TOOL IN INCREASING EMOTIONAL INTELLIGENCE ABILITIES AND CREATIVITY IN ONE'S EVERYDAY AND PROFESSIONAL LIFE

In collaboration with the Botín Foundation and the Botín Centre, researchers at the Yale Center for Emotional Intelligence are designing a series of workshops for children and adults using the arts as a teaching tool. Different educational programs will use visual arts, music, acting and other art forms to build creativity-relevant skills. For instance, unlike a usual trip to the museum, where people might look at each artwork for just 30 seconds, the workshop participants will be asked to look at a single work of art for a minimum of 10 minutes. People will be challenged to examine details of content, structure, composition, and color. They will be asked to explore the work of art from different perspectives, angles and distances. People will be encouraged to imagine themselves inside the work of art, thinking about the sights, sounds, smells and feelings that they would experience if they were literally inside it. Noticing details and creating a rich picture of the artwork will be then applied to learning about emotions and creative work.

This simple technique of deep observation and entering into a work of art is a common tool used by eminent creators across the arts and non-artistic domains (Root-Bernstein & Root-Bernstein, 1999, 2004). Successful actors, for instance, are able to identify with a character they are portraying and not only understand the character's emotions but also feel them as their own. Innovators in other fields also use this technique, from the animal scientist Temple Grandin who observes the world from the standpoint of cows and sheep as she is designing

THIS SIMPLE TECHNIQUE OF DEEP OBSERVATION AND ENTERING INTO A WORK OF ART IS A COMMON TOOL USED BY EMINENT CREATORS ACROSS THE ARTS AND NON-ARTISTIC DOMAINS (ROOT-BERNSTEIN & ROOT-BERNSTEIN, 1999, 2004)

animal corrals, to medical doctors who devise optimal treatment plans for individual patients.

The first goal of our multi-pronged educational programs is to enhance emotional intelligence skills. People will be asked to describe emotional content in works of art and reflect on how the artwork makes them feel. As they share their observations, people will discover that the same work can be perceived differently depending on the level of detail noticed or personal associations the work invoked, as well as learn that the same events evoke different feelings in different people. In this process, people will gain knowledge about how emotions are expressed and what information is necessary to successfully perceive emotions.

The second goal of our educational programs is to teach people to use emotions in the service of their own creative process. Imagining a real life problem as represented in a work of art, participants will gain distance from the problem and achieve a fresh perspective. People will be guided in learning about how different emotions help and hinder performance in various tasks. A person viewing a work of art depicting sadness, for instance, will be challenged to notice the kinds of thoughts that occur in this mood. Similarly, individuals will analyze how emotions like frustration and boredom influence creative work. In one activity, participants will identify a work of art that represents their problem and another work that represents a successful resolution of the problem. Then, people will be asked to imagine that the two works are the first and the third in a triptych, a series of three related paintings. They will be challenged to envision the missing painting. This process will develop associative thinking skills that are important building blocks in creativity (Russ & Dillon, 2011).

Fundamental to this applied educational work is the realization that observation skills are key to both developing emotional intelligence and creativity. The arts provide a suitable medium to teach people about emotions and creativity. Works of art – from paintings, sculptures, pieces of music, to dance and dramatic arts performances – convey emotion and are themselves a result of the creative process. While talking about one's own emotions is highly personal and uncomfortable for some individuals, works of art provide subject matter that is located outside of the person. The arts, therefore, provide the space for emotions to be examined in a psychologically safe manner. Even individuals who are concerned about the negative social consequences of exposing themselves emotionally will be able to engage in educational activities that employ the arts as a teaching tool.

... OBSERVATION SKILLS ARE KEY TO BOTH DEVELOPING EMOTIONAL INTELLIGENCE AND CREATIVITY

Our research and educational activities have the ultimate goal of enabling the emergence of two critical elements in creativity. The first is an open attitude toward creativity and the second focuses on the emotional abilities necessary to sustain effort in creative work. In this chapter, we reviewed research that shows that personality traits and attitudes of openness to creativity are necessary for creative achievement, but are not enough on their own. Importantly, emotional intelligence abilities can guide and regulate behavior during the creative process. These abilities can turn felt emotions into tools of inspiration for creativity and they can direct people's actions during the creative process. When ideas or products are generated, emotional intelligence abilities can help signal the completion

OUR ULTIMATE GOAL IS TO INCREASE SOCIETAL CREATIVITY – THE SKILLS NECESSARY TO INCREASE INNOVATION AND GENERATE DEVELOPMENT IN SOCIETY

of the creative process or a need for continued work. Our current research examines how attitudes about the importance of creativity and high levels of emotional intelligence abilities jointly contribute to creative achievement. Our goal is to envision ways to use emotion-filled works of art to help people more fully develop their emotional and creative skills. Unlike traditional arts education programs and centers, we are not primarily interested in developing artistic skills. Rather, we are interested in using involvement in the arts to enhance people's creativity in their everyday and professional lives. Our ultimate goal is to increase societal creativity – the skills necessary to increase innovation and generate development in society.

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Botín Foundation. In 1964 Marcelino Botín Sanz de Sautuola and his wife Carmen Yllera, founded the Marcelino Botín Foundation to promote social development in Cantabria, in the north of Spain. The main office is located in the city of Santander, the capital of Cantabria, in what used to be the Sanz de Sautuola family's house.

Today the Foundation, chaired by Emilio Botín, nephew of the founder and the Chairman of the Santander bank, remains faithful to the spirit of its founders and after nearly 50 years of work, is Spain's number one private foundation both in terms of its investment capacity and the social impact of its programmes.

The Botín Foundation's objective is to stimulate the economic, social and cultural development of society. To achieve this, it acts in the fields of art and culture, education, science and rural development, supporting creative, cutting edge talent and exploring new ways of generating wealth. It is primarily active in Spain and especially in the region of Cantabria, but also in Latin America.

Coinciding with the Foundation's 50th anniversary, the new Botín Centre, designed by Renzo Piano, will be opened in Santander. The Botín Centre will be one of the leading art centres on the international scene that, through the arts, will contribute to the development of creativity as a way to stimulate economic and social growth.

THE THREADS OF CREATIVITY

Christopher Clouder

"It is music and dancing that makes me at peace with the world, and at peace with myself".
Nelson Mandela[1]

Every day and every moment of our waking lives we live with the creativity of the past. It surrounds and envelops us in all that we do whether it is a cultivated garden or park, the architecture in which we live or work, the clothes we wear, the food we cook, the furniture we use, the social and economic expectations we have or the language we speak. Most of the time we do not perceive it – it is just what it is, but we can also focus our minds on it and then a stream of new questions arises. When we ask ourselves what effect does this space have on me, and why? Why do I use this particular word to describe something I feel? Why do I prefer this picture for my wall? Why are some actions acceptable in one culture but are not considered proper in another? These questions are creative in themselves. They take us into new realms. In human history there has always been creativity and this capacity has had a determinative influence on how we lead our lives, but what really changes over time is how we think about this capacity for creativity and make it conscious.

IN HUMAN HISTORY THERE HAS ALWAYS BEEN CREATIVITY AND THIS CAPACITY HAS HAD A DETERMINATIVE INFLUENCE ON HOW WE LEAD OUR LIVES, BUT WHAT REALLY CHANGES OVER TIME IS HOW WE THINK ABOUT THIS CAPACITY FOR CREATIVITY AND MAKE IT CONSCIOUS

The contemporary vibrant discussion on the value of creativity and innovation and their connection to our emotional life is not new. However, it is different. Utilising the powers of fire, developing the linguistic skills to communicate, creating the first wheel or clay pot, the discovery of metallurgy, building houses for habitation leading to larger and larger communities, finding ways of coordinating social endeavours and aspirations, have all deeply affected human evolution. The inventions and innovations of today should be measured against the discoveries of the past with certain humility. It is all too easy to have hubris about our present state compared to the achievements of our ancestors. Creativity, from the invention of knitting needles to the manufacture of iPads, is synonymous with our continuously evolving sense of identity. "*... never before has the pace of innovation accelerated so dramatically, filling our lives with new fashions, new electronics, new cars, new music, new architecture ... And even now a new crop of artists gaze at the Mona Lisa with an eye to turning it into something fresh and dazzlingly creative. The human chain of invention remains unbroken and in our superbly connected world, our singular talent to create races ahead of us*".[2] (Pringle, H. 2013) In this age of frenzied newness we also need an anchor lest the "race" exhausts us and the "unbroken chain" is snapped. To find our bearings we need more than ever the salutary thought that someone, somewhere, somehow created this, and what they created becomes, as it were, "spellbound" in time and material. Then we can create the connectedness between the past and the present that we need. "*... our lives increasingly require the ability to deal with conflicting messages, to make judgments in the absence of rule, to cope with ambiguity, and to frame imaginative solutions to problems we face*".[3] (Eisner. 2002)

"... OUR LIVES INCREASINGLY REQUIRE THE ABILITY TO DEAL WITH CONFLICTING MESSAGES, TO MAKE JUDGMENTS IN THE ABSENCE OF RULE, TO COPE WITH AMBIGUITY, AND TO FRAME IMAGINATIVE SOLUTIONS TO PROBLEMS WE FACE" (EISNER, 2002)

The question of "how" something is created or invented is usually answerable in some form, at least in terms of what has been created since the

Renaissance, which was a time when art became self-conscious and a more alert attention began to be paid to an individual's innovative attainments. Those who embarked on a creative career at that time became celebrated for their work, hence overturning St. Augustine's authoritative and stern edict "*Creature non potest creare*" (a creature should not presume to create). In contrast, Alberti in 15th century Florence likened the painter's work to that of "*another God*" [4] *(On Painting. 1435).* A battle was begun for the human soul and in many ways the battleground is the same now as it was then. This was the starting point of the early modern age in European history of which we are the heirs. We speak about "disruptive technology" when contemplating the changes wrought upon our lives in the last few years but in the longer term the real disruptive technologies are the arts. They cause us to see and experience the world and our fellow human beings differently, and our ways of perception fluctuate with the influence of our times, our changing cultural and natural environment and our sense of selfhood.

WE SPEAK ABOUT "DISRUPTIVE TECHNOLOGY" WHEN CONTEMPLATING THE CHANGES WROUGHT UPON OUR LIVES IN THE LAST FEW YEARS BUT IN THE LONGER TERM THE REAL DISRUPTIVE TECHNOLOGIES ARE THE ARTS

The Ancient Greeks well knew with their theatrical concept of "*catharsis",* whereby immersing ourselves in the art of the theatre and the tragic god-given destiny of mythological characters, we are able to find new depths and strengths in ourselves to face the challenges within our individual biographies. They celebrated creativity in their exuberant poetic hymns to Pallas Athene, who combined the interconnected capacity of the hands to produce craftwork and that of the mind that lead to clarity of thought. Human creativity is actually a complex continuum of activity, relationships and inner change. It meanders, flows, doubles back on itself, offers up contradictions, requires nurturing and concentration, appears as if from nowhere and weaves itself into the fabric of our lives. In being imaginative we can create our own maze and like following Ariadne's thread we can find an innovative way of emerging from it and find ourselves in a new place. The most influential narrative of creativity is the *Odyssey*, albeit nearly 3000 years old. As well as depicting the inner and outer voyages of its eponymous "*nimble-witted"* hero in his decades' long quest to return home, it contains telling images of how we create our world. Penelope, in her determined attempt to reject suitors who claim her husband must have died over his twenty year absence, has promised that she will chose one of them on completion of her weaving, But what she weaves by day she unweaves by night. This "unweaving" is as creative as the weaving, creativity involves not just the making but the unmaking too. When we try to capture such a pathway it runs through our fingers like sand. It is a process that takes up threads of thought, the weft of structure, the choice of colour and tone, the dynamism of movement and the liberation of the spirit. By relying on only analytically narrowing things down we might end up destroying the very thing we wish to flourish. This is the dichotomy we face in discussing creativity. We instinctively like fixed points that can be calibrated and measured because they give a sense of understanding and control over what is around us, but we also have to face the mercurial ever-evolving nature within us.

HUMAN CREATIVITY IS ACTUALLY A COMPLEX CONTINUUM OF ACTIVITY, RELATIONSHIPS AND INNER CHANGE

> *"A lead pencil has a point, an argument may have a point. Remarks may be pointed and a man who wants to borrow five pounds comes to a point... Lots of things have points: especially weapons. But where is the point of life? Where is the point of love? Where, if it comes to the point, is the point of a bunch of violets?*

There is no point. Life and love are life and love, a bunch of violets is a bunch of violets, and to drag in the idea of a point is to ruin everything. Live and let live, love and let love, flower and fade, and follow the natural curve, which flows on, pointless.... Life is not a question of points, but a question of flow".[5]
(D.H. Lawrence. 1929)

All artists speculate on where their art springs from, even if they keep such thoughts to themselves. Others are more open. Paul Klee famously "*took a line for a walk"*[6] *(*Paul Klee.1920*)* and declared *"Art is a simile of Creation"*(Ibid). He maintained that if the point is the centre then the line is the first dynamic and creative act. In these Creative Confessions he also stated that *"Art does not reproduce the visible, rather it makes visib*le". (Ibid) It is like a fire: "*A certain fire, an impulse to create, is kindled, is transmitted through the hand, leaps to the canvas and in the form of a spark leaps back to its starting place, completing the circle - back to the eye (back to the source of the movement, the will, the idea)".*

THERE IS NO CREATIVITY WITHOUT MOVEMENT

Works of art "*help you ... to fancy you are God*". (Ibid) He also perspicuously perceived that "*Movement is the source of all change ... Character, too, is movement".* (Ibid) There is no creativity without movement. And how we move inwardly and outwardly are intimately connected. The artistic artefacts we produce are the result of "*techne*", that is our art or skill, but we are guided either consciously or subconsciously by what is happening within us. Motion is the source of all creation. Klee is connecting what is physically created with the stream of emotions we all contain. For him lines have a social context because they show our encounters in either converging or diverging forms and therefore they have an emotional quality. And it is the challenge of elucidating this connection that we have set ourselves in this publication. We have taken the arts as our starting point and then followed the flow through the emotions to the source of our creativity.

Questions about creativity of an earlier provenance than the Renaissance, such as why the pyramids were built or Stonehenge erected, lead us to imaginative conjecture and rival theories but never a definitive answer. The questions themselves give us space for creativity in thinking. But the question of "why" always leads us into new territory and helps us find the dormant creativity in ourselves. Then we encounter the dual aspect of all art, that what had seemed familiar can also seem strange. Art lives in a context but can simultaneously elevate that context into something new and challenging. "*Certain aspects are moving precisely because they return us with greater clarity to an aspect of ourselves which we seem to have forgotten or even betraye*d".[7] (Armstrong. J. 2000) Creativity can be a voyage into the unknown but also into the world of memory and forgetting. Written at a time of great drama and foreboding T.S.Eliot summarizes this process concisely, depicting a unifying current between past, present and future:

"We shall not cease from exploration
And the end of all our exploring
Will be to arrive where we started
And know the place for the first time".[8]
(T.S.Eliot. Little Gidding. 1942)

So does creativity make us better people? The Second World War brought this question into stark relief with the concept of the "*banality of evil*".[9] (Ahrendt.1963) In Agatha Christie's Hercule Poirot novels the eponymous hero has to tackle malfeasance of the most creative kind that takes great imagination and rival creativity to unravel. In real life creative tax avoidance, creative bank robbers and creative criminals of a far worse nature, even leading to genocide, have been part of our social fabric in spite of our creative efforts to rein in their malign influence. How do these creative acts differ from the creativity we wish to celebrate and develop here? This added dimension, that can distinguish one sort of creativity from another, is not to

be found in statistical evidence or in a mound of academic papers, but lies in the practice and capacity for generosity of spirit, as Mandela has so recently demonstrated. When we practice the arts we also create the opportunity to open ourselves up, but whether we take this opportunity is another matter. We can however acknowledge the multi-dimensional aspects of our psyche and through that gain greater insight into the value of collaboration and the value of human dignity. Bishop Tutu has summarised what the concept of "ubuntu" meant to Mandela. This was a guiding principle in his political life: *"It refers to gentleness, to compassion, to hospitality, to openness to others, to vulnerability, to be available to others, and to know that you are bound up with them in the bundle of life".*[10] (1986)

There is as well a fundamental connection between art and playfulness. Nabokov saw art as "*divine play"* and asserted that Homo Poeticus preceded Homo Sapiens. In play we cannot fail. Our imagination changes our daily world and its usual limitations are disbanded. We can be confident in the exploration of our emotions. We can imagine becoming what we could be. Our ingenuity is not tempered by the conventional. Our sub-consciousness can be liberated and get on in its own productive way. In biblical terms *"I was by God's side, a little child, delighting God day after day, ever at play by God's presence, at play everywhere in God's world, delighting to be with the human race".*[11] (Proverbs of Solomon) For Plato, too, seriousness and playfulness were not opposites but closely related "*A man should spend his life at 'play'… sacrificing, singing, dancing – so that he can win the favour of the gods".*[12] (Plato. Circa 350 B.C.)

In 2014 we are commemorating 100 years since the outbreak of the First World War and its antecedents showed little generosity of spirit. This war was the product of individual choices made by men in power. *"It was Europe's and the world's tragedy in retrospect that none of the key players in 1914 were great or imaginative leaders who had the courage to stand out against the pressure building up for war".*[13] (McMillan 2013) This analysis highlights the fact that the lack of imagination enabled humanity to sleepwalk into disaster and that to be truly creative requires courage. In 1918 the Austrian writer Karl Kraus, gazing across the devastation of the preceding four years, coined the word "*gegenschöpferish"* – which means counter-creative. It was as though God looked at our antics and *"saw it was not good"*. When we are being creative we can never be sure of the outcome and so our ethical stance comes into play. Clearly If we are to search for new thoughts we must be prepared to take risks. In Michelangelo's Sistine chapel fresco of the creation, Adam, reclining listlessly on the Earth, lifts up his limp hand to receive divine energy sweeping down from the heavens. Then as we follow the sequence of frescoes across the ceiling it leads to that moment when our creativity leads beyond what were hitherto "commandments". We become free. But we could also end up disgraced and earthbound again in the drunkenness of Noah with no redemption in sight. Our history is littered with creativity turned to destructive purposes and so, however much we laud its achievements, it needs supplementing by other more humane capacities if we hope for a better world. In itself creativity needs an inner guidance. Morality did not have any influence on Odysseus in his fabulous fabricated stories to escape from the difficult circumstances in which he found himself. Survival was all. However, as a social metaphor it is not conducive to improving our lot. So in Plato's Apology of Socrates we find Socrates speaking of his "*daimonion"*, an inner voice that warned him of his mistakes but did not tell him what he should do. Today we would call it the voice of our conscience.

"*One of the unexpected things art can do for us is teach us how to suffer more successfully*".[14] (de Botton & Armstrong 2013) This thought also has ancient origins, for instance in ancient Epidaurus in Greece where the sick were brought to recover by sleeping between the statues of Apollo and Dionysus. The Isenheim altarpiece painted by Matthias Grünewald in the early 16th century offered similar consolation to those who were desperately ill, through the contemplation of

the life, suffering and resurrection of Christ in the Antonine hospital in Colmar. These long-gone practices cannot, of course, have the efficacy they once had. We don't need the stomach-churning paintings of Cindy Sherman, Sartre's novel Nausea or Fellini's tortuous film La Strada to acknowledge the cruelty, suffering and pain in the world. But they do help because they become shared experience. In the art gallery, book or cinema we are sharing these perceptions with others. And what these artists bring through their art is the hidden capacity to create that is in itself originally rooted in play. In our world of individuality the arts can assure us that we are not alone. We are not the only ones who experience the world in this way and by communicating these insights of pain and sorrow we move beyond being immersed just within the boundaries of ourselves. The melancholia and resignation in the musical genre of the Portuguese Fado or the chansons of Jacques Brel turn fate and suffering into song and thereby raise it to another level on the scale of emotions.

IN OUR WORLD OF INDIVIDUALITY THE ARTS CAN ASSURE US THAT WE ARE NOT ALONE

> *"Once we believed that only gods knew how to mould worlds or to eradicate them. For good or ill man is now his own god: both a world builder and a destroyer of worlds. Perhaps we have no right to posses such powers, which might yet prove our undoing. But it is too late to regret the audacity of the uncontrollable, invaluable beings who first questioned the limits placed on our thoughts and dreams, supplemented nature with their own creations, and came to be known – for want of a better word – as artists".*[15]
> (Conrad. 2007)

Creativity is not always about the grand and enduring. The little acts of daily life can be creative for all of us. The arts can awaken, arouse, inspire, encourage and challenge us by touching our emotions, eliciting thoughts, and pushing us to create by learning from others. "*The people I most admire are those who are sensitive and want to create something or discover something, and do not see life in terms of power... They produce literature and art, or they do disinterested scientific research, or they may be what is called 'ordinary people', who are creative in their ordinary lives, bring up children decently, or help their neighbours*".[16] (E.M. Forster. 1951) Perhaps the main and optimistic conclusion from all our histories is that "neighbourliness" in all its forms is the most important of the creative arts, and the Arts can assist us in finding that quality in ourselves, if we allow them to teach us how to look, hear and feel.

THE ARTS CAN AWAKEN, AROUSE, INSPIRE, ENCOURAGE AND CHALLENGE US BY TOUCHING OUR EMOTIONS, ELICITING THOUGHTS, AND PUSHING US TO CREATE BY LEARNING FROM OTHERS

"*It is imperative that we give up the idea of ultimate sources of knowledge and admit that all knowledge is human: that it is mixed with our errors, our prejudices, our dreams, and our hopes: that all we can do is to grope for truth even though it is beyond our reach".*[17] *(Popper. 2002)* The arts give us a sense of destination which we all need in our lives, especially in these times, and give us subtle hints as what that destination might be, as well as enabling us to accept that in the multitude of all our pluricultural landscapes of consciousnesses our destinations are not the same. But at least we are not alone on our journey because the arts help us share and hopefully understand more about our emotions and our nature, and to better understand others. Yet we should still approach the topic of creativity with a certain humility. Creativity is a protean gift and whether we try to catch it through myth or neuroscience it continues to elude our grasp. Therein lies its joy.

This is our second publication on this theme and our task has been to deepen what we published in *Good Morning Creativity*. We are hoping that the new Botín Centre in Santander, with its superlative design and setting, will exemplify our approach and bring artistic endeavour into peoples' lives so that they find the sources of their own creativity in whatever way they feel inclined or is appropriate. This time we have taken the six artistic areas that the Centre will initially be working with as discrete subjects in order to explore them further, but without losing sight of their cross-fertilisation and inspiration for new forms and activities. The task is on-going and the spirit of creativity that takes us forward is that which can be found in everybody, regardless of circumstances, and the building and publications, with their international perspective, are there to serve in whatever way they can.

NOTES

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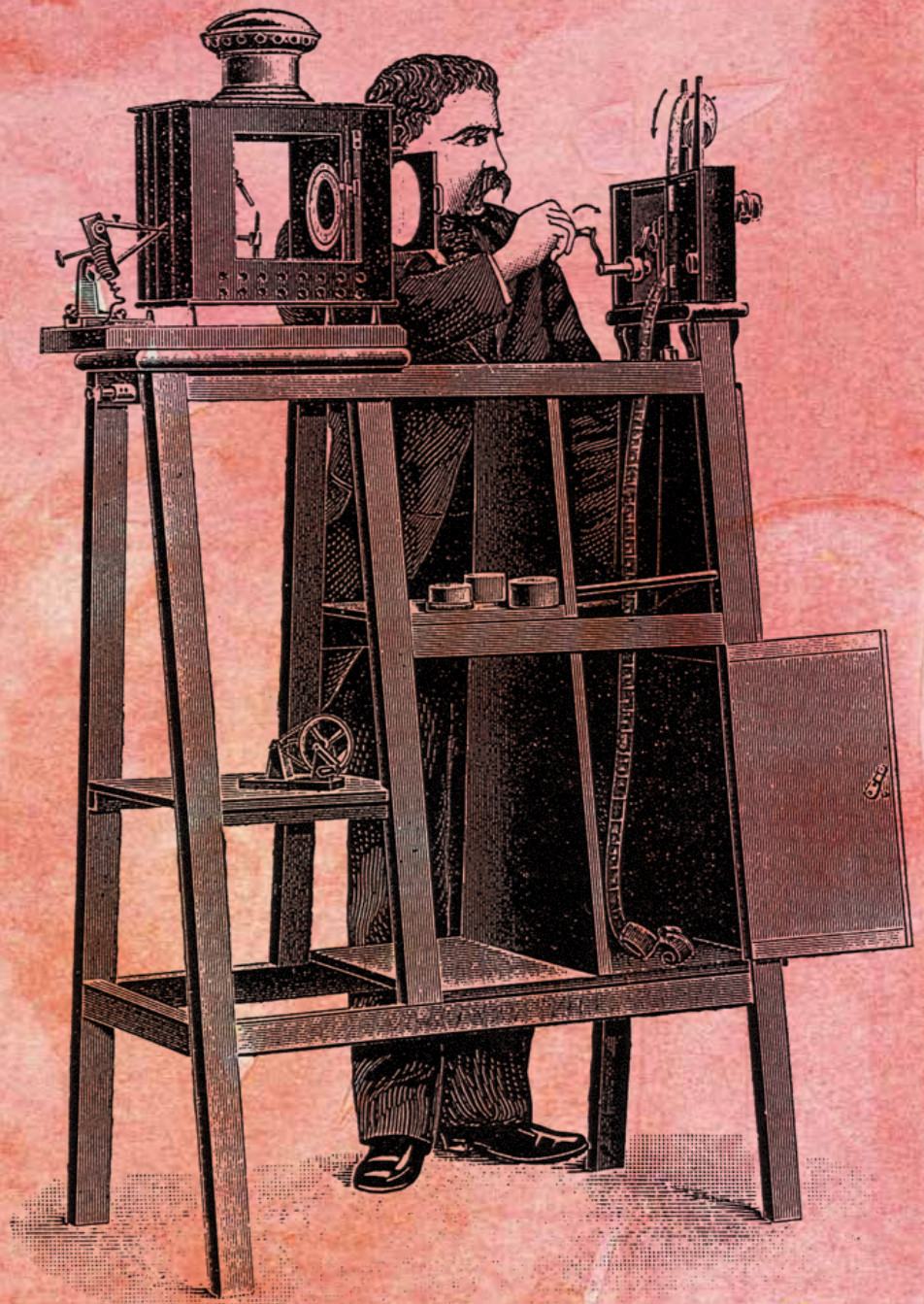
Christopher Clouder from 2009 to 2013 was the director of the *Botín Platform for Innovation in Education*. From 1989 to 2012 he was the founder and CEO of the European Council for Steiner Waldorf Education that spans some 680 schools in 27 countries. Before this he started his career as a teacher, working with children with behavioural difficulties in a Steiner school for special needs. He went on to teach in a Gymnasium in Holland for five years and then in the high school in two Steiner schools in the UK for 18 years. He is now a freelance speaker, writer and consultant.

He has lectured widely, written and compiled books and many articles, and lectured at international conferences, not only on Steiner education but also on other educational and cultural subjects. In 1997 he co-established the Alliance for Childhood, a global network which campaigns for the right of young children to be allowed to experience their childhood in a healthy and fulfilling way. Christopher is a Fellow of the Royal Society of Arts, and Mind and Life Europe, and is on the steering group of the Learning For Wellbeing Consortium based in Brussels. He has made presentations in the EU and Westminster parliaments and been instrumental in gaining public funding for Steiner education in England. He has worked closely with educational policymakers in the UK and Europe, shared platforms with many academics, worked as a school consultant and is considered an authority on Steiner, creative education and educational innovation. He receives many invitations to lecture internationally and finds the research into cultural evolution, different cultures and their artistic expression a source of great interest. He sees his educational work as serving to build bridges between educational cultures, be they political, social, cultural or academic and creating a sense of solidarity, renewal and understanding for the benefit of children worldwide. He has recently been appointed the Director of Pedagogy of the newly founded Il Liceo dei Colli in Florence. http://www.liceodeicolli.it/en/



CINEMA

Antonio Santos

Abstract

Film is a synthetic summation of all the other arts; the natural realm of imagination and fantasy, both key aspects of creativity.

Looking at moving images improves attention, invigorates thinking, jogs the memory, enhances interconnection, and imagination and ingenuity are intensified. Film is a suitable tool for carrying out the education of ways of seeing*, a powerful tool in the formation of intercultural societies which require discerning, receptive, free and active citizens.*

"I think one should do the thing one knows how to do and, more importantly, one should also promptly learn to understand the thing it is one knows how to do".
Federico Fellini

EYES WIDE OPEN: CREATIVITY AND AN ANALYTICAL EDUCATION OF WAYS OF SEEING

Film ushered in a new age in the history of art and of culture, marked by the rise of *audiovisual media*. Chronologically, film was the first of these media and, even today, it remains the most prestigious of all. It is also a valuable teaching aid and an ideal vehicle for conveying culture which has developed in tune with the audiovisual age.

The so-called Seventh Art –a synthetic summation of all the other arts– fulfils the old Wagnerian dream of achieving total art: the art of our times. As a device for representation, film extends a second figurative reality which can be a faithful copy of the real world and it can also be completely far-fetched and imaginary. It is, by extension, a very effective tool for social education – a powerful tool in the formation of intercultural societies which require discerning citizens who are receptive and active. In effect, it is an ideal medium for cultivating emotional education, for educating ways of seeing and for embracing possible or imaginary worlds. A highly suitable tool which, when used properly, can contribute to enhancing and strengthening viewers' imaginations and creativity.

An *analytical education of ways of seeing*, as we understand it, sets the spectator free: makes him or her into a more active, critical and perceptive interpreter of the surrounding world. It is an interdisciplinary educational process, a channel of knowledge that pursues the formation of inquisitive and perceptive pupils. As opposed to merely forming readers or consumers of increasingly plentiful images, it seeks to transform them into real managers and producers of knowledge by means of regular exercise interacting with images and their surroundings. An interpretative exercise, in short, that is underpinned by written and audiovisual texts; by what can be seen and heard; by what can be read and looked at. One that aspires for our pupils to overcome the wholly passive state of being spectators in order to be active interpreters: both object and subject of their learning process.

NEVERTHELESS, AND IN ORDER TO TAKE FULL ADVANTAGE OF THIS RESOURCE, GOING TO THE MOVIES WITHOUT PREVIOUS KNOWLEDGE IS NOT GOOD ENOUGH: GAZES NEED TO BE EDUCATED

It adheres to Erwin Schrödinger's remark that: *"Creative thought consists not so much of seeing what nobody else has seen yet as of thinking something nobody has yet thought about something everyone can see".*[1] The development of creativity is related to the abilities of seeing, analysing, interpreting and re-using; in other words, of transforming or applying something seen in an original way. In this sense, creativity is directly linked to an *Analytical Education of Ways of Seeing.*

Film, together with other audiovisual resources, is probably one of the most suitable tools for carrying out the afore-mentioned educational plan.

"CREATIVE THOUGHT CONSISTS NOT SO MUCH OF SEEING WHAT NOBODY ELSE HAS SEEN YET AS OF THINKING SOMETHING NOBODY HAS YET THOUGHT ABOUT SOMETHING EVERYONE CAN SEE" (ERWIN SCHRÖDINGER)

Creativity has been defined as the ability to pose and resolve new problems, and the ability to come up with novel, original and innovative resolutions to already existing problems.[2] In broad terms, creativity is the ability to create something. Similarly, being creative is related to the creative act, as well as to the things that arouse it.

Likewise, creativity is essential for analysing information and for drawing adequate conclusions from it. It is, additionally, a skill that needs to be learned by spectators in order to draw the necessary information from films and to utilize this practically and creatively.

... CREATIVITY IS ESSENTIAL FOR ANALYSING INFORMATION AND FOR DRAWING ADEQUATE CONCLUSIONS FROM IT

The *knowledge society* is destined to be, eventually, a *creative society*, as knowledge seeks to unravel and solve problems, thus requiring it to be used creatively and applied practically. Creativity has an intrinsically socio-cultural component that needs to be developed, nurtured and fortified firstly at school and then throughout our whole lives. In this terrain, too, film proves to be a powerful and effective ally.

THE KNOWLEDGE SOCIETY IS DESTINED TO BE, EVENTUALLY, A CREATIVE SOCIETY ...

As a point of departure it is worth differentiating an *arts education* from an *education through the arts*, to use the terms expressed by Anne Bamford.[3] Similarly, and in reference to a specifically cinematographic terrain, we should distinguish between *film education,* as a more or less regulated subject, and *education through film*, using the latter as a privileged vehicle to accompany or complement a large number of other subjects and specialties – to stimulate and enrich our creative thinking.

A *PERFECT STORM* (OF IDEAS)

Film has had a powerful effect on the habits, behaviour and lifestyles of spectators around the world. It has contributed, assuredly more than any other medium in human history, to building a social imagination. It has profoundly moulded and affected our notions about life, the world and reality. It has broadened our horizons – both factual and imaginary. It has seduced and moved us; educated and informed us; and on quite a few occasions it has tricked and manipulated us too. It has played, and still plays, an important role in the education of young audiences: establishing modes of conduct, habits and behaviour; engendering new heroes, models and archetypes. It has provided the largest vehicle of popular culture, at least until the expansion of television and the advent of the internet. It is also clear that it has been a powerful driving force for the development of the arts and for stimulating the creative talent of artists and filmmakers, and not to mention the creativity of regular filmgoers and of the public in general.

[FILM] HAS CONTRIBUTED, ASSUREDLY MORE THAN ANY OTHER MEDIUM IN HUMAN HISTORY, TO BUILDING A SOCIAL IMAGINARY

CINEMA AND TELEVISION HAVE GROWN, OVER MANY DECADES, INTO POWERFUL CULTURAL ACTORS, SETTING TRENDS AND CHANGING BEHAVIOUR ...

Cinema and television have grown, over many decades, into powerful cultural actors, setting trends and changing behaviour, into educational tools which are used to educate students in schools, colleges and universities.

Just over a century old, it stands as receiver and inheritor of the forms of storytelling and communication handed down by our ancestors – from oral transmission to written culture and its evolution throughout history. Today, film is the ideal medium for the conservation and metamorphosis of the “great stories”.

Furthermore, it would appear to be the creative area most representative of the contemporary world. Not without reason film is used to create and stage

real and imaginary stories on screen. Additionally, film is a team effort, the end result of which is produced by a fusion of many minds and creative disciplines.

In the realm of film one can find plenty of examples of staging the creative act in all its inexhaustible variety. It is a key reference in the culture and art of our days. In fact, it infuses and illuminates all sorts of activities. It has had a profound influence on the direction taken by art, and it has unquestionably modified the spectator's relationship with the artistic act in general. It has altered, transformed and conditioned our perception of the world and, consequently, our creativity too.

[FILM] HAS ALTERED, TRANSFORMED AND CONDITIONED OUR PERCEPTION OF THE WORLD AND, CONSEQUENTLY, OUR CREATIVITY TOO

One question begs answering - why is film such a present and powerful source of inspiration that can stimulate the creative act in this fashion? Obviously, first and foremost because it invites and incites the act of *seeing*, because our relationship with film is forged from *seeing*.

The so-called Seventh Art is inherently an art of synthesis that comprises all the arts: that is the sum of all of them. Accordingly, we are able to relate the things we see on screen to many other filmic, artistic and cultural reference points. In this way film generates an inexhaustible and continual intertextual dialogue between the spectator and numerous cultural reference points and personal or artistic experiences.

However, film art is additionally closely connected to dreaming; that is, to those times when the unconscious becomes divorced from all conventions and appears fully liberated and broken away, in other words, fully creative. *"Man is a genius while he dreams, as audacious and brave as a genius"*, remarked Akira Kurosawa. Dreams often reveal the brilliance and contradictions of the human mind. And film, a shaper of dreams, is best equipped to reveal the creative essence lurking inside us all.

This explains why no other art has endeavoured as intensively as film to map imaginary geographies and spaces. Film is the natural realm of imagination and fantasy, both key aspects of any discussion related to creativity.

... NO OTHER ART HAS ENDEAVOURED AS INTENSIVELY AS FILM TO MAP IMAGINARY GEOGRAPHIES AND SPACES

Descending to the terrain of the real, film reconstructs life in all its variety and complexity. There is no human exploit that has not been given a direct, on-screen referent. No other medium has better illustrated actual problems and situations of the complex reality we live in. Yet at the same time film depicts the past and our combined experience of history – from most recent events to the remotest past at the dawn of humanity. In this way it allows our own world, our present reality and thought, to be contrasted with a different reality projected on screen. In effect, it is like a kaleidoscopic window on the world; an infinite window that, furthermore, transforms into a blackboard on which we teach and learn. A vast stage which offers a global, holistic and integral spectacle of the adventure of humankind, not far removed from reality, where all the variety and complexity of events and human activity and relations can be viewed as a whole and in context. In addition, this is presented as a mirror in which we are reflected, where we explore and understand each other.

Hence, film structure represents a powerful stimulus for thinking and questioning ourselves – for posing questions and, occasionally, for glimpsing answers. And it does so by extraordinarily attractive and seductive stylistic and visual means. It is no accident that many creative minds in history are considered to have thought in images, before thinking in ideas.[4]

For this very reason, film requires a different way of seeing things: life, everyday problems and situations, reality and fantasy, and even ourselves. It lets us see these situations from new perspectives, from ones that had hitherto often remained hidden or indistinct to us. It requires restructuring problems, reinterpreting them from our experience and current circumstances.

Various scientific experiments have demonstrated the connections between magical thought, generated by fantasy films and stories aimed at suitable age groups, and cognitive growth as well as increased creativity in preschool children.[5] Another study proved the stimulating effects of science-fiction books and films on the creative skills of middle-school pupils in a range of schools in America. Indeed, the study was quite conclusive with regard to proving that pupils found films more stimulating than the literary stories.[6] The effectiveness of films in the care and treatment of certain illnesses which affect the brain has also been proven.

VARIOUS SCIENTIFIC EXPERIMENTS HAVE DEMONSTRATED THE CONNECTIONS BETWEEN MAGICAL THOUGHT, GENERATED BY FANTASY FILMS AND STORIES AIMED AT SUITABLE AGE GROUPS, AND COGNITIVE GROWTH AS WELL AS INCREASED CREATIVITY IN PRESCHOOL CHILDREN (SUBBOTSKY, HYSTSED, JONES, 2010)

For example, the Spanish Alzheimur Foundation developed a project, called Filmotherapy, for patients with Alzheimer's disease, based upon the recovery of long term memory through watching some very popular films.

Film has been utilised as an effective, creative medium, and likewise, it has been applied to the training of doctors and staff specializing in psychiatric care.[7] Indeed, the fantastical creatures that inhabit science-fiction stories can be used to illustrate key concepts in the subjects of Philosophy, Physics and Biology, to mention just a few.[8]

Edward de Bono points out, quite singularly, the fundamental importance of embarking upon any job using hypothesis and possibility, rather than stubbornly limiting ourselves to the terrain of ideas. After all *"possibility is very important. And possibility is the key to creativity"*.[9]

Using his method and a number of proposed exercises, de Bono seeks to enhance and expand what he refers to as *lateral thinking*: a thought model which can be employed as a creative problem-solving technique.

The *Oxford English Dictionary* has an entry about *Lateral Thinking* which it defines as the following: *"seeking ways to solve problems by unorthodox or apparently illogical means"*. According to de Bono, one ingredient of these *apparently illogical* methods, the element of provocation, is always a necessity.[10]

Film could well be included among the unorthodox methods considered by the author. After all, *"In lateral thinking we seek to put forward different views. All are correct and can coexist. The different views are not derived each from the other but are independently produced. In this sense lateral thinking has to do with exploration just as perception has to do with exploration. You walk around a building and take photographs from different angles. All are equally valid"*.[11] We think that film, with its multiplicity of arguments and views, can also provide an effective tool for prompting provocative operations and for stimulating lateral thinking.

SILENT LIGHT: HOW FILM STIMULATES OUR CREATIVITY

When images are looked at thought is invigorated, memory is jogged, interconnections are enhanced, imagination and ingenuity are intensified. Film's ability to pose and depict problems and situations in a very global

manner makes it the ideal medium for formulating all kinds of speculations and possibilities. And this ability to question is the very basis of creative work.

Rudyard Kipling recognized the pillars of his creative talent:

> *"I keep six honest serving-men*
> *(They taught me all I knew);*
> *Their names are What and Why and When*
> *And How and Where and Who".*

Film, direct successor of nineteenth-century storytelling, demands that both the author and the spectator respond to the six interlinked questions of Kipling's method.[12]

Subject: *What?* Proposition: *Why?* Location: *Where?* Sequence: *When?* People: *Who?* Method: *How?*

Long before this, Leonardo da Vinci wrote a chapter entitled "*The Method of awakening the Mind to a Variety of Inventions*" in his *Treatise on Painting*. In it he described how he observed smears and shapes on walls as though they were projections on a screen. He sought connections or similarities between those accidental or fanciful smears and the forms he remembered from his everyday life. And this ability to see and establish interconnections helps to invigorate the creative act, "*By these confused lines the inventive genius is excited to new exertions*".[13]

... THIS ABILITY TO SEE AND ESTABLISH INTERCONNECTIONS HELPS TO INVIGORATE THE CREATIVE ACT

Frequently even a lack of order or something random can help generate a new form of order, a controlled creation. So-called analogical thinking is intensified and developed. In other words connections, similarities and analogies are identified between the object being viewed on screen and the things that the same spectator encounters and recognizes from his or her own real, daily experience.

THE CREATIVE MIND IS CAPABLE OF REORGANIZING THE WORLD IT OBSERVES, OF INTERPRETING AND TRANSFORMING IT

An unavoidable prerequisite of the first step is observation – a refinement of one's faculty of seeing. The creative mind is capable of reorganizing the world it observes, of interpreting and transforming it: of representing it singularly and exclusively.

External stimuli are a source of inspiration for creativity. Many of them appear spontaneously, by chance, quite randomly. Many others, however, are purposefully sought after: when we go on a specific trip, visit certain places, see a particular exhibition, a specific artwork, read a particular book or brilliant poem, and when we watch certain films, of course, which are a constant source of inspiration.

Many of these stimuli occur randomly, by accident: something just crops up along the way. However, it is also often the case that we expressly seek them, looking for certain impressions and consequently rejecting many others.

Matilde Obradors calls these external –filmic– resources, which are sought after in a premeditated way and subjected to a selection process, *desired film*. Evidently these purposefully sought after, *desired,* works do not necessarily have a specific relation to the other works made after being enriched by the *desired* stimuli. They can give rise to a completely different work. It goes without saying that this new work need not only be a film: they may inspire a myriad of creative vehicles.[14]

It is not a question, therefore, of copying or imitating, but rather of stimulating, strengthening and transforming the creative act by using encounter, contact, analysis or enjoyment of a particular work of art. It is, in short, a matter of provoking or encouraging images and stimuli to cross paths – torrents of ideas which will need to be selected, processed and articulated.

Consequently, analogy and association of ideas are mental exercises and processes that fertilize and enrich creativity. Film, equipped with an inexhaustible pool of referents, borrowings, legacies and wide-ranging adaptations, offers an extraordinary bank of images, scenes and subjects to invigorate the process of association and relation, based on the intertextual games it evokes.

STAND BY ME: NOTEWORTHY EXAMPLES

"*Films are more harmonious than life: there are no traffic jams in films, no idle time*", remarked François Truffaut in *Day for Night*. A constant source of inspiration and fascination, film is present in practically every contemporary activity, in our daily ups-and-downs, in our collective imaginary. It provides role models, referents and prototypical lifestyles regarded as perfect or idyllic – or at least as more exciting and attractive than our often grey and unsatisfying everyday lives.

While working on this piece, the author identified examples of how film stimulates creativity in a wide range of fields, sometimes even quite unusual ones. These fields are not limited to artistic endeavour; often they are linked to ordinary leisure and professional activities. Many of the examples are from the vicinity of the Foundation Botin, from Santander to Valladolid, and range from fields as varied as architecture and town-planning, to sculpture, painting, comic-strips, collage, museums and exhibitions, theatre, opera, music, circus, amateur filmmakers, lipdub and music videos, human statues, fashion, perfumes, jewellery, watches, footwear, interior design, window dressing, graffiti, advertising, tattoos, cuisine, confectionery, cocktails, fancy dress outfits, crafts, picture framing, research and educational projects, book trailers, novels, poetry and visual poems. To all these may be added the contributions made by two Japanese artists resident in Santander, who have been inspired by film to make paper dolls (*kami ningyô*) and practice calligraphy (*shôdo*). Additionally, creative use has been made of film in libraries as an instrument for information and to encourage reading.

The works that have been identified in this wide variety of fields make no attempt to translate film into other media, instead they seek to achieve a beneficial interplay of artistic languages based on innovative ideas bathed in a fertile imagination. The author wishes to gratefully acknowledge the contributions made by these creative minds and to applaud on these pages their talent and ability to relate to the world in surprising and personal ways, in other words to celebrate their *creativity.*[15]

Unfortunately, we cannot feature all of them. We have decided to pay special attention to three of these meritorious and noteworthy works due to their singularity and relevance to the main premises of this text.

Sara Huete
En busca del tiempo prendido [In Search of Captive Time].
Film-literary collages. Reading encouragement projects.

"*I express myself better in images than in words*", says Sara Huete. That might seem a strange thing for a Philosophy graduate and librarian at Santander City Library to say, but when you see her collages you have to admit Sara's creative power is eminently visual. A fitting thing for someone who knows how to look first and then interpret, that is, to transform her visions into new images from which the word is never completely detached. Sara's *collages* are distinguished by their essentially visual nature peppered constantly by literary and filmic allusions. Indeed her approach is based on counterpositioning ideas which quite often brings about a kind of film-like montage that succeeds in surprising, disconcerting and amusing the viewer as well as evoking new ideas open to the spectator's speculation and consideration. These are *texts to be looked at*, derived from somebody who works among, and with, books. These are also *images to be read*, created by somebody whose thinking has been inspired by films, photographs and works of art.

"I EXPRESS MYSELF BETTER IN IMAGES THAN IN WORDS"

Without concealing her admiration for Joan Brossa and his *visual poems* – many of which also have a striking filmic style– Sara Huete's oeuvre inhabits the space between words and images. The invariably short titles of her compositions shed additional, complementary, yet never definitive, light, onto a spark, a suggestion that is visually developed. She has pointed out that "*Film is part of my life and it inspires my work, like everything around me: literature, newspapers, sentences grasped at random*". Her discovery of film classics, in screenings at the Film Club and on late-night television broadcasts, is a source of pleasure and revelation. "*I think my works owe a great debt to those images*", she remarks. This is especially true of her creative affinity to works by a famous director of Czech animated films, namely Jan Svankmajer, who incorporates a wide range of materials into his short films – "*Stones, paper, snails, all sorts of objects that I also employ in my works*". The organic and inorganic, people and objects, the animate and inanimate are put into contact with one another, converse with one another and eventually become intermixed: merged into a single framework, as a single entity.

"FILM IS PART OF MY LIFE AND IT INSPIRES MY WORK, LIKE EVERYTHING AROUND ME: LITERATURE, NEWSPAPERS, SENTENCES GRASPED AT RANDOM"

By means of these literary-visual games, the artist confronts some burning issues, such as those concerning the relationship of spectators to the world around them; the closeness of women and men, not to mention their conflicts and frequently their estrangement; the peculiar way we have of governing ourselves in this disconcerting social framework and how we affect our natural environment. These issues have long been the subject of literature and film, and the both merge here into new images born of associations and counterpoised ideas that stimulate the imagination and provoke the visual creativity of the viewer who observes them – testing their skilfulness as *readers of images*. It is by no means a small feat for an artist to practice collage as a valid way of generating *provocative operations,* Edward de Bono's exciting *"po"*: the lateral thinking technique of posing hy*po*theses, of conceiving supp*o*sitions, of countering the *po*ssible and the imp*o*ssible and of turning this opp*o*sition into the raw material of *po*etry.

SARA HUETE

María Luisa Ramos
Domus Videns: House for Visions. Short films about archaeology, women and society.

Marisa Ramos is an Archeologist, and a Professor at the University of Cantabria, who uses film as a path of research. Her work environment is not the *Domus Aurea* (the name of the Emperor Nero's Palace, and the most luxurious Roman house ever made), nor is it the villa or the baths which she excavates and studies with such passion and dedication. Her house is a *Domus Videns*, a House for Visions built from images and sheltered by the thoughts blossoming from these images. The analogy is not a gratuitous one for someone who has devoted a large portion of her life to researching, documenting and reconstructing roofs of Roman houses using craft techniques reminiscent of the ones employed by our ancestors.

Accordingly, hers is a twofold exercise in creativity, which has a scientific base for its starting point: reconstructions of the everyday lifestyles of the inhabitants of the Roman Empire; but additionally modelling, decorating and laying the humble roofing tiles upon which, in effect, the functionality of those houses from ancient times wholly depended. Today this is still the case: a house without a roof or roofing tiles cannot protect its dwellers from the inclemencies outside.

FILM HAS ... BEEN THE IDEAL MEDIUM FOR THIS PROFESSOR TO ASK QUESTIONS ABOUT THE WORLD IN WHICH WE LIVE AND ITS NUMEROUS CONTRADICTIONS

"*For me film means honing my intuition in an expressive way, thus letting me put my way of seeing the world on screen*", she remarks. Film has been a source of inspiration and a creative means for this archaeologist and researcher at the University of Cantabria. But it has also provided the necessary approach to research, for recording her research, and for reaching a much wider audience than would have been possible through exclusive and closed scientific publications. Film has also been the ideal medium for this Professor to ask questions about the world in which we live and its numerous contradictions.

"*My muses have been firstly my students and secondly women. In my ambition to know and show the reality I perceive*". Being sensitive to the concerns of women, Professor Ramos' audio-visual oeuvre is divided, like a two-faced Janus, between these two themes: archaeology and gender. At first glance they might appear to be quite divorced from one another, but this could not be further from the truth: Marisa is able to view the *past* with the eyes of a *present*-day researcher, while at the same time questioning the *present* with the knowledge and perspective of a connoisseur of the *past*, of the things that have sculpted us and shaped our contemporary panorama. In the short films by Professor Ramos, whether focussed on archaeological subjects or on today's women, documentary and fiction coexist

MARÍA LUISA RAMOS

and converge, because –once again the image of Janus comes to mind– they are two sides of the same coin. The *peplum* (films about Ancient Rome) creep into scientific arguments and make them all the more effective: they put faces to the protagonists of microhistory – make them more accessible, closer and reachable. A similar effect is at work in the interweaving of ironic comedy in *Superwoman* and the real testimonies of women who talk about their daily experiences on camera: it is basically a question of breaking clichés, of burying prejudices and defending the active role, too often ignored or silenced, of women in Cantabria today. Marisa builds bridges, *hand in hand*, as in the title of one of her short films, from the farthest flung yesterday to the most immediate today. Both the former and the latter are built using the same characters: I, you, him, her, *us*. And all of them lie on the same soil, on the same foundations and they find shelter under similar roofs. The house and the *domus*; the *thermae* and the baths. Man, woman and child. Young and elderly people. Life and death, Eros and Thanatos. The need to enjoy love, affection, understanding and recognition above riches and other grandeurs. *Parva domus, magna quies:* small house, great peace. Yesterday and today – forever.

Filmography of María Luisa Ramos:

Experimenting in Archaeology by Building a Roman Roof (2004)
Using the equipment of experimental archaeology, this piece strives to reconstruct ancient roof tile making methods and the process of tile assembly for roofing in Hispanic-Roman buildings.

Women Hand in Hand (2006)
A number of women lend a human face to visible and invisible daily chores which they perform to help our society to progress.

Healthy Milk: Breastfeeding and Life (2007)
Shows the importance of breastfeeding, stressing the close emotional bond that connects mother and child.

Life at the Baths (2007)
Salus per Aquam: SPA. That was the goal sought by ancient Roman baths. This short film reconstructs a virtual depiction of the Maliaño baths (Cantabria), and shows how they may have been used on a daily basis.

Manuel Gutiérrez Aragón College

The Manuel Gutiérrez Aragón College in Viérnoles, Cantabria has successfully developed an audiovisual training programme which includes educating students in ways of seeing.

The College, currently under the leadership of Eduardo Caballero, caters for secondary school pupils and also for sixth form students providing all subjects: with a special emphasis on Nature and Health, Social Sciences, Humanities and the Arts. Part of the College's curriculum includes a course called *Audiovisual Culture*, which is run by Juan Carlos Fernández Izquierdo. This teacher recalls how film appeared for the first time in his life, thanks to François Truffaut's *Day for Night* (1973), with all the magic and might of a powerful spell. After this initial fascination film became an essential tool for his work as a teacher, a didactic resource and a study aid in all the courses he teaches.

At the College other teachers, including specialists in Natural Science subjects, also use audiovisual media as an educational aid. Fernando Portal, for example, who is a lecturer in Auxiliary Nursing Care for higher education students, works with his class to make news reports about promoting healthy eating habits or ecological farming practices. It is worth emphasizing that the College has an excellent supply of equipment and resources to put its audiovisual educational project into practice. These resources are more than justified by the College's activity and its students regularly submit work to competitions in the categories of illustration, photography, video, etc. They often win prizes thanks to the high level of their work, and the prize money is spent on purchasing more materials, which sets in motion a rewarding creative feedback process that benefits both students and the College.

Teacher Fernández Izquierdo's experience has taught him that there is a need to correct the scant attention curricula pay to audiovisual media. "*It's clear to me that one of the biggest mistakes made by every new educational reform is to have left out fine arts, performing arts and visual arts. They should have been included in the curriculum at all the various levels of education*", he remarks.

"IT'S CLEAR TO ME THAT ONE OF THE BIGGEST MISTAKES MADE BY EVERY NEW EDUCATIONAL REFORM IS TO HAVE LEFT OUT FINE ARTS, PERFORMING ARTS AND VISUAL ARTS. THEY SHOULD HAVE BEEN INCLUDED IN THE CURRICULUM AT ALL THE VARIOUS LEVELS OF EDUCATION" (FERNÁNDEZ IZQUIERDO)

For his course he teaches small groups of 12 to 15 pupils who range in age from 16 to 18 years old. He trains his students in cooperation and teamwork to actively and smoothly carry out tasks in his classes.

The College has its own local broadcast TV channel that showcases the work being made by students of this course. In particular they have to report about matters directly affecting the College and its surroundings – about their classmates, their teachers and courses. In this manner, they report on many aspects of College life using an audiovisual language.

IES MANUEL GUTIÉRREZ ARAGÓN

To perform these tasks they form small film crews and share out the jobs and the roles among themselves, like any other smooth-running professional team would do. Furthermore, classroom work fosters and encourages an inquisitive and participatory climate: it is a creative and, at the same time, uninhibited place. But can these two aspects get out of hand? The students have, in effect, been awarded a certain degree of trust with regard to coming and going from the classroom and in relation to choosing and making their video productions, but always according to a set of jointly agreed rules.

Among its other activities, the College promotes an annual comic competition which encourages the creative and educational value of the comic-strip. In addition, it pays special attention to advertising as an audiovisual medium which concentrates the whole range of creative resources into the space of a few seconds. Accordingly, teacher and pupils spend time on analysing and discussing television adverstisements. In a fluent dialogue between theory and practice the pupils also produce their own projects for commercials. They think up ideas and develop them into a working plan. Their approach is either literary, using a written script; or visual, with a storyboard. They also go on to produce some of these advertisements, filming the best designed projects.

THE PRINCIPAL AIM ... IS FOR PUPILS TO DEVELOP A CRITICAL APPROACH TO THE AUDIOVISUAL PHENOMENON THAT PROFOUNDLY ENVELOPS AND CONDITIONS INDIVIDUALS TODAY

The principal aim, therefore, is for pupils to develop a critical approach to the audiovisual phenomenon that profoundly envelops and conditions individuals today. And if this were not reason enough, the audiovisual medium is also a wonderfully potent and attractive resource, among modern-day students, for stimulating and strengthening creativity. Fernández Izquierdo corroborates this as "*not only watching and analysing films, but also looking more closely at film language from any of the many angles that this marvellous medium has to offer: screenwriting, shooting, editing, sound, etc.*". Any education of the ways of seeing worthy of the name demands rigour, standards and first-hand experience. Fernández Izquierdo points out that inappropriate use of audiovisual means could have disastrous effects. "*We could make the mistake of letting visual junk consume everything eventually*", he adds.

An education of the ways of seeing, therefore, combines both theory and practice. It is not a trivial task at this current juncture: it is sorely needed to remedy the beguiling hypnosis we are exposed to; to make our pupils into attentive and thoughtful viewers; to help them become creative, free and informed members of our society who are fully aware of the times we live in.

NOTES

[1] Loc. cit: OBRADORS BARBA, Matilde. *Creatividad y generación de ideas: Estudio de la práctica creativa en cine y publicidad.* Bellaterra: Universitat Autònoma de Barcelona, 2007, p. 122.

[2] Op. cit., p. 156.

[3] BAMFORD, Anne. *El factor ¡wuau! El papel de las artes en la educación: Un estudio internacional sobre el impacto de las artes en la educación.* Barcelona: Octaedro, 2009, p. 14.

[4] Jack Foster mentions examples such as Albert Einstein, William Harvey, Frank Lloyd Wright, Alfred Wegener, Man Ray, Sigmund Freud, Isaac Newton... to which it would be perfectly natural to add the great artists of all ages. See: FOSTER, JACK. *How to get ideas*. San Francisco: Berrett-Koehler, 2007, pp. 102-104.

[5] SUBBOTSKY, E.; HYSTED, C; JONES, N. "Watching films with magical content facilitates creativity in children". *Perceptual and Motor Skills*, 2010, August, v.111, no. 1, pp. 261-277.

[6] LIN, K.Y. "The stimulating effects of Science Fiction books and films on the product-design creativity of Middle School students". *Journal of Research in Education Sciences,* 2012, vol. 57, no. 3, pp. 121-151.

[7] See: MASTERS, J.C. "Hollywood in the classroom: using feature films to teach. *Nurse Educator,* 2005 vol. 30, no. 3, pp. 113-116.
And: MORENO MARTÍN, Florentino; MUIÑO, LUIS. *El factor humano en pantalla: un paseo por la psicología desde el patio de butacas.* Madrid: Editorial Complutense, 2003.

[8] CRUZ, R. A. L. "Aliens in the classroom: Fantastical creatures as tools in teaching biology". *American Biology Teacher,* 2013, vol. 75, no. 4, April, pp. 257-261.

[9] BONO, Edward de. *Creatividad: 62 ejercicios para desarrollar la mente*. Barcelona: Paidós, 2010, pp. 18-19.

[10] The term was coined by the prestigious researcher in his book *New Think: The Use of Lateral Thinking,* published in 1967, which refers to the technique allowing problems to be solved indirectly using a creative approach. See also: BONO, Edward de. *El pensamiento creativo: El poder del pensamiento lateral para la creación de nuevas ideas*. Barcelona: Paidós, 2010, p. 96.

[11] Op. cit., p. 98.

[12] Rudyard Kipling quoted in: MICHALKO, Michael. *Cracking creativity: the secrets of creative genius*. Berkeley, California: Ten Speed Press, 1998, pp. 26-27.

[13] Leonardo da Vinci. *El tratado de la pintura*. Murcia: Colegio de Aparejadores y Arquitectos Técnicos, 1980. Facsimile copy of the Madrid edition: Imprenta Real, 1784, pp.8-9.

[14] Loc. cit. OBRADORS BARBA, Matilde. *Creatividad y generación de ideas: Estudio de la práctica creativa en cine y publicidad*. Bellaterra: Universitat Autònoma de Barcelona, 2007, p. 145-146.

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He is author of the following books: *Kenji Mizoguchi* (Cátedra, 1993); *Yasujiro Ozu: Elogio del silencio* (Cátedra, 2005. 2nd edition, 2012); *La trama policial en el cine* (Cosema, 1995); *El sueño imposible: aventuras cinematográficas de don Quijote y Sancho* (Botín Foundation, 2006); *Barataria, la imaginada: el ideal utópico de don Quijote y Sancho* (Centro de Estudios Cervantinos; University of Cantabria, 2008); *En torno a Noriko. Primavera tardía, Principios de verano, Cuentos de Tokio* (Filmoteca de Valencia; Institut Valenciá deĺ Audiovisual i de la Cinematografía Ricardo Muñoz Suay, 2010).

DRAMA

Anne Bamford

Abstract

Drama contributes to everyday creativity by making people feel more alive, healthier and more connected with the world. It promotes self-esteem and provides people with a sense of achievement and recognition.

The first part of this chapter shows how drama education emphasizes multi-sensory modes of learning. Drama focuses on processes such as creating, exploring, learning, games, and can help enhance divergent thinking, fluency of ideas and flexibility.

The second part examines the impact of theatre in society and includes the role of theatre in promoting broader social well-being through raising aesthetic awareness and engaging people in constructive social activity and civic engagement.

INTRODUCTION

From the outset, there is a need to draw a distinction between the impact of drama, both as a method of learning and as a subject in its own right – on the education of people and the impact of theatre more broadly on society. The word "Drama" originated from the ancient Greek word δραμα, meaning "to do" or "to act". In its simplest sense then, drama involves doing and acting, and as a verb, it implies an action – in other words, something that is done. Conversely, "theatre" comes from the Greek and is used as a noun to describe the thing that occurs - or the place where it occurs - when drama is acted in front of an audience. For the sake of this chapter, drama will be used to describe the active process of doing and acting, whereas theatre will be used to describe the moment when actions are performed before an audience.

Drama is an artistic expression that explores human conflict and tension. It generally takes the form of a story presented to an audience through dialogue and action. Drama education uses drama as an educational pedagogy for students of all ages. It incorporates elements of an actor's training to facilitate the students' physical, social, emotional, and cognitive development. Drama Education emphasises multi-sensory modes of learning. The term "drama education" is often used as an overarching term that includes the various forms and applications of drama for educational purposes. It focuses on "processes" such as creating, exploring, learning, games, and standards-based lessons.

Theatre is generally more strongly focused on the "product" such as performances, happenings, plays, and productions. Theatre involves much more than the drama and acting that are used to convey a story or narrative. For example, costume design, model and prop making, scenography, lighting, music, and sound are vital components of contemporary theatre. The production of theatre may also give rise to a whole host of associated trades and industries such as, electricians, removalists, hairdressers, "front of house" staff, production and marketing staff, caterers and cleaners.

The focus of the impact of drama will be on human development and the capacity of drama to encourage human flourishing, especially when drama is included in education. This will include the impact of drama on the individual's:

- Self confidence
- Empathy
- Learning processes
- Cooperation and collaboration
- Concentration and memory

The second part of the chapter will examine the impact of theatre in society and include the role of theatre in promoting broader social well-being through:

- Raising aesthetic awareness
- Engaging people in constructive social activity and civic engagement

Throughout the chapter, there are short vignettes from professionals working in drama and theatre and these are designed to capture the lived experiences of those people engaged in the practices and performances of drama and theatre.

DRAMA AND SELF-CONFIDENCE

Drama has an important contribution to make to the development of self-confidence. Through drama people become confident in a range of personal qualities such as teamwork, creativity, leadership and risk-taking. In an increasingly dynamic working and social context, these qualities are assets in all areas of life. Karakelle (2009)[1] used a standard test of creativity[2] to determine the impact of drama on an individual's creativity. The results showed that creative drama processes can help enhance important aspects of creativity including divergent thinking, fluency of ideas and flexibility. Divergent thinking is essential to creativity as it involves thinking in multiple

directions, seeking changes, and investigating. Fluency is measured by the quantity of unconventional and associated ideas generated on a specific issue while flexibility, is measured by the number of associations generated that relate to different fields. By being open-ended, creative drama tends to stimulate the creative potential of people by increasing their tolerance of uncertainty and provoking their curiosity. These are both key characteristics of creativity.

... CREATIVE DRAMA PROCESSES CAN HELP ENHANCE IMPORTANT ASPECTS OF CREATIVITY INCLUDING DIVERGENT THINKING, FLUENCY OF IDEAS AND FLEXIBILITY

It is also argued that the group process which is normally part of drama may also directly boost creativity. For instance, participants in a drama process have to be aware of the different responses of other individuals. By generating a social dynamic that necessitates "having a go" or taking risks (which are inherent in creative behaviour), the drama experience encourages participants to "decide to be creative," an indispensable step toward increased creativity.

While of course it can be argued that many activities boost confidence – such as participating in sports, public speaking and volunteering – drama's particular benefits may lie in the manner in which drama creates an atmosphere of security, trust and collaboration. Drama promotes self-esteem and provides people with a sense of achievement and recognition.

... DRAMA'S PARTICULAR BENEFITS MAY LIE IN THE MANNER IN WHICH DRAMA CREATES AN ATMOSPHERE OF SECURITY, TRUST AND COLLABORATION

For example, research conducted with children participating in the National Theatre in London's drama schemes showed that the children gained confidence through drama and that this confidence transferred positively to other areas of their lives. The confidence gained resulted in the children enjoying school more and has improved their speaking and listening skills. The three-year research study found that, through studying theatre, the children had a "marked increase in self-confidence in class".[3] Compared with children at similar schools not participating in the drama programme, the study found that the National Theatre pupils had a significant increase in "oracy" skills - the ability to speak and listen. They also enjoyed school more and gained self-esteem and confidence.

EMPATHY

Drama deals with issues that touch people's own lives closely, often in highly significant ways. Through the vicarious experiences in drama or theatre, people can make sense of their own behaviour and others, and develop aspects of emotional intelligence, such as empathy.

DRAMA ALSO HELPS PEOPLE DEVELOP TOLERANCE AND EMPATHY

Drama also helps people develop tolerance and empathy. In order to play a role competently, an actor must be able to fully inhabit another's soul, in other words, to become fully empathetic with another person. Drama appears to be particularly useful in promoting empathy as at the heart of the roleplaying that occurs in drama is the capacity of actors to put themselves in someone else's shoes.

Empathy is a key element within the social and emotional aspects of learning. Active empathy can be evident through developing self-awareness, sensitive social skills and movement towards more intrinsic types of motivation. Prendiville and Toye (2007)[4] argue that speaking and listening activities within

drama enable people to practice empathetic behaviours and so result in a growth in overall empathy.

A practical way in which this capacity of drama to promote empathy has been used is in the training of doctors. Increasingly, undergraduate and graduate programmes in medicine are exploring the ability of the arts to elucidate the human condition of empathy as it relates to vital aspects of patient care. At the University of California[5] students and faculty from both the Department of Medicine and English Literature performed informal readings of scenes from dramatic works. Medical students participated in staged readings of plays, which were filmed and then screened for a group of 30 medical students in order to elicit discussion. Topics included how individuals deal with illness differently and how prospective physicians could address similar clinical scenarios. The study found that the medical students who had participated in the drama activities were much more likely to be empathetic both with patients and with other medical professionals.

The UK-based company *Theatrescience* aims to bring together high-quality drama and biomedical science that "explores the relationship between arts and sciences, analysing preconceptions about theatre and science collaborations and suggesting how these can be challenged". It scrutinises the collaborations between scientists/clinicians and theatre makers.[6] For both the artists and the theatre makers involved, the project led to new ideas. It was also found that when scientists and artists worked together it was possible for the sciences to communicate more effectively as drama provided a way to transport quite complex ideas (such as biomedicine) to a wider community. The results of the project indicated that both science and the arts share a process of abstraction. Abstraction is a process by which concepts are derived from the usage and classification of literal ("real" or "concrete") concepts, first principles, or other methods. Abstractions in both the arts and sciences are formed by reducing the information content of a concept or an observable phenomenon into a more understandable and communicable form. Abstraction is also core to the process of creativity as this requires the complex processing of a range of stimuli.

... WHEN SCIENTISTS AND ARTISTS WORKED TOGETHER IT WAS POSSIBLE FOR THE SCIENCES TO COMMUNICATE MORE EFFECTIVELY AS DRAMA PROVIDED A WAY TO TRANSPORT QUITE COMPLEX IDEAS (SUCH AS BIOMEDICINE) TO A WIDER COMMUNITY

DRAMA AND LEARNING PROCESSES

Drama enables people to create and inhabit a fictional world for the experiences, insights and understandings it may yield (Heathcote, 1984). It encourages people to bring their interests and personalities, their "cultural capital" (Giroux, 1989), to the learning process so that they can become actively involved and their knowledge personalised (Bruner, 1962). Thus drama is itself exemplary of creativity by blurring the edges of the real and fictitious life and by promoting a rich environment that creates meaningful, motivating contexts for communication and learning.

Arguably, drama builds on the human capacity for play. Children are naturally eager to explore and play. Drama can be used to arouse interest, attention and curiosity. Put simply, dramatic pedagogies lead to higher learning outcomes. Drama creates involvement and interest, and motivates and encourages the learning process. This positive outcome is likely to be generated by brain activity that is stimulated when fiction and role play are incorporated into the learning process. Also,

DRAMA CAN BE USED TO AROUSE INTEREST, ATTENTION AND CURIOSITY. PUT SIMPLY, DRAMATIC PEDAGOGIES LEAD TO HIGHER LEARNING OUTCOMES

drama provides interludes in the creative process where there is active knowledge creation, as opposed to being passively receptive of information.

Norwegian researcher Aud Berggraf Sæbø[7] focuses on the value of drama as a unique form of aesthetic learning. The main findings in this research extending over more than 10 years show that learning through drama enables students to engage as active participants in their own learning processes. Sæbø's results show that drama strengthens and improves the learning environment and learning process for all students.

Drama may enhance learning by providing opportunities for people to use different combinations of their multiple intelligences (linguistic, visual-spatial, musical, kinaesthetic, logical-deductive, interpersonal, intrapersonal, naturalist) (Gardner, 1983) as "entry points" to learning (Gardner, 1999). Drama may serve to develop and discover individual learning and teaching styles and preferences. A multiple intelligences approach[8] is fostered in drama through a variety of tasks appealing to different learning styles. Drama stimulates the imagination and allows people to explore issues and experiences in a safe and supportive environment.

The impact of dramatic pedagogies is especially evident in relation to second language and mother tongue literacy learning. Storytelling and drama techniques provide robust and flexible scaffolding.

USING DRAMA TO "PRACTICE" LANGUAGE ENABLES LEARNERS TO BECOME INCREASINGLY COMPETENT, CONFIDENT AND INDEPENDENT

Scaffolding[9] as a concept in education describes the guidance, collaboration and support provided to lead children to new learning. Drama as a form of language and literacy learning "scaffolding" technique can reinforce and strengthen the development of language skills. Using drama to "practice" language enables learners to become increasingly competent, confident and independent. Language learning through drama helps the learners to gain in confidence, and opens the way to new learning and the internalisation of language and skills in enjoyable and creative ways.

The quality of language learning can also change over time through drama. For example, a beginning language learner may initially only be able to have a receptive understanding of the story. As the dramatic action is an international language, the early language learner can "follow" the story through what they see and intuitively "pick up" the language as the dramatic action continues. Also, if not already familiar with the oral language, drama enables the language learner to act out and re-tell the story. As their language competencies grow, participating in drama will enable students to explore issues and personalise and transfer some of the acquired language to their own lives. Drama is able to enhance the speed and quality of language learning through the processes of imitation, repetition, gesture, voice and actions.

COOPERATION AND COLLABORATION

The form of creative group work needed to create theatre pieces promotes cooperation and collaborative working. The individual creative process (while important) becomes subordinated to the purpose and will of the group within a theatre production. This group tension in drama provides an ideal opportunity for children to develop social and co-operative skills.

Collaboration, cooperation and joint actions are inherent in creating theatre. Through drama, people relate to one another and forge meaningful social groupings. Co-operative Learning theory,[10] an offshoot of Constructivism,[11] incorporates the idea that the best learning occurs when students are actively engaged

THROUGH DRAMA, PEOPLE LEARN WITH GREATER DEPTH AND COMPLEXITY WHILE ENJOYING THE EXPERIENCE EVEN MORE

in the learning process and working in collaboration with other students to accomplish a shared goal. Through drama, people learn with greater depth and complexity while enjoying the experience even more. People who work together in drama tend to stick at the task with greater intensity and for longer periods of time. This promotes self-esteem and provides a sense of achievement.

Both theatre and drama activities are social and communal. Drama provides a framework for developing social skills such as cooperation, collaboration, listening and turn taking and helps to create appropriate affective conditions. Through drama, people develop an awareness of self (mind, body, and voice) and others (collaboration and empathy). This results in a deeper understanding of human behaviour, motivation, diversity, culture, and history.

In this way, drama enables people to reflect more securely and openly on matters which are significant to them because they remain at a distance. In a theatre production, both participants and audiences are colluding in the temporary suspension of time, place and identity. The skills and qualities developed in drama, such as team work, creativity, leadership and risk taking are assets in all subjects and all areas of life. Koestler's (1964)[12] seminal book on the nature of creativity may give some clues to how drama serves to initiate creativity. Perhaps, the drama process provides what Koestler describes as an environment of "ripeness" for the development of creativity. He argues that in such situations people experience a displacement of attention to something not previously noted. Putting things in a new dramatic context may enable new connections to be made – put simply, the more familiar the parts, the more striking the new whole. The Latin verb cogito for "to think" etymologically means "to shake together". Arguably, drama enables the combining of new ideas to take place thus creating an environment "ripe" for new syntheses to occur or, in other words, the creative process to flourish.

... DRAMA ENABLES PEOPLE TO REFLECT MORE SECURELY AND OPENLY ON MATTERS WHICH ARE SIGNIFICANT TO THEM BECAUSE THEY REMAIN AT A DISTANCE

CONCENTRATION AND MEMORY

Humans are capable of doing many things at the same time. For example, we can drink a cup of coffee while reading the morning papers or sing our favourite song while ironing clothes. These are simple tasks that we can do simultaneously without difficulty. But not everyone develops the ability to do many things simultaneously in the same way. The brain can quickly adjust and synchronise all these skills into a coordinated set of actions. The individual skills have changed from conscious incompetence to unconscious competence. It is argued that through drama it is possible to increase the "sense memory" through the way drama serves not only to present characters, but importantly to re-present them. This high level recollection is aided by remembering using all the five senses. In characterisation and dramatic action the actor takes the observations from daily life and combines these in a multi-sensory way to represent the memory of a social archetype and the memory of emotion. The concentration needed to evoke that representation is immense. Perhaps you are thinking at this point that that only applies to those actors who reach the pinnacle of their profession and can represent the truth of life in a way that seems so totally convincing that the audience is transformed. But even young children have this ability. A child can easily act daddy being angry, or mummy's look of surprise. They will re-enact with clarity their teacher or an argument with their brother. Such multi-dimensional skills are evidence of both great concentration and observation and an ability to recall memories and present these in a rich manner.

Drama stimulates the imagination and allows people to explore issues and experiences in a safe and supportive environment. It is vital to create an

atmosphere of security, trust and concentration. This acting out and retelling independently allows people to imaginatively explore issues and feelings beyond reality – in other words to use their imagination. Imagination is a vital ability to deal with everyday tasks, feelings and problem. The human creative imagination is vast and can provide a never ending journey of exploration of whatever we can conceive. Creative freedom is about being able to be free to explore all options and use the concept of complex integration to find ways to move past what are otherwise insurmountable obstacles. Our creative imagination is what allows us to access the infinite possibilities of creativity in any situation we face. It is where we can explore any and all possibilities. In this way, imaginative events that occur in drama may help people to deal with complex emotional situations by giving them practice in a safe, and risk free context to explore complex situations.

CREATIVE FREEDOM IS ABOUT BEING ABLE TO BE FREE TO EXPLORE ALL OPTIONS AND USE THE CONCEPT OF COMPLEX INTEGRATION TO FIND WAYS TO MOVE PAST WHAT ARE OTHERWISE INSURMOUNTABLE OBSTACLES

RAISING AESTHETIC AWARENESS

Theatre has a long and illustrious history. In its simplest origins, it was about embellishment of a good story – using a range of verbal and non-verbal dramatic devices to engage people in a good narrative. Theatre takes many forms including pantomime, clowning, drama games, storytelling, radio drama, melodrama, puppetry, improvisation, mask theatre, public speaking, playwriting, directing, and play productions. The broad term “theatre” can also include the elements of theatre (costumes, props, scenery, lighting, music, and sound) to enrich the experience, re-enact stories, and mount productions. Within theatre it is possible to gain experience in the various roles of actor, director, writer, designer, and audience member.

From the ancient times to the present, theatre has been used to educate society. People learn about and through the aesthetics of a dramatic experience. Yet what people understand about a work of theatre usually depends on prior experiences and expectations, which are then applied to new experiences. The more people see and experience theatre the better they are at making sense of their theatre experiences. Students whose families take them to live performances from an early age will naturally feel more at ease with theatre in school. Vivid theatre experiences are likely to grab attention and stimulate conversations and questions. Effective drama sets up a complex issue, suitable for in-depth analysis and discussions that cross multiple areas of inquiry, including aesthetics, history, ethics, and business. These issues enhance cultural understanding by broadening our perspective and often portray life from different points of view, cultures, and time periods.

THE MORE PEOPLE SEE AND EXPERIENCE THEATRE THE BETTER THEY ARE AT MAKING SENSE OF THEIR THEATRE EXPERIENCES

Theatre follows inherent rules and conventions. For example, the rules of theatre include that the audience is usually expected to be seated and watch while others perform. The performance is ended with applause and it is not usual to eat during the performance. In addition to these very practical conventions that bring people into a shared understanding, there are also conventions in terms of the narrative structure of most theatre pieces. For example, the audience expects the initial disturbance of a state of equilibrium leading to the creation of tensions, conflict and final resolution.

ENGAGING PEOPLE IN CONSTRUCTIVE SOCIAL ACTIVITY AND CIVIC ENGAGEMENT

The theatre can be a source of pride and connection in a community. Theatre can also be a site for social activism and civic engagement in democratic

action. Civic engagement is about behaviour that is purposive and conscious and aimed at leading to change – whether that is personal, social, political, environmental or economic change. Civic engagement is public and is usually collective. When theatre is aimed at civic engagement, its main purpose can be to address social issues. For example, *Theatre Without Borders*[13] is an international theatre-based movement that focuses on the impact that can result in peace building and theatre.

ImpactArts[14] uses visual arts, music, drama, dance and technology to work in local communities with people of all ages. The organisation uses drama as a tool for change – improving the environment, helping people get back into work or improving quality of life.

Similarly, *Open Clasp Theatre*[15] works with the United Kingdom Equality and Human Rights Commission around issues of equity and inclusion. While theatre is the focus, the company engages with health, social care and criminal justice professionals and a range of community groups as well as the general public. The focus is on the experience of women and young women involved in sex work and/or victims of sexual exploitation; women who have lost children to adoption (when children have been removed through state intervention due to domestic violence or substance misuse); homeless women; experiences of women with mental health issues; and sexual minorities, among others. "The basis for all the work is the knowledge that drama and theatre can be used as a tool to empower, increasing self-esteem and confidence, leading to personal development and growth, and to positive change for those taking part and the audience members who share the experience".[16]

"... DRAMA AND THEATRE CAN BE USED AS A TOOL TO EMPOWER, INCREASING SELF-ESTEEM AND CONFIDENCE, LEADING TO PERSONAL DEVELOPMENT AND GROWTH, AND TO POSITIVE CHANGE FOR THOSE TAKING PART AND THE AUDIENCE MEMBERS WHO SHARE THE EXPERIENCE" (OPEN CLASP THEATRE)

CONCLUSION

These are impacts of direct involvement in drama and theatre. Theatre activity impacts on the environment and has an emotional impact on both the participants and audience members. It holds up a mirror for us to examine ourselves, deepening our understanding of human motivation and behaviour. While there are professional expressions of drama and theatre, people use dramatic techniques and theatrical expressions in common life settings and interactions. Being involved in drama and using dramatic techniques in daily communication can increase self-confidence. The social nature of drama and theatre builds cooperation and collaboration. Watching theatre or being part of a theatre production can improve people's concentration and memory.

Theatre in the community builds individual and collective empathy by engendering aesthetic awareness and civic engagement. In a very practical sense, drama contributes to everyday creativity by making people feel more alive, healthier, and more connected with the world. The empathy inherent within drama makes us more open to other people and towards new experiences. As we suspend disbelief and become caught up in the world of the imaginary, we become less defensive. There is a whole of body experience, where both the mind and body feel good. Drama and theatre can opens people to inspiration and deep self-knowledge.

IN A VERY PRACTICAL SENSE, DRAMA CONTRIBUTES TO EVERYDAY CREATIVITY BY MAKING PEOPLE FEEL MORE ALIVE, HEALTHIER, AND MORE CONNECTED WITH THE WORLD

Aaltje van Zweden is the Director of The Papageno Foundation in the Netherlands. Over the past 15 years, The Papageno Foundation has developed inclusive practices in arts education for people with autism and related disabilities These innovative activities use drama and theatre in a prominent way to unlock the creative potential of people with autism.

Aaltje explains, “I am a mother of a child with autism. For my son, who did not communicate verbally, drama proved to be a powerful medium and a valuable way of establishing a connection. I have regretfully seen that the field of art education is scarcely, if ever, structurally represented in special education settings. As an art teacher and founder of The Papageno Foundation one of my main professional pursuits is initiating interdisciplinary art projects for students with disabilities”.

“I AM A MOTHER OF A CHILD WITH AUTISM. FOR MY SON, WHO DID NOT COMMUNICATE VERBALLY, DRAMA PROVED TO BE A POWERFUL MEDIUM AND A VALUABLE WAY OF ESTABLISHING A CONNECTION” (AALTJE VAN ZWEDEN)

Since 2007, Papageno has been developing its *Ontmoeten*(Encounters) projects. In these projects people (both with and without autism) work together with artists and teachers on creating a single piece of musical theatre that integrates script/lyrics, play, movement, visual art and music. Participants are engaged in art activities in a laboratory-like setting that allows scope for experimentation in an open dialogue with professional artists, teachers and aides.The general aim is to play, sing, dance, and make music together, in such a way that every participant plays his or her role on stage.

The impact of working through drama and creating theatre productions is high. As Aaltje described, “Art is a universal human form of communication and has the power to break through language barriers, physical barriers, mental and cognitive barriers, in order to enable contact and communication with others”.

Aaltje especially values the impact of drama for children with communication challenges. “Children with autism and other disabilities are confronted with incapacities and failures in many areas. That they are able to successfully communicate their thoughts and feelings by means of play demonstrates the importance of drama/theatre education for pupils with autism”.

The Papageno Foundation believes that it is vitally important that people with autism in particular are given the opportunity to develop their creativity and imagination through music and drama/ theatre education in order to contribute to an inclusive and diverse society.

In the words of Vygotsky: “In play it is as though the child were a head taller than himself” (1978, 102). This is true for any child but for children with a disability it is most certainly true. Drama and theatre allow for playfulness, which we believe is a very basic human need.

“IN PLAY IT IS AS THOUGH THE CHILD WERE A HEAD TALLER THAN HIMSELF” (VYGOTSKY, 1978)

AALTJE VAN ZWEDEN

Professor Patricia Lindberg from Plymouth State University, in the USA first became interested in drama and theatre at the age five when she attended a performance of "The Three Billy Goats Gruff" with her kindergarten class. Patricia recalled, "Getting so engaged and excited and something inside me, even at that young age, knew I had found my tribe".

Along with Television Producer, Carla Russell, Patricia has recently (2013) won a prestigious Emmy award for her children's television programme TIGER. TIGER (Theatre Integrating Guidance, Education, and Responsibility) is a collaboration between the PSU graduate programmes in Integrated Arts, School Counselling and School Psychology. The professional theatre company helps children, schools, parents, and communities deal proactively and positively with social issues and concerns facing children in schools today. TIGER uses musical theatre to give school audiences tools to identify, discuss and, hopefully, reduce bullying. The cast has spent several years traveling across New England to give performances and lead workshops for students, teachers and parents on bullying and other issues such as self-esteem and friendship. Patricia Lindberg serves as writer, producer and lyricist and has worked closely with others on music and set design.

TIGER USES MUSICAL THEATRE TO GIVE SCHOOL AUDIENCES TOOLS TO IDENTIFY, DISCUSS AND, HOPEFULLY, REDUCE BULLYING

Despite the success Patricia has had linking drama to reduce bullying, she is continuing to develop other projects aimed at building a better society through drama. In the past year, she has written an original musical with a local historian and a talented composer celebrating the 250th anniversary of her home town. She also had the opportunity to direct the piece. Professor Lindberg commented, "It was such a celebration of community. We had 120 people from ages 8 to 77 in the production and we had so much fun. It really made me realise once again how important it is for people to make art together. The joy that these people felt has been long lasting too. They all had such a great time and we learned a lot about the wonderful history of our town too!"

Professor Lindberg feels that drama is vital for people. "Experiencing theatre allows an individual to step inside their imagination and to play, an essential part of life that is often lost in our whirlwind world".

"I feel that my work empowers people to feel good about themselves and their creativity and to feel more connected to those around them. Theatre has such power as it is such a collaborative art".

"I FEEL THAT MY WORK EMPOWERS PEOPLE TO FEEL GOOD ABOUT THEMSELVES AND THEIR CREATIVITY AND TO FEEL MORE CONNECTED TO THOSE AROUND THEM. THEATRE HAS SUCH POWER AS IT IS SUCH A COLLABORATIVE ART" (PATRICIA LINDBERG)

PATRICIA LINDBERG

Marianne Bosma first became interested in drama at secondary school when she was doing a theatre production as part of a jubilee celebration. When her teachers saw her acting they urged her to apply for the Academy for Dramatic Art. The impact of her secondary school must have been significant as Marianne has now successfully led drama and theatre programmes as a reputed drama educator in the Netherlands.

Marianne recalls, “In this past year I had to teach for the leaving examination to the final year students and this was really very interesting and hard because there is this big responsibility. There is always a tension as a drama educator as you want to make a beautiful show and yet you also want to ensure that the students are given enough space and creativity to make their own performance... There is always this tension between what to allow and what to decide. What is the teacher’s role in it..? It was great, awful, tiring, interesting and a very creative period and I will never forget it!

Marianne feels it is often quite difficult to be certain of the impact of her work, but she feels that drama can be beneficial for people. While acknowledging that it can be very difficult to provide concrete evidence of impact, drama can contribute to both the individual and society. She says, “There is always a good feeling if your lessons are interesting and the people you work with are 100% involved. You can see the impact on individuals. I’m convinced that drama makes a contribution to self-confidence. Being involved in the theatre gives more ways to express our idea and provides people with more openness for the future”.

Marianne also highlights the technical impact of theatre. She commented, “Being involved in theatre provides training that you can use in a number of fields of employment. People who are involved in acting are better at observing people and their behaviour, being aware of speaking, being aware of facial expression and the meanings expressed by others. People involved in the theatre are generally more creative, open and sensitive. If there is more drama and theatre I think society will be able to take a more open look at things and be more open to ‘meet the strange’. If you are making theatre or have lessons in Drama you will have the opportunity to find things out about yourself. Through observations about others and you will learn to play your own instrument (body and voice) which can help you for an open and flexible communication and a positive creative mind”.

“IF THERE IS MORE DRAMA AND THEATRE I THINK SOCIETY WILL BE ABLE TO TAKE A MORE OPEN LOOK AT THINGS AND BE MORE OPEN TO ‘MEET THE STRANGE’”
(MARIANNE BOSMA)

MARIANNE BOSMA

Victor Ladan Lutsili is a script writer and movie director who uses theatre and drama to lead development projects. He first became interested in drama through the influence of his mother**,** who worked for World Vision on sponsored community projects for destitute children. To help the children, she would ask him to develop scripts she could use with the children she was working with.

In his current work he is researching the use of drama for people who have experienced trauma. Victor Ladan Lutsili explains, “I am currently doing a research project called *Narratives of the Living Dead.* This work uses drama and script writing to explore how People Living With HIV/Aids (PLWHA) confront their psychological trauma caused by HIV infection by using theatre to voice their stigma”.

He feels that the impact of his work changes the lives of individuals and improves society, as he commented, “I have seen attitudinal change, total transformation in their view of the world”.

Victor feels that drama has a very strong restorative effect for people. “Drama and theatre are potent medicine that returns to life a dead body, mind and soul”.

“DRAMA AND THEATRE ARE POTENT MEDICINE THAT RETURNS TO LIFE A DEAD BODY, MIND AND SOUL” (VICTOR LADAN LUTSILI)

VICTOR LADAN LUTSILI

NOTES

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[6] The research report from the theatre and science project concluded that:" 1. There is a persistent prejudice that 'science plus theatre equals poor plays' despite increasing evidence to the contrary; 2. Most NMF participants believe that science is represented too simplistically in the arts, where it is represented at all; 3. Both scientists/clinicians and writers generally need some experience of science-based theatre before they appreciate what it can offer them; 4. Theatre makers, scientists and audiences can all offer each other new insights; 5. It is important for writers to have a good relationship with their scientific advisor and to be able to seek guidance throughout the writing process; 6. The relationship with a scientific advisor can be broader than answering specialist questions; they can also act as mentor and open pathways to reliable information; 7. Dramatic and scientific direction cannot be fully separated; 8. Collaborations tend to lead to an increasing overlap of roles between individuals". http://www2.warwick.ac.uk/fac/cross_fac/iatl/projects/studentperformance/thomas
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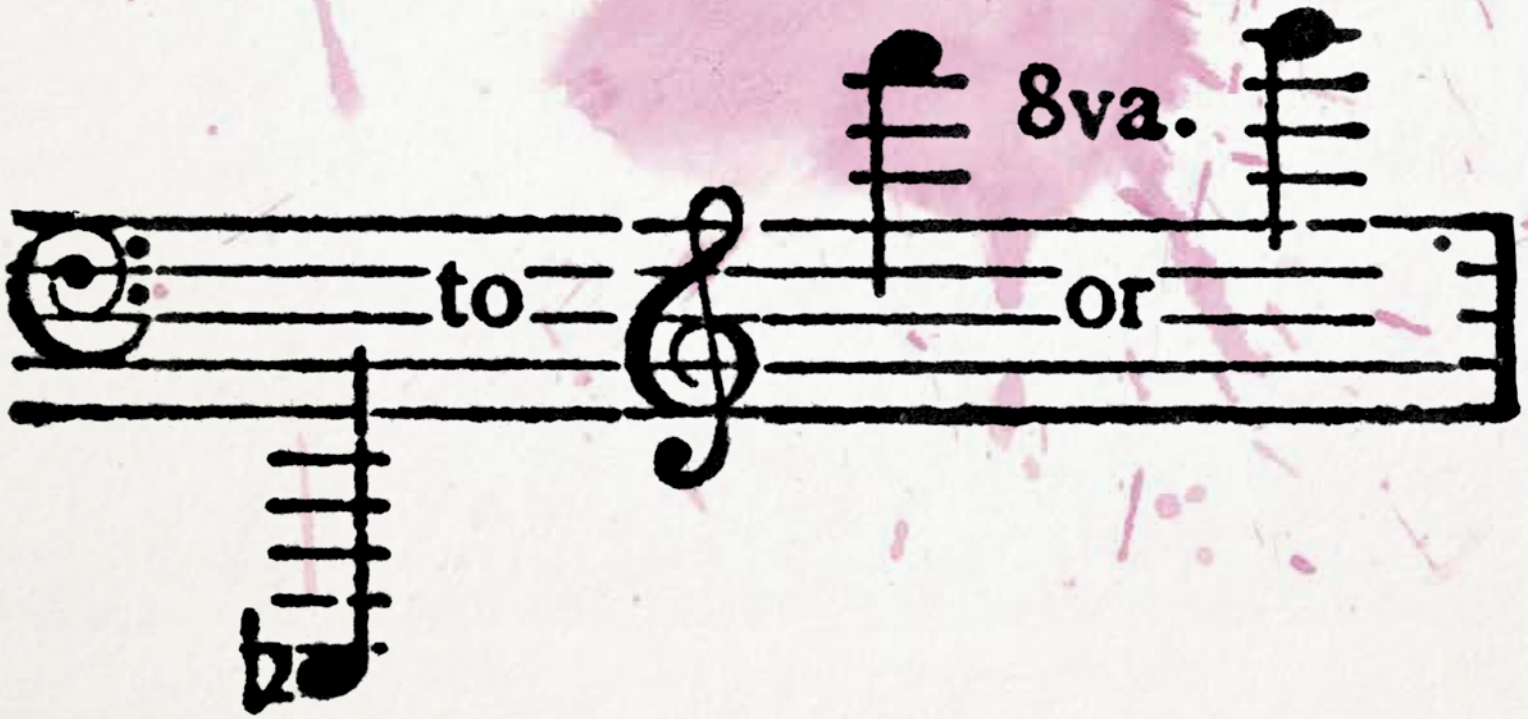
Professor **Anne Bamford** is Director of the International Research Agency and Director of the Education Commission. Anne has been recognized nationally and internationally for her research in arts education, emerging literacies and visual communication. She is an expert in the international dimension of arts and cultural education and through her research, she has pursued issues of innovation, social impact and equity and diversity. A World Scholar for UNESCO, Anne has conducted major national impact and evaluation studies for the governments of Denmark, The Netherlands, Belgium, Iceland, Hong Kong and Norway. Amongst her numerous articles and book chapters, Anne is author of the "Wow Factor: Global research compendium on the impact of the arts in education" which has been published in five languages and distributed in more than 40 countries. Anne is a former Professor at the University of the Arts London and a Professor at St Mary's College and the Institute of Education, Hong Kong.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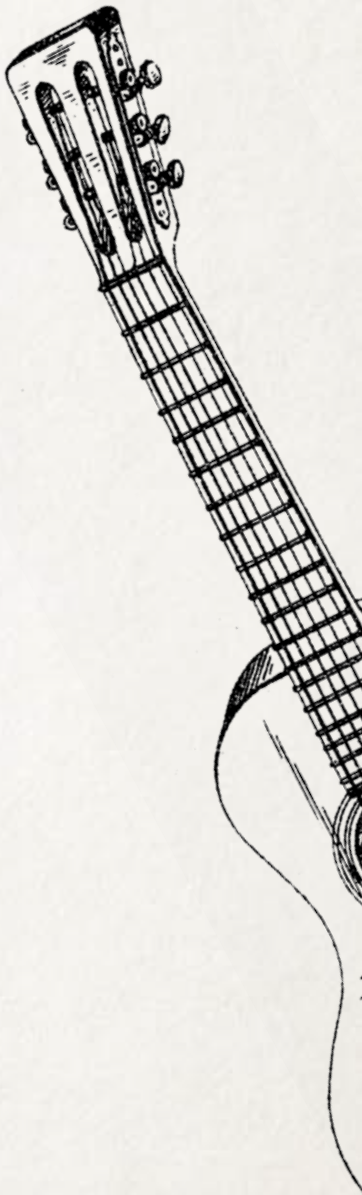

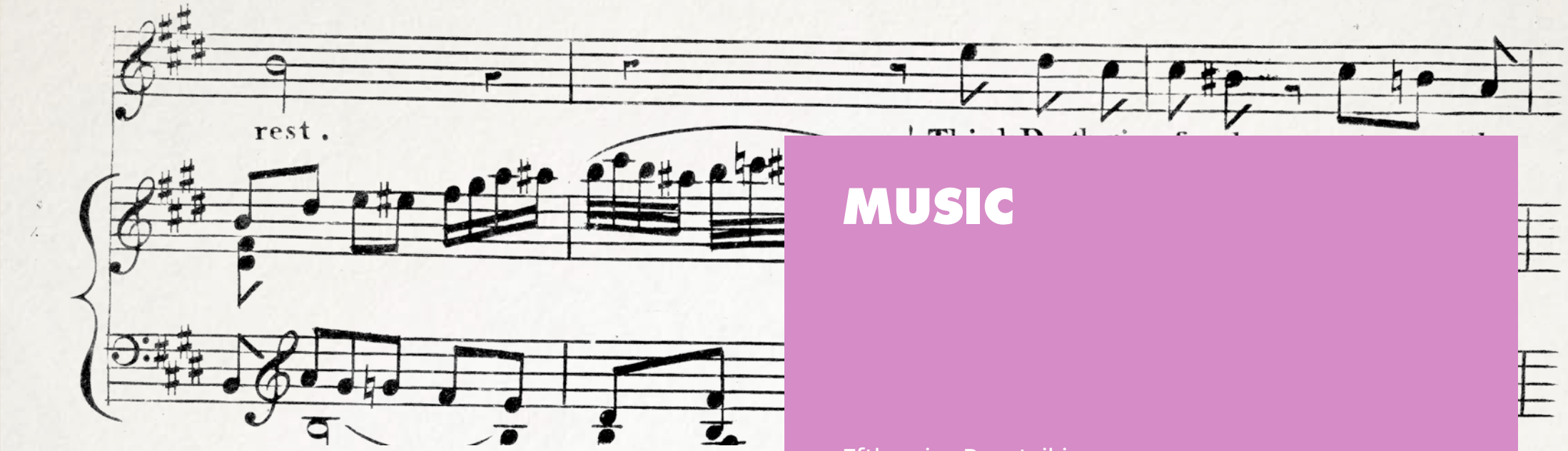

MUSIC

Efthymios Papatzikis

Abstract

Music is the universal language. It inspires and brings to our mind deep emotions and awakens our imagination, opening new creative ways of learning and development.

Music is used to achieve specific psychological states, it has the potential to alter or manage social behavior, it can help us to remember specific product names and even enhance a brand image. Participating in choirs, orchestras and bands creates connections, promotes cooperation and teamwork.

"Music, compared to the other arts, is approached by many leading researchers in evolutionary biology as one of the oldest and most fundamental traits of human socio-cognitive development".
(Peretz, 2001)

WHY MUSIC?

Everyone is a musician. We are born musicians, we all live our lives within music and we get in touch with it in many different ways and for many different reasons. Music exists all around us – in the simple rhythmical beats of our hearts to the most complicated melodic sequences of a classical symphony – and it seems to be one of these abstract entities and needs, like love, that plays a major role in the way we perceive and approach our surrounding environment.

In this broad sense, of course, music cannot be seen as only a human construct. Nature is filled with musical sounds. Sometimes these sounds are simple like the sound of the waves breaking upon the sea shore, sometimes they are more complicated and non-understandable to us like the songs of the birds. Whether straightforward or more sophisticated, these sound structures all consist of music, being made either by humans or nature for pleasure, communication or sometimes for no obvious reason at all – they are there just to project nature's hierarchical structure (i.e. the aforementioned sea waves). Nevertheless, these sounds and music "speak" to us – and deeply affect us – whether we want them to or not, interacting with our mind and brain from the very first moments of our lives.

... SOUNDS AND MUSIC "SPEAK" TO US – AND DEEPLY AFFECT US – WHETHER WE WANT THEM TO OR NOT, INTERACTING WITH OUR MIND AND BRAIN FROM THE VERY FIRST MOMENTS OF OUR LIVES

IN THE BEGINNING...

Consider newborn children. The easiest way for them to communicate with their environment in the very first months of life is through sound and music. They cry, laugh or produce amorphous series of sounds denoting different states and levels of emotions. They use sounds as a form of "music", organising them, trying to make sense of them, using them to ascribe meaning. In these first instances of life, to soothe the child through singing and cradling - where the rhythm of the mother's heartbeat and voice are always present - is crucial. The innate human connection that exists with the specific sound manifestations is one of the most important means for a newborn to feel secure and relaxed in this world of so many sensorial challenges.

Rhythm and (musical) sound perception start already in the womb, and both are already at work from the 16th week of gestation (Shahidullah and Hepper, 1992). Sounds have a surprising impact upon the foetal heart rate. It has been found (Chapman, 1975) that a five second sound stimulus can cause changes in heart rate and movement, which may last up to an hour. Some musical sounds can also cause changes in metabolism. Brahms's Lullaby for example, played six times a day for five minutes in a premature baby nursery produced faster weight gain than voice sounds played to the same schedule.

RHYTHM AND (MUSICAL) SOUND PERCEPTION START ALREADY IN THE WOMB, AND BOTH ARE ALREADY AT WORK FROM THE 16TH WEEK OF GESTATION (SHAHIDULLAH AND HEPPER, 1992)

CONTINUING...

As we grow up and until the end of our lives, music follows us in our everyday life activities, too. The connection of language to music we experience when we talk and sing, the bodily movement that is innately connected to musical

sounds when we dance, or even the ultimate feeling of self-expression that music offers through its creative substance, are some of the practical examples showing how music is embedded in our human existence in a variety of ways.

Both music and language are common to all humans in which "perceptually discrete elements are organized into hierarchically structured sequences according to syntactic principles" (Patel, 2003: 674). In many ways, spoken language is a special type of music, and research has clearly shown that music and language share the same brain regions (Brown, Martinez, & Parsons, 2006). Growing up, therefore, and living in a musically rich environment is often advantageous for language support and development. A brilliant example of how music can support language acquisition is where familiar song melodies are linked to new information, making the relevant processing from the brain more effective and long-lasting. After all what do you remember more easily; the lyrics of a song or some phrases from a "dry" speech? It has been repeatedly suggested by scientists that continuous interaction with music has a notable effect on improving our verbal memory and intelligence (Moreno et al., 2011).

IN MANY WAYS, SPOKEN LANGUAGE IS A SPECIAL TYPE OF MUSIC, AND RESEARCH HAS CLEARLY SHOWN THAT MUSIC AND LANGUAGE SHARE THE SAME BRAIN REGIONS (BROWN, MARTINEZ, & PARSONS, 2006). GROWING UP, THEREFORE, AND LIVING IN A MUSICALLY RICH ENVIRONMENT IS OFTEN ADVANTAGEOUS FOR LANGUAGE SUPPORT AND DEVELOPMENT

Music, movement and dance are also inextricably part of human social life although the production of combined, purposefully structured sounds and movements is not unique to humans. Nevertheless, we are probably the only species that ascribes a purposeful yet variable meaning to patterned sounds and movements, projecting through them fundamental values (i.e. caring and sympathy), rituals (i.e. war dances) or even states of mood in our everyday lives. On a more specific level, the innate understanding of rhythm we all possess helps us to move our hands, walk and run. Ultimately, different sounds in our environment – or even their absence – drive us to fine-tune or synchronise particular body movements in a smooth or abrupt manner.

We intentionally or unintentionally choose to process and understand the music and sounds generated in our environment. We listen to them, we "distill" them, and finally use them according to our needs and wishes. Listening – passively or actively – to our surroundings is a continuous process that happens even when we sleep. Apart from our external ear, a huge line of mechanical "processors" exists beyond this, helping us to decode, categorise, synthesise, assess, value and finally understand sounds. There are at least three main distinctive pathways through which sound can be sent from the outer-inner ear to the auditory processing centres of the cortex; and we constantly use them to provide meaning to ourselves about the quality and quantity of the overwhelming stimuli reaching this highly sensitive processing machine. This is how we feed our emotional mechanisms (i.e. limbic system) in the brain through sounds and music, managing to alter – raise or calm – our or others' moods, when, for example, driving and listening to the radio, when speaking and controlling our voice according to the audience we are communicating with, when listening to our favourite songs to boost our self-esteem and scaffold our positive social attitude.

LISTENING – PASSIVELY OR ACTIVELY – TO OUR SURROUNDINGS IS A CONTINUOUS PROCESS THAT HAPPENS EVEN WHEN WE SLEEP

CREATIVITY AND MUSIC

However, people do not only listen to music. They also actively take part in making it – directly or indirectly – thus projecting a need for an everyday creative advancement through it. We all have a natural curiosity, and curiosity is the seed of creativity. Music offers us a great opportunity to channel that natural curiosity into creative endeavours and activities, making it the "vessel" which carries all the elements that potentially provide a fertile ground for advancement, change and innovation in our social, emotional or personal lives.

Music and society have always been intimately related. Music has been present since the beginning of the human race, and nowadays experimental work shows that our decisions, concerning the music we choose to listen to or perform in given situations, helps us to achieve particular psychological states that complement specific social environments. For example, we choose to listen to specific music when we exercise in order to achieve a highly aroused biological and psychological state (North and Hargreaves, 2000). In this sense, we creatively search for music's best possible usage in order to enhance the quality of our lives.

In addition, music helps us to define our identity and further manage and develop our interpersonal relationships. There are a number of examples showing that people favour a specific musically defined individual or group at the expense of others who do not share the same musical characteristics with them (Tarrant et al. 2002). Music facilitates communication which goes beyond words, enables complex meanings to be shared and provides a creative basis for complex social interactions. One contemporary approach to the latter may be seen in the marketing industry, where one can observe the effects of music on workers and consumers. Music can alter or manage relevant social behavior, and it can help us to remember specific product names or enhance a product's image through association with a well-loved piece of music (Bruner, 1990; Garlin and Owen, 2006).

IN ADDITION, MUSIC HELPS US TO DEFINE OUR IDENTITY AND FURTHER MANAGE AND DEVELOP OUR INTERPERSONAL RELATIONSHIPS

In day to day social environments such as schools or colleges, music helps students to develop creative bonding in groups and teams. In orchestras, choirs or bands we learn that success depends upon teamwork and cooperation, and we discover all the advantages that contributing to a creative team has to offer. Someone needs to think creatively in order to promote and maintain effective associations of people. This fact is wonderfully presented in a study by Kirschner and Tomasello (2010) showing that joint music making among 4-year-old children increases subsequent spontaneous cooperative and helpful behaviour. Children are encouraged to constantly bear in mind the collective intention and shared goals, thereby effectively satisfying the intrinsic human desire to share experiences and activities with others.

IN ORCHESTRAS, CHOIRS OR BANDS WE LEARN THAT SUCCESS DEPENDS UPON TEAMWORK AND COOPERATION, AND WE DISCOVER ALL THE ADVANTAGES THAT CONTRIBUTING TO A CREATIVE TEAM HAS TO OFFER

Of course, creativity and music as a combination do not only have an impact on social interactions. This combination is a powerful tool for arousing emotions and feelings, while it has been proved to be far more "invasive" than language. The action of listening to music is a deep brain creative process in itself. In simple terms, processing usually starts in the very deep regions of the brain (subcortical areas; thalamus and cerebellum where synchronization

of pulses occur) and then moves out towards the higher cortical areas and the systems of cognition. This is why when we listen to organized or random sounds in nature and society, we first react emotionally to them, trying to connect them, and then understanding them through a more complex – either societal or environmental for example – framework at a later stage (... all these in milliseconds, of course!). We bring together the pieces of the puzzle in order to construct a meaning, to appreciate it. We structure a big picture in the brain that projects feelings and meanings, devising in collaboration new emotions every time we come across a musical or sound stimulus. No one feels the same about the same piece of music. We are all unique in this matter and creative in many different ways.

THE ACTION OF LISTENING TO MUSIC IS A DEEP BRAIN CREATIVE PROCESS IN ITSELF

Emotional creativity sourced from music, however, does not only come about by the act of passive or active listening. Personal activity in music is even more important, thus taking us on its creative path of emotions from the very beginning of our lives. "The biological significance of the emotional associations of music is perhaps most evident in the infancy period, where much of the interaction between preverbal infants and their caregivers involves regulation of the infants' states and the communication of emotional information" (Schmidt and Trainor, 2001: 488). This regulation and communication of emotional information through music and sound is a creative process that happens a lot during that period, providing the basis for later emotional variability and expansion.

MUSIC IS A GRAMMAR TO THE EMOTIONS AND WE CREATIVELY USE IT TO PERSONALLY EVOLVE AND THRIVE IN SOCIETAL SETTINGS

Emotional creativity through music comes to its apogee at a later stage in life, when people start to consciously interact with either its structure (i.e. composition) or its tools of production (i.e. instrumental performance). This is when we start to realise that music making is far more than simply an activity of mind. In all its different manifestations in teaching, performing, composing and learning, music emotionally connects the mind to the brain (and vice versa) in a very strong way, reaching to expose biological effects of emotions common to all humans. Musical stimuli induce "shivers down the spine" (i.e. Grewe, Nagel, Kopiez and Altenmuller, 2007) which clearly represent in a physiological manner the effects of the musical creative process. This process begins in primitive brain structures that are involved in motivation and reward. Hence, composers creatively manipulate their writing within a song to reach specific emotional expectations, performers creatively structure their performance to build anticipation, the teacher and the learner both follow the creative path of being rewarded through learning in order to achieve new knowledge, new futures. Music is a grammar to the emotions and we creatively use it to personally evolve and thrive in societal settings.

Despite all this, however, we should not forget to stress the possible effects that musical creativity may bring to cognition at the individual level. Both thinking about and creating through music, have a strong impact on biological and psychological systems of cognition. Music changes the wiring of our brain, and according to our responses to it, alters our behavioural performance. It has been found that music enhances spatio-temporal intelligence and its performance (Picazio et al., 2013; Forgeard et al, 2008; Suda et al., 2008). Improving our perception of the world around us through music may help us to more effectively and creatively use the skills that we need,

MUSIC CHANGES THE WIRING OF OUR BRAIN, AND ACCORDING TO OUR RESPONSES TO IT, ALTERS OUR BEHAVIOURAL PERFORMANCE

which extend from solving advanced spatial problems in related domains to being able to pack a suitcase for a short trip overseas.

Recent studies have also shown that people who follow the creative path of music may be more successful on standardized mathematical tests like the SATs. In a paper published in the Journal of Aesthetic Education, the author provided a meta-analysis on 25 studies examining correlation and causation of mathematical advancement due to music usage in educational environments and training (Vaughn, 2000). Results demonstrated that there is a positive association between the voluntary study of music, on the one hand, and mathematical achievement, on the other. Additionally, although at a marginal level, this same review suggested that background music has a positive effect on students who take maths tests.

Last but not least, in this domain of music and cognition, it has been found that creative endeavours through music affect our attentional performance and overall behavioural discipline. From the well-established formal educational settings to informal everyday-life activities, interaction with music seems to influence the maturation of auditory discrimination and attention, the benefits of which effect areas of our lives well beyond the musical domain (Putkinen, Saarikivi, Tervaniemi, 2013). It has been also suggested (Khalil, Minces, McLoughlin and Chiba, 2013) that creative musical contexts (such as choirs or orchestras) inherently promote social discipline, and can foster and enhance positive attentional behaviour and group synchronization.

NEUROSCIENCE AND MUSIC

In our societies, music is usually approached as a cultural entity or human construct. Its semantics – the notes and tools it employs – or its specific cultural use and benefit – different styles of group and individual expressions – dominate its relevance to discussions, educational or social activities. Because of this sometimes over-simplistic approach, however, myths such as the right-left brain paradigm, the overly strict convergent versus divergent thinking, or even the focused versus defocused attention states of musical interaction have penetrated how we think about music. For example, beliefs such as “if someone wants to be musical they should use the right side of their brain more”; or, “convergent thinking is what it takes to make music”, or even that, “defocused states of mind are the only way to reach the best music performance results” are prevalent in our society. All this shows just one side of the coin, and unfortunately blocks music’s further advancement or fusion with fields other than that of education or social anthropology.

Fortunately, neuroscience research in our time has presented us with a richer picture, and gives us a wider – if not different – scope on music’s substance and use, opening the way for a multifaceted approach to and understanding of the benefits of music. Neuroscience now provides a more solid basis through which we can better understand the combined creative characteristics and biological extensions of music. What is known so far, however, is not much, and as Dietrich (2004) claims, “there is no sound theoretical framework on the neural basis of [music’s] creative thinking…” (p. 823). It is indeed difficult to study musical (re)creation and involvement in plain neuroscientific terms. Art and music cannot be fully studied in the overly controlled environments that most neuroscientific laboratories promote and demand.

Nevertheless, seeing music as a fundamental activity of human information processing, researchers have clearly managed to decode certain properties of the neural substrates of music in the human being. We now know that making and feeling music is far from a magical event of unexpected random inspiration or divine interaction. Instead, it is a mental occurrence that results from the application of ordinary cognitive-brain processes (Smith, Ward, & Finke, 1995). Improvisation, for instance, can be defined “as the spontaneous generation, selection and execution of novel auditory-motor sequences” (López-González, 2012). Or, that intensely pleasurable responses to music are

connected to heart rate and respiration changes and provide an imprint on the cerebral blood flow balance, involving brain regions such as those relating to reward/motivation, emotion, and arousal (i.e. ventral striatum, midbrain and amygdala) (Blood & Zatorre, 2001).

For some people, the neuroscientific approach may seem too systemic or even shallow. However, it is very practical and gives us a new perspective on how music is involved in our lives. This is probably why "musicians" (in this case meaning people who either listen to, perform or make music) are one of the first and most fit populations with which to study the impact that music has on our bodies. Due to the intensive, long-term, variable style, training mode and characteristics of the lives "musicians" follow (i.e. the hours and starting points of their active connection with the musical phenomenon) it gets much easier for neuroscientists to study and realise what music does to human neural circuits and brain functions (Zatorre, 2005). This is also why "neuromusic" research does not confine its oeuvre to music performance or creation only, but also extends its applications to well-being, education and rehabilitation.

Neuroscientific research on music - or neuromusic - started developing during the last couple of decades, going as far back as the mid-80's (Dietrich, 2004). Techniques such as the Electroencephalography (EEG), functional Magnetic Resonance Imaging (fMRI) and the Positron Emission Tomography (PET) have been employed for deeper and more detailed investigations. Projects looking at listening to music, performance practice, improvisation and composition now show that there is a variable activation of the brain in the prefrontal cortex, the premotor and the supplementary motor areas, some temporoparietal areas, the visual cortex, the thalamus, the basal ganglia, the hippocampus as well as the cerebellum (Dietrich, 2004; Gibson, Folley, & Park, 2009). The same or other neuroscientific research projects have also presented sometimes contradictory evidence of deactivation of the brain regions that regulate emotions: the limbic and paralimbic areas (Limb & Braun, 2008). It seems that brain blocks such as the hippocampus, amygdala, hypothalamus and parts of the parietal and occipital cortices diminish their involvement during some "creative" tasks in order for the artist to reach safely and faster the desirable creative outcome (figure 1). Emotions may be tricky during certain instances in interacting with music and neuromusic research suggests that our brain knows about it! For example, we may feel good having fun when hearing loud noises in a rock concert – i.e. the beat of drums. Nevertheless, this is a harmful process for the whole system when excessive, thus the brain reacts in certain biological ways – with the emotion of happiness in this case – to defend it self from being harmed.

The neuromusic field has also investigated – among others – the domains of special education, some degenerative diseases and heart diseases. More specifically, research in autism and special education has presented extremely positive evidence on the way autistic children could use music's engaging potential in order to be more social and communicative in both their educational as well as in wider social settings (Wan, Demaine, Zipse, Norton, & Schlaug, 2010). Listening to music can evoke a great intensity of emotions in autistic children, who typically have difficulty in processing emotions (Allen, Hill and Heaton, 2009; Heaton and Allen, 2009). Research has also shown that music-based activities facilitate the use of sign language and other non-verbal methods of communication in children with autism (Buday, 1995). Furthermore, learning through music has been found to improve joint attention behaviours and nonverbal social communication skills in children with autism, with some

LISTENING TO MUSIC CAN EVOKE A GREAT INTENSITY OF EMOTIONS IN AUTISTIC CHILDREN, WHO TYPICALLY HAVE DIFFICULTY IN PROCESSING EMOTIONS (ALLEN, HILL AND HEATON, 2009; HEATON AND ALLEN, 2009)

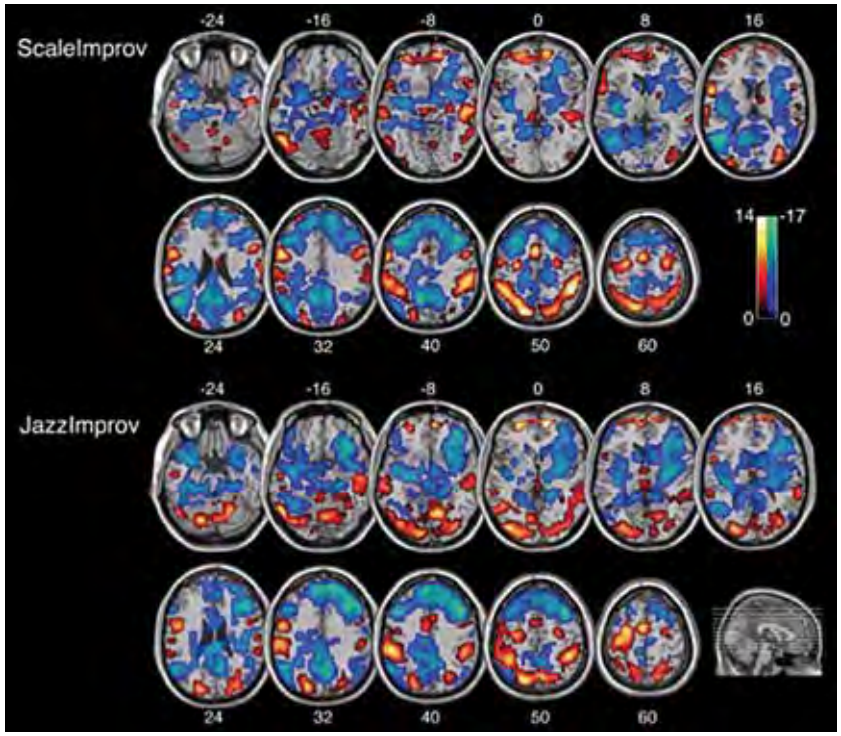

Figure 1. Example of multiregional and interhemispheric activation in musical creativity: Axial slice renderings of mean activations (red/yellow scale bar) and deactivations (blue/green scale bar) associated with improvisation during Scale and Jazz paradigms. Reproduced with kind permission by the authors ((Limb & Braun, 2008).

generalisation to settings beyond the music therapy sessions (Kim, Wigram and Gold, 2008).

Research referring to particular degenerative diseases and music has also shown the positive effects that music has on these conditions. For Parkinson's disease, for example, researchers have found that music improves rhythmic limb movements, gait and freezing (Swallow,1990; Stern, Lander and Lees, 1980; Sacks, 1982). Music brings about positive changes in motor performance and emotional functions connected to the disease (Pacchetti et al., 2000). For stroke patients, music has been proved to be particularly beneficial as it has a great capacity to promote neuroplastic changes, an important element in stroke neuro-rehabilitation. Grau-Sanchez *et al.* (2013) in one of their most recent projects, used a music-supported therapy (MST) programme along with Transcranial Magnetic Stimulation (TMS), and found that the participants obtained significant motor improvements in their paretic hands, accompanied by changes in the excitability of the motor cortex. Similar results were reached in another study on music and stroke rehabilitation (Lim et al. 2013), where the Aphasia Quotient (AQ) of ischemic/hemorrhagic patients improved, showing again that a music-supported therapy programme has a greater effect than a speech language therapy programme.

FOR STROKE PATIENTS, MUSIC HAS BEEN PROVED TO BE PARTICULARLY BENEFICIAL AS IT HAS A GREAT CAPACITY TO PROMOTE NEUROPLASTIC CHANGES, AN IMPORTANT ELEMENT IN STROKE NEURO-REHABILITATION

All the above are just a few of the numerous elements of research in the neuromusic field, investigating the positive results that music participation and involvement already show in different contexts and across different age ranges. What we should definitely keep in mind however is that (a) not only one brain part is active during creative musical tasks, meaning there is not just one part of the brain connected to music and musical creativity; (b) that both hemispheres show activation when music is present either as an acoustic stimulus, as performance or as pure creation and that (c) when engaged in musical creative tasks the same brain areas could be similarly active when involved in other everyday and ordinary tasks.

CONCLUSION

Sound decoding, music perception and musical creativity seem all to be fundamental and inherent elements of human behaviour and existence. Physiological research has shown in different clinical and other domains that interaction with musical structures and activities enhance our biological mechanisms, and help towards a more effective intervention and rehabilitation. In educational settings, music has also been proved to be a cornerstone of development, providing benefits not only at the cultural and psychological level, but also at the cognitive and functional levels. Music is present in most of our social and personal activities, and we live with it from the very first moments of our lives through to the end. Of course, there still is a lot to be discovered and explained in relation to it and its effects on our human mind and brain. However, we should never forget that music is a universal language that inspires and evokes strong emotions in a healthy way, while it sparks our imagination, bringing new creative roads to our constant path of learning and development.

IN EDUCATIONAL SETTINGS, MUSIC HAS ALSO BEEN PROVED TO BE A CORNERSTONE OF DEVELOPMENT, PROVIDING BENEFITS NOT ONLY AT THE CULTURAL AND PSYCHOLOGICAL LEVEL, BUT ALSO AT THE COGNITIVE AND FUNCTIONAL LEVELS

Let's just call me **Catherine**. A girl who grew up on a farm, I was introduced to music at the age of three when my father bought a second hand piano at an auction. It was not just any piano, but a black concert grand that filled almost a whole room, or at least that is what I can remember. Half of the piano keys got stuck and I have vivid memories of my mother fixing this with a screwdriver and lots of improvised skill. Oh what a wonderful world of sound opened for me! I was free in that world to play and experiment, trying out tunes that I knew, playing by ear, all in that little room with its big black grand piano. Today I am a professor of music at a leading university; what began as creative play became my way of living.

TODAY I AM A PROFESSOR OF MUSIC AT A LEADING UNIVERSITY; WHAT BEGAN AS CREATIVE PLAY BECAME MY WAY OF LIVING

Three years ago my life changed in a split second when a stroke left me temporarily paralysed and speechless. And yet, I remembered that the brain is "plastic" and mouldable; much of what I lost could be restored through active music making. My true passion became a strong restorative source and force. As a pianist, I turned towards the contrapuntal works of Bach as my source of inspiration, painstakingly learning six new Suites that I had not played before. During dark hours my piano playing helped me to stay sane, as I knew intuitively that doing so was helping to restore neural pathways. This knowledge filled me with hope and the intricate sound structures lifted my spirit and continue to do so.

My journey has not been easy but there have been key pointers along my way. My parents nurtured a love for music and created a suitable environment. As a family we made music together and often had house "concerts", playing for our parents and family friends who were kindly "forced" to buy tickets and refreshments! This taught me that sharing music is as important as making it. I was furthermore exposed to thorough teaching in my formative years. Because of this exposure to music, actively making music became a tool to enable me to rehabilitate from the effects of a dread disease.

By telling my story I have indicated the importance of music in my life. To make music is part of being human. Doing so is part of human survival and important in expression of self and other. I still play my piano and it has not ceased to bring me joy, filling me with astonishing wonder.

CATHERINE

Mark is an independent management consultant and has held management positions at PricewaterhouseCoopers, Mercer, and Ernst and Young. He has worked with many companies across Europe, the USA, and the Asia Pacific.

We had a piano at home, and some of my earliest memories are of my father playing bits of Beethoven and Bach at night. However, I was thought to be sporting and have no musical talent, so my younger brother was encouraged to learn the piano. I wanted to play the piano too, but I did not manage to persuade my parents to arrange this, so I stopped trying. Despite this I wanted to play an instrument and I knew that I had some musical capability since I was often asked to sing solos and perform in concerts. Some time later – while away at school at the age of 13 - I leapt at the chance to learn the violin for free for a term. I was in fact captured by the sound of the violin, rather than by sport, and this time my parents could not intervene, so I took up the fiddle.

MARK

At school I was the despair of all my teachers, except my violin teacher. She was a very good pianist and so we just played pieces endlessly, but without - as I was to realise later - nearly enough focus on technique or studies. I put all my efforts into the Royal Schools of Music exam pieces, and took a grade each term. I did not enjoy boarding school life, so hours spent in the Music School were never wasted. By the age of 17 I somehow managed to get into the National Youth Orchestra although I was at nothing like the technical standard of the others. This rather amateurish approach continued for several years. Moreover, I never studied music formally, and was not encouraged to do so. I took a degree in Classics and later became a chartered accountant. However, for all this time I still put all my discretionary time into playing the violin.

AT SCHOOL I WAS THE DESPAIR OF ALL MY TEACHERS, EXCEPT MY VIOLIN TEACHER

During this period I learned various things, nearly always the hard way! I gave some disastrous performances and discovered how far adrift I was from the required standard for public performance. At college, many of my friends were properly trained and talented musicians, so I began to realise how far good teaching from an early age could take you; I found some good teachers and started to develop my technique. I started to sing in choirs and realised that it was important to sing from an early age to give yourself confidence with musical performance. I started to teach myself the piano and learn music theory.

At college, I played in many orchestras and had some marvelous experiences, and by my mid 20's I had managed to reach a point where I was able to take part in chamber music. Gradually this repertoire took hold of my imagination, and now it is my chief interest. Initially I found that as a viola player I was in demand. However, I wished to return to the violin, so I gradually converted back to the fiddle. However, it took many years to achieve this, as I had a demanding job and a very busy family life. At the same time I was interested in many different forms of music, for example jazz and folk, and spent several years concentrating on the piano.

Nowadays I do not work full time, and I am able to practice more regularly. I find regular practice offers many benefits, mental and physical. I enjoy the discipline of practice. I enjoy all aspects of it.
I aim to spend some 3 hours a day practicing. I am well past the point where I could earn a living from music, but it occupies such a big part of my imaginative life that it is impossible to ignore.

I AM WELL PAST THE POINT WHERE I COULD EARN A LIVING FROM MUSIC, BUT IT OCCUPIES SUCH A BIG PART OF MY IMAGINATIVE LIFE THAT IT IS IMPOSSIBLE TO IGNORE

There is this idea that music offers a form of cartharsis. We channel our existing emotions through artistic performance. Music can provide a release of emotion, add intensity, or just offer a controlled form of expression. Secondly, for me, music creates a link with people in the present and in the past. Chamber music achieves both. You have to play with people – listen to them, respond to them, especially in a quartet where you have different roles to play, and at the same time you have the immediate link with Haydn or Mozart as people. And finally, music offers patterns that create mental pictures. Music appeals to my imagination – whatever you are playing or listening to you can somehow get in touch with someone else on a level that is purely pattern based. You are following Beethoven's line of thought when you listen to his symphonies. This is how he thought – through sound – and it is a compelling picture.

YOU ARE FOLLOWING BEETHOVEN'S LINE OF THOUGHT WHEN YOU LISTEN TO HIS SYMPHONIES. THIS IS HOW HE THOUGHT – THROUGH SOUND – AND IT IS A COMPELLING PICTURE

YIANNIS GEORGIADIS

International Violinist

Yiannis was born to a family strongly connected to music. Although his parents were not musicians by profession, his father had practised the viola for several years, and performed as a percussionist with the Philharmonic Band of the Municipality of Athens, Greece. His mother, although working as an office clerk, had completed her studies at the Vienna Music Academy. She was the one who mostly nurtured in Yiannis the passion for classical music and the violin, driving him to feel this instrument as an extension of her maternal love and care. It was not before he was 8 years old that Yiannis started to systematically practise the violin, seeing it up to that moment as a way to play, and sing with his fingers. When he was 16 and after a European competition, he was selected as a member of the European Community Orchestra. This, as an experience - performing at the best European venues, collaborating with the best conductors in the world such as Abbado, Barenboim and Solti - defined his future musical choices. He went on to attend the Vienna Music Academy in order to study the violin at the highest possible level. Yiannis is now a violin and chamber music soloist of high calibre, and has worked with the best conductors and performers all over Europe, the Americas and Asia.

I CERTAINLY BELIEVE THAT THROUGH MUSIC WE AS HUMAN BEINGS CAN PRESENT A "MULTICOLOURED" WORLD OF EMOTIONS

At a very young age I learned to express most of my emotions through sound and music. I certainly believe that through music we as human beings can present a "multicoloured" world of emotions. Especially for the very young and "fragile" ages, classical music has a very positive effect. It sharpens intelligence, challenges imagination and stimulates mental and psychological perceptual skills. Listening to music can induce strong feelings. And this may well happen when processing or capturing the content of major compositions which carry the psyche of the great composers. On the other hand, a performer does not only remain at this perceptual level in order to achieve the ultimate feeling. Performers exploit all their artistic creativity, internal discipline and outgoing expression. These are the qualities that make a difference in the professional domain after all, simulating the internal focus, the educational scaffolding and the passion that an athlete needs to excel in his or her domain.

PERFORMERS EXPLOIT ALL THEIR ARTISTIC CREATIVITY, INTERNAL DISCIPLINE AND OUTGOING EXPRESSION

Working in music means always having to set goals. This is the recipe for making dreams come true. This is how I have managed to collaborate with great orchestras as a soloist all around the world, as well as to work with numerous great colleagues.

This last year (2013) I had the chance to greatly "communicate" with and make music for children (6 - 10 years of age). It was an initiative funded by the European Union, targeting this age range in their native school environment. Most of them had no previous experience or knowledge of classical music or opera due to their remote living location. The final impact was something that even we - as professionals – could not predict, providing a creative approach to what other school courses nowadays struggle to achieve! The children were enthusiastic and intrigued by the feelings they experienced on this occasion, and tried to find a very holistic meaning to the musical representations they received through our performances. We knew that we had touched their souls, but we did not realise that we had touched their minds as well! Music can provide a vehicle to imagine and attenuate focus, bring joy or sorrow, provide the seed for internal passion and energy; and bring about the ultimate relief.

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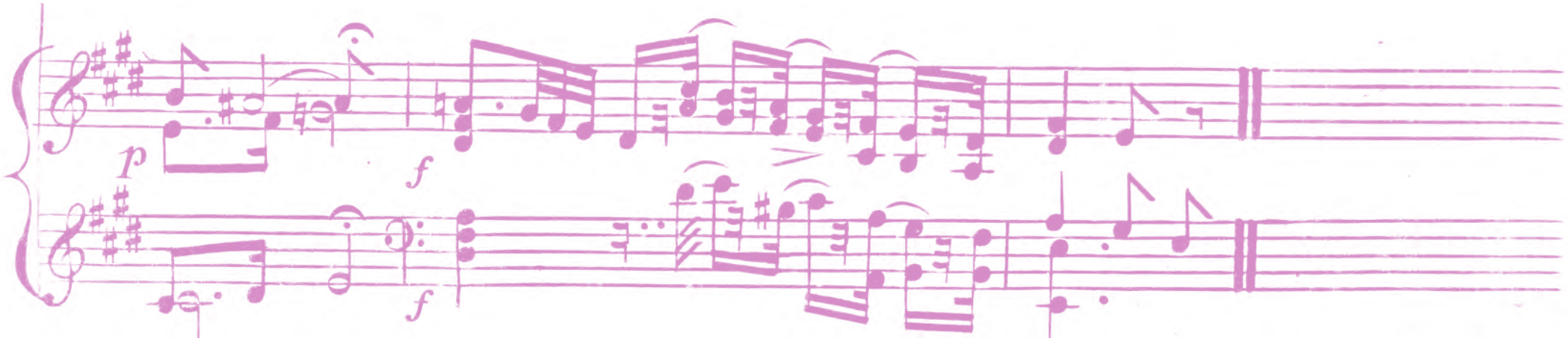
Efthymios Papatzikis

With a special interest in music education and cognitive neuroscience, Efthymios has extensively explored the field of music development, working for more than 10 years as a professional instrumental teacher and researcher. Appointments he held in the past include two professorships in major Conservatories (Music Academies) in Greece, an appointment as a Strings Tutor and Lecturer in Music Psychology and Neuroscience at the University of East Anglia in the U.K, a Post Doctoral research appointment at Harvard University, U.S.A, as well as a directorship at the Musics R.E.D. Group Research Centre in Greece.

Since 2006, Efthymios is an International Music Examiner of the International Baccalaureate Organisation (IBO), while since the beginning of 2012 he has been the Musical Director of the "Youth Makes Music" U.K Competition (South Bank Centre, London) and a Fellow of the Botin Foundation, Spain. At the beginning of 2013, Efthymios was appointed a Post Doc Research Fellow at the Institute of Education, University of London, while for the same period he was distinctively chosen to attend with a full scholarship one of the most prestigious training schemes in Neuroscience and Brain Imaging organized in Switzerland by the International Brain Research Organisation. His very latest professional achievements include a research award from the Hellenic Medical Society, U.K and an invitation to publish on the Oxford Grove Music.
Efthymios's research portfolio is synthesised by projects and publications relevant to Pedagogy in Instrumental Teaching and Learning, Historical Musicology, Intercultural Music Awareness, Design of Music Courses, and Instrumental Teaching Reflection. His current research interests extend to the Mind, Brain and Music Education field, working in projects that explicitly combine developmental psychology and neuroscience.

As a violinist, Efthymios has worked with major performers, conductors and teachers including J.J. Kantorow, Sir Colin Davis and L. Kavakos, and he has performed as a soloist, orchestra leader and chamber music violinist all over Europe and North America.

He is a Fellow of the Higher Education Academy in the U.K, and holds the awards of a Qualified Teacher both in the U.K and Greece. He is a member of the Society for Education, Music and Psychology Research, as well as the International Society for Music Education, participating in the Advocacy Standing Committee for the period of 2012-14.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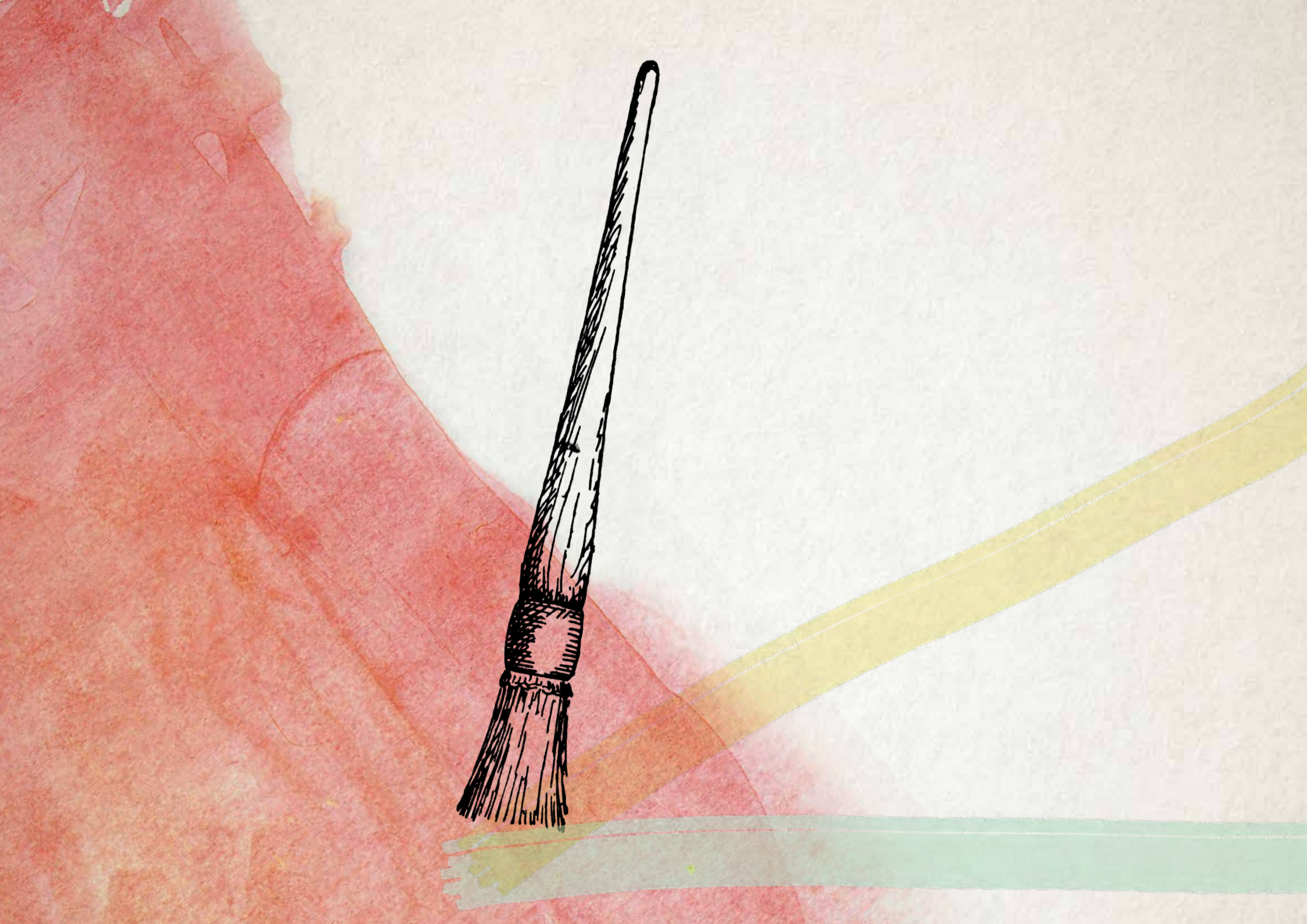

VISUAL ARTS

Ana Angélica Albano
Graham Price

Abstract

We were born with the potential to create and read images. The time devoted to artistic expression is a time for oneself, to reflect upon “myself in my world”. It is in the act of making that we value ourselves.

The act of creation is a state of total involvement, a bridge between all aspects of the human being, connecting reason and emotions, feeling and thoughts, intuition and perceptions, thus improving creativity as well as personal and social well-being.

"In the beginning it was the image"
Theodor Abt

INTRODUCTION

The first rock paintings mark the dawn of the human spirit.[1]
The historical narratives we create from the past before the invention of writing are possible thanks to the images found at archaeological sites. The paintings in the caves allow us to connect with the human beings who lived there 32.000 years ago, igniting our imagination to wonder about their physical and spiritual lives. Their ability to read and create marks was central to their survival, and for us today offers a glimpse into the way they organized their lives. The history of the images is linked to the ancient history of mankind. We are connected through time by our ability to read their stories from such images.

WE WERE BORN WITH THE POTENTIAL TO CREATE AND READ IMAGES

We were born with the potential to create and read images. To read animal tracks was to be able to hunt or avoid danger, to read the signs of the sky was to be able to predict the weather and "reading" the body language of other human beings was fundamental to the survival of ancient human beings.

To live, however, is more than just to survive. Although contemporary human beings live in an entirely different world, it is still a world in which the ability to read images continues to play an important role. Much of our shared information now comes to us in visual ways. This requires us not just to be visually alert in the natural world but capable of reading the messages embedded in our image-saturated social world. The immediacy of image is experienced by each of us every day through the advertising industry which has created a situation where two year olds can distinguish brands due to their exposure to popular media. These trained habits of seeing can be challenged. By embracing an adventure of seeing we are taken beyond the functional world of commodities. There is the human capacity to "re-cognise", to re-think or re-imagine the place of images associated with artistic endeavour. This kind of noticing, communicating and understanding the visual world around us, can be considered a birth-right. Artists are skilled in drawing our attention to the stilled moment, an unusual combination of appearances, or to the way in which our eyes have been captured by others. We can all borrow an artist's way of looking at the world because it is an extension of the capacities which all humans acquire from birth.

WE CAN ALL BORROW AN ARTIST'S WAY OF LOOKING AT THE WORLD BECAUSE IT IS AN EXTENSION OF THE CAPACITIES WHICH ALL HUMANS ACQUIRE FROM BIRTH

In the beginning of life the intimacy that exists between mothers and their children is dependent solely upon their shared body language. Verbal speech is not needed to explain this. Both the child and the mother are fed by the mutual experience of interest in each other. To enter into relationship with an artwork asks nothing less than this. Remain in a state of curiosity. Stay long enough in a focus that interests you until words drop away. Whatever associations begin to take hold, these form your new relationship with the image's power to provoke your own imagination.

Art-making accompanies the development of the visual sense. However, it is informed by the fascination with touch, – a touch that leaves a trace. Sliding fingers in the bottom of a favourite food dish, dragging a stick along the sand, riding a bicycle through puddles to watch the tyre track, can all be considered acts of drawing. When children begin to develop narratives they take a natural pleasure in creating pictures which are not necessarily informed by vision but

by the need to recall and retell important experiences. This ability predates their writing and in the telling of their pictures children animate their still drawings. Dr Susan Wright has spent many research hours sitting alongside young children as they draw their imagined futures. She responds as witness to the richly embodied repertoire of not only their drawn marks, but gestures in the air, sound effects and moments of speech that often accompany engaged acts of drawing. Through interviews she collaborates in the reconstruction of the emergent stories which occur alongside the drawing process. Through such patient attending we are gifted with glimpses into a far more complex world than apparently simple drawings are capable of revealing. Watching children carefully can awaken in us the gift of being their first audience. We may even remember how to play ourselves through observing such engaged teachers.

WHEN CHILDREN BEGIN TO DEVELOP NARRATIVES THEY TAKE A NATURAL PLEASURE IN CREATING PICTURES WHICH ARE NOT NECESSARILY INFORMED BY VISION BUT BY THE NEED TO RECALL AND RETELL IMPORTANT EXPERIENCES

Like writing and speech, with repeated opportunities these art skills develop. Without opportunity for repetition this ability remains undeveloped until most adults believe that they cannot create an image themselves because they are not artists. Adults, when they produce functional writing do not feel the need to say... "but I'm not a writer" yet they often deny their ability to make images by bowing to the intimidating skill of others or the mechanical lens of the camera.

This chapter reflects on how the visual arts, both in observing and making, touch our lives and awaken us to become creative and innovative.

WITH CHILDREN'S EYES

> *The effort to see things without distortion demands a kind of courage; and this courage is essential to the artist, who has to look at everything as though he were seeing it for the first time: he has to look at life as when he was a child and, if he loses that faculty, he cannot express himself in an original, that is, a personal way.*
> Henri Matisse

Following Matisse's thoughts, we are invited to create. Creativity begins with vision, an invitation to look at everything as if we were seeing it for the first time. Mostly we use vision to identify, compare and label - to wrap familiar words around what we see. Experience with visual arts begins when the words are inadequate to *ex*-press what has been *im*-pressed . Sometimes an experience touches us beyond words. We cry, we laugh, we are moved. When the *quality* of the experience is more important than the story we might tell in words, then we have further reason to explore an image, to articulate our impressions through paints, pencils, clay – through any available materials that can assist us in modelling what we have experienced. Movement is our first language - it precedes speech. In art our gestures leave a trace that can show us where we have been. As children, we claimed a space on a page. We produced a certain kind of knowledge. The recognition that *"I made that mark in the world"* attests to a magical power. Because every child draws, we can even say that it is their first writing. Lines, colours, shapes and textures become for the child their first alphabet. Our focus, chiming with Judy Burton's title, *Drawing: Catching Things That Are*

AS CHILDREN, WE CLAIMED A SPACE ON A PAGE. WE PRODUCED A CERTAIN KIND OF KNOWLEDGE. THE RECOGNITION THAT "I MADE THAT MARK IN THE WORLD" ATTESTS TO A MAGICAL POWER

Out Of Reach,[2] recognises that for children of all ages, the urge to draw is an attempt to grasp at appearances and meanings that do not sit easefully in our verbal world.

DEVELOPING ART-MAKING WITH CHILDREN

Our capacity to speak was learned by imitating the patterns of speech used by our parents. Imitation and repetition lead us to a deeper understanding and a wider vocabulary. In the case of the visual arts, it is a similar learning journey. Initially, the artistic process of thinking and expressing images through lines, colours and shapes, happens spontaneously through moving a medium such as crayon or paint, resulting in colours and shapes arranged on a page. Children widen their media skill range and compositional sensitivity through being immersed in a rich and diverse artistic environment. This environment should include contrasts of textures, organic natural forms that the child has had a hand in collecting. A variety of flexible art materials should be presented which are appealing to touch and sight. Well-intentioned adults may provide stickers and stencils. These tend to reduce children's own solutions to ready-made adult constructed answers. We are looking to harness children's curiosity and to find ways to tell their stories through their own movements. A visual repertoire of mark making can be developed through experiences that consciously link the visual to the kinaesthetic. Moving a material that responds to pressure and touch yields different kinds of marks. Merely noticing that different actions produce different kinds of marks is an education. Repeating the ones you like leads to developing an increasing control.

Although we live surrounded by images, we often look long enough to only name what it is we see. This is also true of viewers in an art gallery where research has shown that most work hanging on the wall is offered only a 3 second glance. Visual learning is understood not just as personal expression but as our ability to use and interpret the visual languages of different people and times. Artworks do speak but they require active attention, different to receiving entertainment from a moving screen. The fleeting glance orientates us in space, tells us if the coast is clear and sets goals for our next directional move. We can practice this kind of looking in nature but our eyes still tend to flit and dance as we move through the space. To offer a lingering glance we need to set aside time and believe in the power of an apparently static image to take us to undiscovered territory. If we treat the artwork more like a map, then it can begin to tell stories about other times and places, other cultures, enabling us to reach beyond the limits of our daily lives. The art work comes to us when we give it room. Why not go out and practice looking? At art works, at nature, exploring what you see as if it were a multi-layered map?

IF WE TREAT THE ARTWORK MORE LIKE A MAP, THEN IT CAN BEGIN TO TELL STORIES ABOUT OTHER TIMES AND PLACES, OTHER CULTURES, ENABLING US TO REACH BEYOND THE LIMITS OF OUR DAILY LIVES

Antonio Tapies suggests that a painting is a doorway that leads to another door. The artwork is but an invitation. The door that has the real possibility of opening is the one within the viewer.

SCHOOLING: EDUCATION IN AND THROUGH ART

> *"Painting does not, as many people believe, make a man eccentric; rather it renders him adroit and adaptable in every situation".*
> Carlo Ridolfi

Carlo Ridolfi's[3] statement from the seventeenth century, suggests that misleading suspicions about artists are not a modern phenomenon. Unhelpful cultural anecdotes and stereotypes of artists are often linked to uncontrolled behaviour or eccentricity. Another marginalisation occurs when the pleasure

of creating with colours and forms is associated with a state of childhood, a childish phase which adults need no longer take seriously. Ridolfi's claim that making art gifts us with skillful and creative flexibility is supported by contemporary understandings of the power of art.

The poet Carlos Drummond de Andrade[4] noted that poetry too, is often associated with, and perhaps confined in some way to childhood: "Why are children, in general, poets and, over time, cease to be? Is poetry a state of childhood related to the need for play, the lack of bookish knowledge, a lack of interest in practical commandments of living, in short, a pure state of mind?"

For the poet, the likely cause of the disappearance of poetry would have to be laid at the feet of the schooling process. This is due not just to the excessive attention paid to the disciplines considered "academically most important", but due to the very way in which we teach a school curriculum.

> *"But if the adult, in most cases, loses his communion with poetry, it would be in school. More than any other social institution, school provides the corrosive element to the poetic instinct of childhood. This capacity withers in proportion as systematic study develops, until it disappears in a man allegedly prepared for life? - I'm afraid so. The school fills the boy with math, geography, language, without reference, as a rule, to the poetry of mathematics, geography, or language. The school does not notice the child's poetic being. The school does not comprehend the ability to live poetically in the world".[5] (Andrade, p. 10)*

This poetic imagination of young children can be observed in the way in which they think and express themselves through images. Their world is whole, not fragmented. Thought, feeling, emotion and reason are not divided into compartments of preferred knowledge or sensory separation. Consider these examples. Paulo Freire,[5] reported that one of his daughters, when 4 years old, spoke of her friend who had "hair as soft as sea foam". The soft hair like sea foam, opens to further metaphors such as that expressed by one of Arno Stern's young pupils: "I want a mountain colour".[6] In both comments there is no intention to "make" poetry. Children think poetically by association and will gradually enter into the "discipline" of logical discourse through the schooling process. This process of verbal playfulness can be recaptured by adults by allowing a free flow of associations, memories, images to drift playfully across our minds.

However, while we continue to develop our verbal language through interaction with others our emergent personal visual language often atrophies for lack of opportunity or audience. The drawings of an adult, when they are not consciously grown through artistic practice, often bear resemblance to the drawings of a seven year old child. This atrophy is not a natural consequence of development, but a consequence of neglect. Relearning how to spend time relaxing with our observing eyes can be accomplished through giving time to drawing.

How the society and by extension the school, relate to the arts are a signal to children of what adults deem of value. This is the unspoken curriculum of the social world. When we were learning how to talk, we were constantly exercising new words. When we began to learn how to read and write we were, also, practicing every day. We were pleasantly surprised and proud when we managed to read a new word and even more so when we communicated with others through written words. In the case of the visual language this context of practice and reward does not have the same currency.

The acquisition of logical thinking, which is clearly an important development, need not necessarily suppress metaphorical thinking. The goal of logic is to incorporate a new dimension, increasing cognitive ability and empowering children's expression.

THE ACQUISITION OF LOGICAL THINKING, WHICH IS CLEARLY AN IMPORTANT DEVELOPMENT, NEED NOT NECESSARILY SUPPRESS METAPHORICAL THINKING

However, schools, with rare exceptions, emphasize only rational thinking. By insisting on separating and dividing knowledge into disciplines, schools thereby increase the distance between thought and feeling, reason and emotion, images and words. Instead of integrating the different dimensions of knowledge, discipline boundaries increase the sense of fragmentation.

In Soul and Culture (2003), Roberto Gambini[7] asks: "Can we not conceive of a kind of education in which a child grows and maintains side by side: Self and ego, imagination and the sense of reality, reason and poetry, straight lines and curves, information and formation, thinking rationally and thinking intuitively?"[8] In painting, drawing or modelling, children are involved with their whole being - emotion and reason are integrated. However, little attention is given to this sense of wholeness in most schools.

When examining school timetables we easily recognise the privileged place of all the disciplines that focus on the development of logical thinking and on objectivity. Affectivity, subjective experience and emotional growth are on the margins. The whole academic enterprise marginalises or attempts to "manage" the emotional realities of children and adolescents. "In college, especially in natural sciences, when the teacher shows the class a crystal, girls particularly tend to cry out, "Oh, what a beautiful crystal", and then the teacher says, "we are not now admiring beauty, but want to analyze the structure of this thing" (von Franz, 1996).[9] So we are constantly and habitually trained, from the very beginning, to repress personal reactions and train our minds to be what we call objective.

Adding the number of all hours devoted to the visual arts throughout the schooling process, we realize how little time schools devote to the arts. As Eliot Eisner advocates, "the arts' position in the school curriculum symbolizes to the young what adults believe is important".(2002)

It was with pleasure that we observed "strike action" by a class of 8 year olds. The teacher was required to attend a meeting with the school psychologist during the time that was normally reserved for the art class. The children refused to copy the homework down, because they had gone without their art class. The teacher had not realized the importance of this activity, but the kids had and were prepared to demonstrate this strongly. The children instinctively knew what Judith Burton describes: "the journey of drawing involves both looking inward within the self and outward to the world of others, engaging a kind of playful ebb and flow shaping the forms that give expression to the relationships uncovered along the way".[10] While children are making drawings, they are engaged in a range of events, in which they "attend to their voices, movements, nuances and organizations such that they become the vehicles of new insights, thoughts and feelings, expanding consciousness".[11]

> *As artists, teachers and caregivers we do not always pause to take note of the critically important learning of the early years and to ponder their significance for blossoming artistry and cognitive flexibility. While we admire the works of early childhood, the so-called scribbles and daubs that adorn refrigerators across the nations of the world, we do not at the same time probe their significance for what is to come in human development.*
> *Burton, 2013*

... THE TIME DEVOTED TO ARTISTIC EXPRESSION IS A TIME FOR ONESELF

If we go more deeply into this matter, we realize that the time devoted to artistic expression is a time for oneself. It is the time in which one takes possession of the material to reflect upon "myself in my world"; to speak of what concerns one, to shape thought and emotion. This is a precious time that the rhythms of contemporary living may have substantially suppressed. Can we create

time for artistic expression in our own lives? A time through art-making for reflection, allowing ourselves breathing space, time to immerse ourselves, then emerge refreshed, honouring ourselves as creative beings? It is in the act of making that we value ourselves. The end result we may judge critically but taking time and care to look and reflect in themselves are transformative activities.The arts provide a bridge between all aspects of being, connecting reason and emotions, feeling and thoughts, intuition and perceptions, thus improving creativity and personal and social well-being.

IT IS IN THE ACT OF MAKING THAT WE VALUE OURSELVES

The arts in early schooling, through an open and inclusive focus on all aspects of a child's life, have the broadest opportunity to capture a child's curiosity. Without such curiosity little learning of worth can be pursued. Being curious leads to a personal investment in learning. A focused "wanting to know" provides the energy and momentum to drive all learning forward. A sensitive teacher knows how to foster and capitalise on observed interests. Susan Engels[11] in reviewing educational responses to children's interests found a common message from curriculum theorists, and educational researchers. Young children are eager to learn more about the "unfamiliar". The intrigue that arises in such a self-selected interest is an unselfconscious awareness of "other". It is both the foundation of scientific inquiry and aesthetic investigation. This capacity to look at the world and freshly discover and investigate where interest takes you is at the heart of art practices with young children. "The evidence is quite clear: when children are curious, they learn. It turns out that curiosity in school is not merely a nicety but a necessity" (Engel, 2011, p.628). So the challenge for the arts is to demonstrate how effective they are in being responsive to children's interest. Adults can renew the opportunity to explore, in an open and non-judgemental manner, just what is surfacing, what is unfamiliar.

The opportunity for adults to recover from their schooling and reclaim their interest in the visual is always present where curiosity is given space. What catches your visual attention? Your aesthetic is always present the minute you arrange food on a plate, choose clothes, pause to notice an ephemeral moment of light. Noticing that you are noticing is the metacognitive step to becoming a unique witness to your world. We must be careful not to assume that such inner events reach a conclusion. Memories and associations flicker and change. Such movement is life giving. The key is in acceptance of what is arising, being interested in the fact that I am having this thought, this feeling while looking at this painting. There is not a final or right answer to this process. When you revisit a painting it is not the painting that has changed but perhaps the viewer has! Growing these capacities for curiosity and self-awareness is part of the function of attending to art.

THE OPPORTUNITY FOR ADULTS TO RECOVER FROM THEIR SCHOOLING AND RECLAIM THEIR INTEREST IN THE VISUAL IS ALWAYS PRESENT WHERE CURIOSITY IS GIVEN SPACE

THE PATH OF THE IMAGE

An image is not a fact to be understood by thinking. The image presents as a non-verbal experience to be savoured. It could equally be acknowledged as a disturbance. Fear, distrust, confusion and delight can all be the vehicle to vicariously ride on. Through an act of imagination a viewer can enter into the experience more deeply. The poet John Moffitt (1961) long ago offered that it was not enough to stare at the waiting invitation, but the act of imagination must be fuelled and fed by the active participation of the viewer.

THE IMAGE PRESENTS AS A NON-VERBAL EXPERIENCE TO BE SAVOURED

To look at any thing,
If you would know that thing,
You must look at it long:
To look at this green and say,
"I have seen spring in these
Woods", will not do—you must
Be the thing you see:
You must be the dark snakes of
Stems and ferny plumes of leaves,
You must enter in
To the small silences between
The leaves,
You must take your time
And touch the very peace
They issue from.
John Moffitt

There is a threshold for any new knowing to enter that must be willingly crossed and then a resonating image may become like an open door. Rika Burnham (2011) suggests that this need not be a solitary venture. The teaching she advocates within museum programmes describes how the most important understandings people have of works of art are often started through opening moments of silent attending. A following sympathetic dialogue is not about imparting information but creating "conditions for a shared experience of looking, seeing, thinking, feeling and talking"[12] (p.2). This happens when both the viewer and the art object are respected equally. There are also conversations that take place beyond speech; "moments without words, moments of attentive silence filled with astonishment and affection for the work of art". (p.63) Such seeing is not a mechanical formula. It takes patience and willingness. This effort of relationship has the potential for transformation as the image is allowed to work with our associative mind. In a world now exploding with online social media the shared opportunity for meaningful live sharing in front of powerful artworks holds a special sway.

Referring to dream images, Hillman (1991) advises: "Stick to the image". He believes we should take seriously the images that touch us, we should explore them with every sense to give them life, even recognize them by their signature "smell". For they bring with them a subtle but complex call that can lead us to a deeper understanding of things and ourselves. Consider applying this same principle to any of the pictorial images that impress us. "A particular image is a necessary Angel waiting for a response. How we greet this Angel will depend on our sensitivity to its reality and presence"[13] (Hillman, 1991, p. 50-51).

In an interview with Suzi Gablik (1997),[14] Thomas Moore says that in the West, we have lost the ability "to contemplate" as a culture. Perhaps we think that as we contemplate, we are not accomplishing anything. Any process of creation, both intellectual creation and artistic creation, requires time, but also the observation of yourself, the confrontation with yourself. It requires re-looking at things. It requires contemplation. We have been reflecting on how the experience in the arts might bring along with it the experience of "the other" – the other within ourselves and the other in front of us: the art work.

ANY PROCESS OF CREATION, BOTH INTELLECTUAL CREATION AND ARTISTIC CREATION, REQUIRES TIME, BUT ALSO THE OBSERVATION OF YOURSELF, THE CONFRONTATION WITH YOURSELF

It is difficult to hope for harmony or resolution; especially where contemporary arts are not founded on the hunger for harmony. "There can be outrage evoked, bitterness and desolation, as well as joy, visions of the sublime". (Greene,2001) Entering into such states with empathic awareness allows us

to safely experience dimensions of life not immediately accessible. Through engaging in this way our lives can be touched.

ART MAKING AS A PATH

Wholeness, and the struggle for certainty, are present in the creation process, for both an adult artist or in a child. It is visible when concentration and the entire body is involved. This links an artist who is creating to the child who is playing. It is the feeling of being whole, entirely absorbed in what one is doing. Children play because they could not be otherwise, so do artists. Children draw because they have the need to play. The act of creation is a state of total involvement in which reason and feeling, pain and pleasure, fear and courage are connected and accessible. When creating, conflicts are not absent, they are brought into the present. Creation is the act of joining, living with the paradox of opposites and expressing this in all of its complexity. *"To create is as hard or as easy as living and it is equally necessary"*. (Ostrower, 1978, pg, 166)[15]

THE ACT OF CREATION IS A STATE OF TOTAL INVOLVEMENT IN WHICH REASON AND FEELING, PAIN AND PLEASURE, FEAR AND COURAGE ARE CONNECTED AND ACCESSIBLE

Artists and children have a common interest in the quality of the moment of creation. The actions of children are carried out according to the need for their own growth, seeking to accomplish *themselves*. Creative adults as formed and informed individuals seek to change the world around them, both physically and mentally. *"Children build the reality of society for themselves, artists construct new realities for society"*. (Ostrower, pg130).[16] For viewers of art everywhere the invitation is to seek out those artworks that offer a glimpse of our resonant associations, that perhaps disturb us into new visions of ourselves or the social dimensions we inhabit. Taking such time for ourselves supports our continued unfolding and the participatory health of our communities.

"CHILDREN BUILD THE REALITY OF SOCIETY FOR THEMSELVES, ARTISTS CONSTRUCT NEW REALITIES FOR SOCIETY" (OSTROWER, 1978)

Isabel Güitrón is a Mexican dentist, who lives and works in Jalisco, Mexico.

A few months ago I received an email from her telling me that she had watched one of my lectures on the Foundation Botin website. She was coming to São Paulo to attend a course and asked me if we could have a meeting.

It was a surprise to realise that our work at the Botin Foundation had reached a person so far away and, most of all, that she was still pursuing what she had learned from watching a video of my lecture.

In August, when the second semester started, she came to my class at the University of Campinas. This was when I came to know about her encounter with art:

"I was educated to be a professional and art was not even considered to be a possible choice. So, I became a dentist. My relationship with art began when I saw, for the first time, "The Adoration of the Kings" by Juan Bautista Maino, in the Prado Museum, during a trip to Spain. It was like a revelation. When back in Mexico I started my own development in the field of art. At first it was just a philosophical and aesthetic analysis of that particular painting. This was when I realised how we can be inspired and how our actions can be influenced by an artwork. I had never imagined that I would dare to change, dramatically, the course of my life.

"THIS WAS WHEN I REALISED HOW WE CAN BE INSPIRED AND HOW OUR ACTIONS CAN BE INFLUENCED BY AN ARTWORK"

While doing the analysis of the painting, I met the manager of an orphanage for children with cerebral palsy in the city of Guadalajara, Mexico, and felt the impetus and the strength to imagine a scenario where I could play with all those events so well put together by the artist in the painting. The need to work to transform social injustice and the fascination with the aesthetic language came together supporting my need to be creative. The care for the holy child presented in the painting inspired in me the need to help the development of those children and I sensed that art could be the way of doing that. But I was a dentist and had no knowledge about teaching children, so I started to attend teacher training classes at the university and after that, art courses, where I experienced my own creativity. The articles and lectures I found on the Botin Platform for Innovation in Education helped me a lot, especially your experience with Sementinha Project, the hope inspired by Pablo Fernandez and the tools from Dr Puig, which were the right threads to weave into my imagination and create my own art project. Thus came the crucial moment of facing the concrete reality and I proposed an art studio for the children living in the orphanage. The experience and the results were extraordinary and I am now planning a permanent programme, which aims to develop resilience skills in socially disadvantaged children".

ISABEL GÜITRÓN

Denise Maia is a Jungian Analyst, who lives and works in São Paulo, Brazil. http://www.denisemaia.com.br

Some years ago, she came to my house, asking for supervision. She was writing an essay about Vincent van Gogh. She had recently returned to Brazil after spending two years living in Italy, was told about my work in the Psychology of Art and wanted my opinion about her writing.

Here is the story she told me at our first encounter:

"In 1995 I moved to Italy, accompanying my husband. His company had sent him there to work. During the nearly two years that we had lived in Milan, I tried to find something really meaningful for me, as I had interrupted my clinical activity in Brazil. Visiting an exhibition - "From Monet to Picasso" - I observed many paintings by Toulouse Lautrec, Matisse, Signac, Degas and Gauguin, but among the many works, only one caught my attention. I am speaking of the painting "Prisoners Round". What caught my attention, in this painting, was the image of one of the prisoners, who looks at the viewers. I felt a strong need to visit the exhibition several times, not the whole show, but this piece in particular. While the show was in Milan, I kept visiting it, letting myself, passively, be driven by the painting. I started, then a silent dialogue with van Gogh. I had not had much previous contact with art and almost no knowledge about art history, so I began visiting many museums in several countries, everywhere I could appreciate van Gogh's works. I started also attending courses at art galleries and began my extensive literature search".

After finishing the story, she handed her writings and told me a dream:

"I walked into a room and saw an easel, a colour palette and a canvas. On a table next to it, I saw many large used tubes of paint. When I picked one up, I realized that it pulsated in the same rhythm as my heart".

It was not difficult to notice her desire to paint, so, besides accepting to supervise her writing, I suggested that she try watercolour painting.

Over the course of about three years, she came regularly to my atelier. We discussed the text she was writing, she painted watercolours and we talked about art and psychology. Later she attended one of my Psychology of Art graduate courses.

What started as just a visit to an exhibition, such a common experience for foreigners in Europe, became, even after her return to Brazil, a routine for her.

During her learning art process, she introduced art into her clinical practice and never left it out of her daily life:

"Art in the everyday life of a psychotherapist has a privileged place. The works he/she chooses to visit, play with or create allow him/her to withdraw into their depths and reflect. Thus, the therapist's psychic imagery, populated by images, opens to the imagery of the clients, listening to their dreams, sharing their images".

DENISE MAIA

Marcelo Moscheta is a Brazilian contemporary artist, who has participated in several group shows such as the 7th Biennale International de Gravure Contemporaine de Liége, the XV Cerveira Biennial, Portugal and recent solo exhibitions in Germany, Brazil and Italy. His work is already in several museums and private collections in the USA, Europe, Russia and Latin America. He lives and works in Campinas, Brazil. www.marcelomoscheta.art.br

When he was still an art student at the University of Campinas and he came to tell me about his intention to take my teacher training course, I was pleased, but very surprised.

I knew that he had no intention of becoming a teacher. Though very young, he was already a very commited artist, and artists, often, do not want to become teachers.

While most of his colleagues chose schools as their training field, Marcelo chose a museum - MASP-São Paulo Museum of Art, which owns the most important and comprehensive collection of European art in Latin America.

Recalling his experience in teacher training Marcelo says:

"I used to live in a small town in the countryside, so my first visit to a museum happened in my first year at university, when a teacher took my class to MASP. I had really a small repertoire of art history ... so everything there was very new to me. The experience had a great impact on my education as an artist. It was really amazing! Years later, during teacher training, I chose to work in the educational service at the same museum and there, I saw the other side of the work of an artist".

"I USED TO LIVE IN A SMALL TOWN IN THE COUNTRYSIDE, SO MY FIRST VISIT TO A MUSEUM HAPPENED IN MY FIRST YEAR AT UNIVERSITY"

Years after leaving university, he took his first trip to Europe and during his first visit to the Museo del Prado, his life literally changed:

"I remember crying uncontrollably, unable to stop in front of the "Descent from the Cross" by van der Weyden and "The Annunciation" by Fra Angelico. I felt, in this very moment, that being an artist was much more than just a profession .. it was a calling. To be able to touch someone the way I was being touched... it was not something that anyone could do. That was when I understood that being an artist was not about self-promotion, it was not about becoming famous... it was something much deeper and I had not experienced it in all its power till then".

In September 2013 Moscheta participated in a collective exhibition called The Arctic at the Louisiana Museum in Copenhagen http://www.louisiana.dk/uk/Menu/Exhibitions/Coming+exhibitions+2013. When I knew about the exhibition I was overwhelmed with joy and pride, as the Louisiana is one of my most favourite museums, so I asked if he was going to attend the opening.

He replied: *"No, I can't, because I will be in Beijing/ Shanghai/ Sichuan, China, as an artist in residence!"*

Yes, he had become an art teacher, but his classroom, now, is the entire world.

MARCELO MOSCHETA

NOTES

[1] *These thoughts were developed for an exhibition on rock art from all continents, called "The Dawn of the Human Spirit", which first opened in Cologne in 2000.(Abt, T, 2005)*

[2] *Burton, Judy (2013) Drawing: Catching Things That Are Out Of Reach, New York, Thinking Through Drawing Conference.*

[3] *Carlo Ridolfi (1594-1658), Venetian painter, who wrote the Wonders of Art, a biography of Venetian painters.*

[4] *Carlos Drumond de Andrade (October 31, 1902 – August 17, 1987) was perhaps the most influential Brazilian poet of the 20th century..*

[5] *Paulo Freire (September 19, 1921 – May 2, 1997) was a Brazilian educator and philosopher who was a leading advocate of critical pedagogy.*

[6] *Arno Stern, born 23 June 1924 in Kassel (Germany), now a French citizen, is an arts educator. He devoted his career to creative education through painting.*

[7] *Roberto Gambini is a Brazilian Jungian psychoanalyst at the forefront of Jungian training in Sao Paulo, Brazil.*

[8] *Gambini, Roberto (2003) Soul and Culture. Texas :Texas A&M University Press.*

[9] *Von Franz, Marie Louise (1996)The Interpretation of Fairy Tales Boston, Massachusetts:Shambhala Publications.*
Marie Louise von Franz (4 January 1915 – 17 February 1998) was a Swiss Jungian psychologist and scholar.

[10] *Burton, Judy (2013) Drawing: Catching Things That Are Out Of Reach, New York, Thinking Through Drawing Conference.*

[11] *Engel,S. (2011). Children's need to know: Curiosity in schools. Harvard educational review,81 (4),625-645*

[12] *Burnham, R. & Kai-Kee, E. (2011) Teaching in the art museum: interpretation as experience. Los Angeles: J. Paul Getty Museum*

[13] *Hillman, James(1991), The blue Fire, New York ,Harper Perennial.*

[14] *Gablik, Susan (1997) Conversations before the end of time, New York: Thames and Hudson.*

[15] *Ostrower, Fayga (1978). Criatividade e Processos de Criação, Petrópolis: Vozes.*
Fayga Ostrower (14 September 1920, Łódź - 13 September 2001, Rio de Janeiro) was an engraver, painter, designer, illustrator, art theorist and university professor.

[16] *idem*

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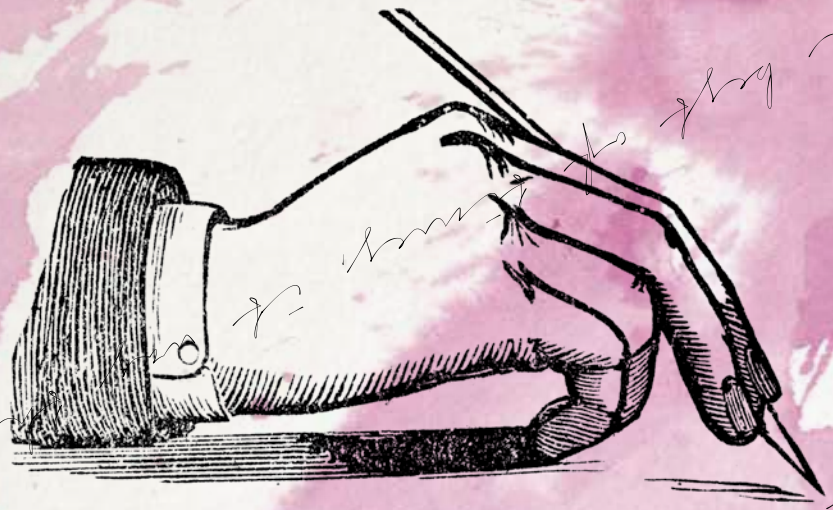
Ana Angélica Albano has been an associate professor in the Faculty of Education at the State University at Campinas (UNICAMP), Brazil, since 1997. She holds a degree in Visual Arts from Fundação Armando Alvares Penteado, SP and she received a Ph.D in Social Psychology at the University of São Paulo (USP). She worked extensively in primary and secondary art education as a teacher in the 1970s and coordinated social projects for arts initiation in the cities of São Paulo, Santo André and Diadema from 1983 to 1997. Currently she is the associate director of the Museum of Visual Arts of UNICAMP (2012), a member of the research group Laborarte - Laboratory of Studies of Art, Body and Education at UNICAMP: www.fe.unicamp.br/laborarte/ and of the Focus Group for Creativity in Education, Fundacion Marcelino Botín, Santander/Spain since 2009. She researches stories of initiation in art, has published many books and papers about the psychology of art and aesthetics education. She has delivered lectures, workshops and academic papers in psychology of art and art education practice in Canada, Equador, Portugal, France, Spain, Japan, Mexico, Argentina and the UK. In 2011 she began a new research project: "Zero-twenty: the early education in the undergraduate student identity", in association with Dr. Victor Luis Porter from Universidad Autónoma Metropolitana Unidad Xochimilco, Mexico.

Graham Price is senior lecturer in art education at the University of Waikato, New Zealand. His M.Ed thesis focused on children's responses to adult artists' work and a review of the discourses underpinning elementary art education practice. How teachers negotiate the museum experience with original artworks and sustain children's focus into their aesthetic worlds remain a key part of his research interests. Post-graduate research has spanned investigations into the pedagogies of art and art history in elementary and junior high schools across bicultural settings in New Zealand. Recent team research has explored the interrelationships between art, drama, dance and music education and the wider curriculum amongst elementary teachers. The development of "visual methods" and "role" to elicit insights from children has been a particular recent development (Whyte et al, 2013). He has on-going research collaborations with Prof Albano at the University of Campinas, Sao Paulo, Brazil focused around concepts of authenticity and student voice. He has delivered workshops and academic papers in art education practice in Japan, Brazil, France, Portugal, Australia, the UK and the USA. His own artistic explorations follow a life-long interest in a cappella music, sacred dance and forms of Buddhist calligraphy reinterpreted from jewellery to sculptural scale.



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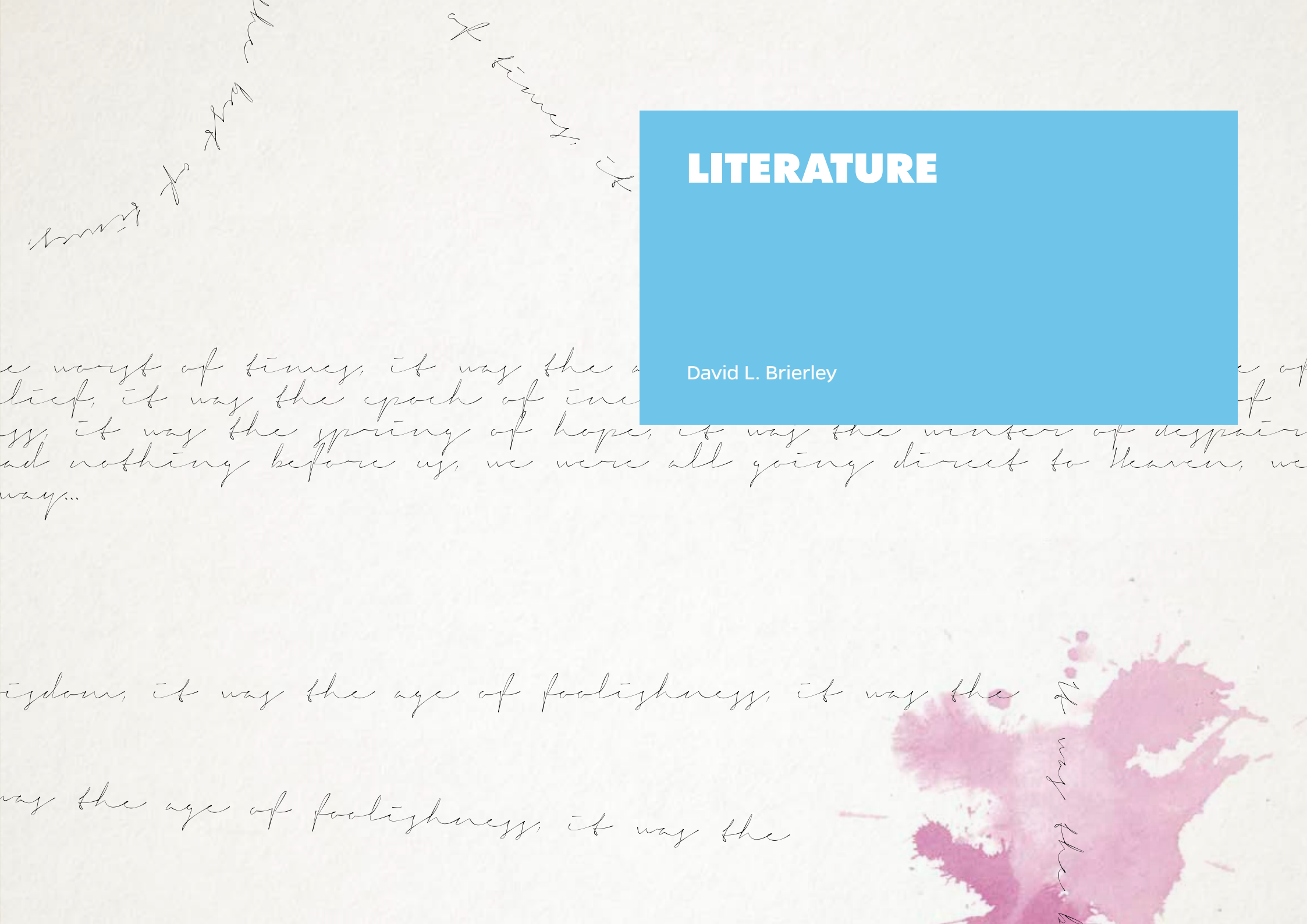
LITERATURE

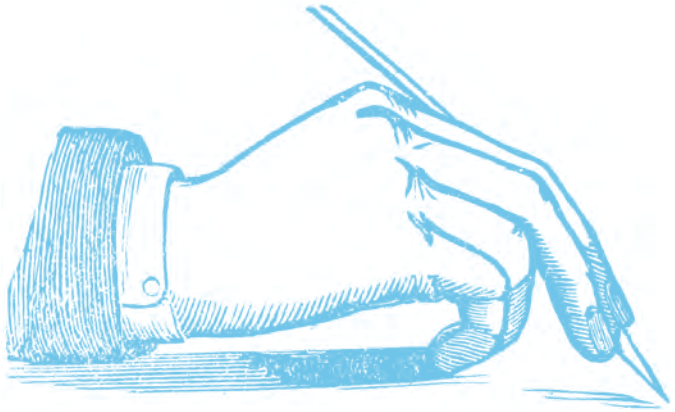
David L. Brierley



Abstract

Reading provides the impetus to boost creative and divergent thinking and helps us to become more empathetic, more tolerant of difference in that we are able to "step into the shoes of others" and "read the minds of others". There is a relation between literature and literacy in relation to levels of empathy, self-esteem, social intelligence, and lowering of the level of violence amongst young people.

When it comes to evaluating the importance of reading, both in terms of "eminent" and "everyday" creativity and its impact on life, it is necessary to look at the process involved rather than the result.



It was the best of times, it was the worst

When Henri Labrouste died in 1875 at the age of 74 he left his architectural legacy behind in the form of two of the greatest buildings in nineteenth century Paris – the Bibliothéque Sainte-Geneviéve and the Bibliothéque Nationale, both miracles of stone, iron, glass and books.

In London the domed reading room at the British Museum, opened in May 1857, was to serve as a meeting place for such figures as Marx, Dickens, Soloviev and Tolstoy but also for the ordinary man in the street. In the vast reading room the new middle class who had been freed from mechanical labour sat together in silence studying subject literature of all kinds. Libraries became temples of knowledge and silent meeting places. Today the British Library prides itself on storing 150 million books, adding 3 million more annually.

LIBRARIES BECAME TEMPLES OF KNOWLEDGE AND SILENT MEETING PLACES

On a recent flight to Santander I was able to observe a normal practice. Once on the aeroplane passengers struggle to find their seats, put their hand luggage in the locker and then throw onto the seat some novel they picked up at the bookshop in the departure lounge. A flight without a paperback seems an exception to the rule, and although there is an obvious increase in the number of e-readers, last minute purchases of paperbacks at the airport is also on the increase. A journey has become a detachment from a hectic life, an opportunity for reading and gentle slumber. The increase in travel since the turn of the century is proportionate to the increase in the sale of novels.

Technology has brought about a transition of consciousness. A century ago the new manufacturing age needed to draw on individual talents. The emphasis shifted from the kind of role you played in life to the person you were. For the first time individuals would not just be defined by their place and function in society but by what happened to them in particular, what they did and their own lives. This trend can be traced in our reading habits as seen in the rise of the novel. Unlike legends, epics and poems, a novel emphasizes what a character thinks and feels rather than what he or she actually does. In a time of a yearning for self-actualization the shift away from objective narratives to subjective attitudes can be seen as a celebration of individuality, giving meaning to a modern life. The accompanying expansion in reading reached a culmination with the publication of the two outstanding works of the twentieth century Marcel Proust's "In Search of Lost Time" and James Joyce's "Ulysses".

IN A TIME OF A YEARNING FOR SELF-ACTUALIZATION THE SHIFT AWAY FROM OBJECTIVE NARRATIVES TO SUBJECTIVE ATTITUDES CAN BE SEEN AS A CELEBRATION OF INDIVIDUALITY, GIVING MEANING TO A MODERN LIFE

In order to understand the role of literature in our time one must pose the question as to what was new in Joyce and Proust. As for Joyce it was his insistence on portraying every aspect of an individual's life in detail. Proust became known for his psychological penetration, telling us what the narrator thinks and feels. Both authors are engaged in finding out how people send themselves out into the world either through choice or inadvertently. As the American author Rebecca Solnit explains in her latest book: "What is your story? It's all in the telling. Stories are compasses and architecture; we navigate by them, we build our sanctuaries and our prisons out of them, and to be without a story is to be lost in the vastness of a world that spreads in all directions like Arctic tundra and sea

"... STORIES ARE GEOGRAPHY, AND EMPATHY IS FIRST OF ALL AN ACT OF IMAGINATION, A STORYTELLER'S ART, AND THEN A WAY OF TRAVELLING FROM HERE TO THERE" (SOLNIT, 2013)

of times, it was the age of wisdom, it was the age of foolish

ice. Which means that stories are geography, and empathy is first of all an act of imagination, a storyteller's art, and then a way of travelling from here to there".[1] As everyone has a life story to tell, the need arises to put it in perspective. Reading an unknown story helps in this quest.

In this way we can begin to understand the roles of non-fiction, in studying and keeping up to date with a profession, and fiction in cultivating the self.

After decades of declining time spent in reading in the western world there now seems to be an upswing amongst adults.[2] Unfortunately the same cannot be said for children. Local libraries in many countries are closing.[3] According to recent research in the U.K. almost 4 million adults have never read a book for pleasure. Lack of time is the most cited reason.[4] Where does one take the time from? Reading time is always in danger of being stolen. One may ask: stolen from what? The tyranny of living? Our cultural and human striving is founded on the realization of ideals. When it comes to reading in this context it is interesting to note the recent trend to establish "Homes of Reading" or "Houses of Literature" independent of libraries where people of all ages come together for public readings by authors and establish literary discussion groups. It seems as though the social aspect of reading that was common in the eighteenth century when families gathered together by the fireside on winter evenings or when authors such as Charles Dickens travelled extensively to read for the general public has taken a new form.

The author Umberto Eco belongs to that small group of insightful artists. He is the owner of a large personal library containing some thirty thousand books both fiction and non-fiction. He divides his visitors into two groups – those who react with "Signore professore dottore Eco -what a big library! How many of the books have you read?" The second category, by far the smallest, thinks that his library is not an ego-boosting affair but a research tool. A reader accumulates more personalized knowledge and more books as he or she grows older (Eco is now 82). The more one reads and knows the larger is the number of unread books. Knowledge (not information) is a personal property to be protected and defended. Ralph Waldo Emerson writing in his "Essays" (1803-1882) put it this way:

> "It is the good reader that makes the good book; in every book he finds passages which seem to be confidences or sides hidden from all else and unmistakably meant for his ear; the profit of books is according to the sensibility of the reader, the profound thought or passion sleeps as in a mine until it is discovered by an equal mind and heart".[5]

THE ROLE OF LITERATURE

It is a general opinion that in literature, as in most arts, is a pleasing play of the imagination and an escape from reality. Many think that fiction has little or no practical importance. There are deeper motives. Literature can be seen to preserve the ideals of humanity. The Ancient Greeks believed that the ideals of beauty were to be preserved in perishable stone whereas the ideals of truth were to be upheld in imperishable prose and poetry. When Goethe referred to literature as "the humanization of the whole world" he referred to its permanence, a documentation of habits, thoughts, dreams, and deeds. Books enable us to connect to our ancestors' states of awareness, providing a possibility to make comparisons with today's world. All science and art is based on ideals. Literature encompasses those human traits worthy of cultivation - love, faith, duty, friendship, freedom and reverence. Our society, our freedom, our progress rests solidly on the cultivation of the written word. This can no longer be taken for granted. Therefore literature should be seen as the expression of life in words of truth

LITERATURE CAN BE SEEN TO PRESERVE THE IDEALS OF HUMANITY

and beauty. Our literary heritage is a record of the spirit of humankind through thoughts, emotions and aspirations.

Reading encompasses two values. One is of simple engagement and appreciation, the other of personal analysis. In the latter the reader is able to discover a new world that is different to his/her own and to enter into it. Reading helps us to become more empathetic, more tolerant of difference in that we are able to "step into the shoes of others" and "read the minds of others". This act represents the love of a book and reading becomes a personal revelation and in so doing appeals to our emotions and imagination rather than to our intellect as with a text book. Literature should be seen in the light of an art whose purpose is not to instruct but to delight in order that the reader can become engaged in a process of self-development. Therefore the general opinion that fiction provides an escape from the trials and tribulations of everyday life, a distraction from the demands society and work imposes on us is a superficial view.

READING HELPS US TO BECOME MORE EMPATHETIC, MORE TOLERANT OF DIFFERENCE IN THAT WE ARE ABLE TO 'STEP INTO THE SHOES OF OTHERS' AND 'READ THE MINDS OF OTHERS'

LITERARY RESEARCH

Does reading great literature make us better people? Research has shown that people who read a great deal spend much less time watching television and are generally more empathic. Modern literature is generally a simulation of social experiences. The question of literature and literacy in relation to levels of empathy, self esteem, social intelligence and lowering the level of unaccountable violence amongst young people has brought increased attention to the role of literature in schools and in later life. This can be seen in the light of the worrying decrease in the levels of literacy in Europe. The Italian sociologist Umberto Galimberti, for one, has emphasized the need for adolescents to read classic literature (something fast disappearing from school curricula). In these classic works pupils meet a range of characters who help the reader to put their own emotions in place.[6] In epic tales such as "War and Peace" by Leo Tolstoy degrees of positive and negative emotions provide a constant shifting of emotions within a framework of inter-human relationships.

RESEARCH HAS SHOWN THAT PEOPLE WHO READ A GREAT DEAL SPEND MUCH LESS TIME WATCHING TELEVISION AND ARE GENERALLY MORE EMPATHIC

A wonderful contribution to the understanding of literacy, emotions and creativity has been made by Daniel Pennac. His book "Comme un roman" is a passionate defence of reading as a foundation for emotional stability.

> "Perros was a teacher who didn't drum knowledge into people, but made a gift of what he knew. Less a teacher than a master troubadour – one of those jugglers of words. (.....) Like all troubadours his voice was aimed at a public who didn't know how to read. He opened eyes. He lit lanterns. He set people off on the road to books, a pilgrimage without end or certainty, the path of human towards fellow human. The most important thing was that he read everything out loud to us. From the word go, he trusted in our desire to understand . . . When someone reads aloud, they raise you to the level of the book. They give you reading, as a gift. (.....) He taught us for an hour a week. That hour was like his saddlebag: anything could come out of it. When he left us at the end of the year, I totted up Shakespeare, Proust, Kafka, Vialette, Strindberg, Kierkegaard, Molière, Beckett, Marivauv, Valery, Huysmans, Rilke, Bataillt, Gracq, Cervantes, Laclos, Cioran, Chekhov, Henri Thomas.

> He talked to us about everything, read us everything.
> He never lost sight of us. Even when he was completely engrossed in what he was reading, he would watch us from the top of the page. His voice was clear and resonant.....no single word was stressed at the expense of another (.....) He was an echo chamber for all books, the physical incarnation of words, the book made human. Through his voice we suddenly discovered that all this had been written for us".[7]

In recent years literary research has focused on emotional transportation. This involves the way in which the arts in general and in this case classical fiction is able to build empathic skills. This takes place when the reader is emotionally transported by a story. Research is only in its beginnings. However, it has become clear that not all fiction is able to trigger emotional transportation. Our classical European literature from Cervantes to Hugo, Conrad to Orwell has this quality.

Jerome Bruner in a ground-breaking analysis has distinguished between two modes of thinking - logical-scientific and narrative.[8] Whereas the former aims at seeking universal truths through logic and argumentation as in textbooks, scientific journals and newspapers, the narrative mode establishes what he calls verisimilitude (lifelikeness). This enables a reader to be drawn into a plot and to participate focusing on believability. Literature as a scientific mode of thinking is not able to evoke responses in the same way due to the absence of characters, events and settings. A reader is transported by the story, the reader identifying him or herself with the characters. Two-way emotional involvement brings sympathy and antipathy into play that can resound in personal life experiences. In this way fiction is true to life. The reader can become involved in predicting the outcome of certain situations, can forecast the reactions of the characters involved in the story and envisage a consequent turn of events. She follows two lines of thought simultaneously, her own and those of others. Taking on the perspective of another involves both intra and inter personal forms of intelligence. These constitute ever-increasingly important forms of intelligence in modern society. Collaboration in the workplace ("teamwork") and a creative spirit is dependent on esteem (seeing values in others) and self-esteem (seeing values and capabilities in oneself) an important aspect of adolescent education.

ALTHOUGH THE DETAILS OF THE NARRATIVE MAY BE FORGOTTEN SHORTLY AFTER COMPLETING A BOOK CERTAIN NEURAL STRUCTURES AND MENTAL MODELS IN THE BRAIN REMAIN AS A CONSEQUENCE OF AN EMOTIONAL INVOLVEMENT IN THE PLOT

When small children listen to a story they are practising a skill which is developed further in the adult reader. Although the details of the narrative may be forgotten shortly after completing a book certain neural structures and mental models in the brain remain as a consequence of an emotional involvement in the plot. Research in this area is difficult due to the fact that in all creative processes that involve activation of the imagination there will always be a period of incubation. Keith Oatley and Raymond Mar are pioneers in this field of literary neurological science.[9]

Their work has brought to light an important consideration when studying the methodology of creativity – the phenomena of unconscious processing, that emotional experiences are "stored" and can be retrieved at a much later date in a new context with other seemingly unrelated images, providing new insights or creative breakthroughs.

THE DEEPENING PAGE

We can read in different ways. Great literature requires "deep reading" as opposed to a more superficial reading, which is a mode that is becoming more

and more common in our day and age. “Deep reading” is a distinctive cognitive ability. It is slow, immersive, rich in sensory detail and emotional complexity. It is a distinctive experience, different from a mere decoding of words. When extracting mere information as is more and more the case in our schools and universities we use a mode of processing words that is effective but we do not slip into another’s voice, another’s soul. Frank Kermode, the famous British literary critic who died in 2010, talked of two types of reading: “Carnal Reading” which is characterized by hurried, utilitarian information processing, a technique we use most of the time and, secondly, “Spiritual Reading” where there is a focused attention with on-going reflections and analysis. This division is by no means new. Aristotle draws the same line in his “Poetics”. Undoubtedly “deep reading” needs to be cultivated in our educational institutions. It lies beyond a materialistic, biological ability to read as used in literary testing, but involves a human act of finding meaning, understanding, interpreting. In the end the everlasting value of reading a book is seen only in the reader’s ability to assimilate the words, to chew and digest them. The classical art of “lectio divina” (or “spiritual reading”) enters our souls as food, as nourishment, spreading through our digestive systems, into our blood to become, in time, love and wisdom. This ability takes time and effort, it needs encouragement. How we read is what we are.

“DEEP READING” IS A DISTINCTIVE COGNITIVE ABILITY. IT IS SLOW, IMMERSIVE, RICH IN SENSORY DETAIL AND EMOTIONAL COMPLEXITY

HOW WE READ IS WHAT WE ARE

IN SOLITUDE BUT NOT ALONE

In his poem the American modernist Wallace Stevens describes a reader, a book in his hands, a summer night, a house where the world is calm. The same silence, solitude, and contemplative attitudes were formerly associated with pure spiritual devotion. Things become vivid, concepts more clear and emotions stronger.[10]

Solitude is the capacity to be alone, not the psychological condition we call loneliness. As an attribute it is closely connected with self-discovery and becoming aware of one’s deepest needs, feelings, impulses and with creativity. It is quite different from enforced solitude, confinement and sensory deprivation. It does not involve separation or isolation - quite the opposite. So to lie on a couch with Gabriel Garcia Márquez’s novel “One Hundred Years of Solitude” can be a life-enhancing experience. It must be remembered that there are many worlds which we do not receive as gifts of nature but which are created in our own spirit. The world of books is one of the greatest. This can be seen in the face of the small child, listening to the flow of words that tell of imaginary far-off places. It all begins in the crook of a parent’s arms. As soon as a young child can sit on a beloved’s lap she will associate reading with comfort, warmth, security and a sense of being loved. Stories are a sheltered haven for emotional development. In later years this is reiterated alone in the comfort of a fireside chair.

At the same time the socialization of reading has almost disappeared. In the past families and friends gathered to read to each other. Books were scarce and expensive and not everyone was able to read. Listening to an orator reading aloud requires attention in a different way than solitary reading. You read aloud with your diaphragm, tongue and lips, something other than reading with your eyes alone. Language becomes part of your own body. No one understood this better than Charles Dickens whose stories were first serialized in weekly, affordable editions called “Household Words”.[11] Reading aloud in class by teachers and pupils is not the trend today. On the other hand the rise of Houses of Literature in Northern Europe has brought about a renewal of this form of socialized reading for all age groups. A person who has grown up with rhythmic sounds and exciting stories is literally competent

e age of wisdom, it was the age of foolishness;

and wants to read alone in later life. An evolution from oral reading to silent reading should be promoted. The former encompasses the art of vocalization, the latter the art of visualization.

THE WRITER AND THE READER

The bond between the reader and the writer is mutually beneficial unrivalled in other art forms. It is a means of intellectual and artistic cross-fertilization. The words of the writer are a catalyst in the reader's mind that inspire new associations, insights and perceptions. The existence of the attentive reader is the motivation behind the writer's efforts, giving him or her the courage to venture into uncharted territory. As Ralph Waldo Emerson once remarked, "They knew that the intelligent reader would come at last, and would thank them". Our literary heritage would be unthinkable without the intimacy between writer and reader. The deepening is extended beyond the page, it extends into life itself, enriching responses to external stimuli in response to a spectrum of human experience. Today there are fears that the advance of technology will swamp the personalization of reading.

Back in 1612 the Spanish dramatist Lope de Vega in his play "All Citizens are Soldiers" wrote:

> *So many books. So much confusion!*
> *All around us an ocean of print*
> *And most of it covered with froth.*

The printing of books became an agent of change with a danger of overflooding.[12] Today we face a situation where, due to technology, the word is being revolutionized. Computers and hand-held smart phones are our constant companions, the internet has become our way of storing and processing a text. These are ways of technologizing texts but the word itself can never be technologized. The world of the screen is a very different one from the world of the page and many neurologists fear that the pathways to the brain are being rerouted in a way that is disadvantageous because the cognitive load (due to the amount of information we are required to process today) weakens the ability to comprehend and retain what is being read.[13] Memorizing is far more than a means of storage. It is the first stage in a process of synthesis leading to a deeper and more personal understanding of what one is reading. This is in no way a mechanical, mindless process, as it involves judgement and creativity.

CONCLUSION

Reading has not traditionally been perceived as a creative activity. This suggests that creative experience is easier to trace in other forms of artistic encounters than in reading. One of the key reasons for this is that writing rather than reading is readily seen as a creative enterprise. When it comes to evaluating the importance of reading on both "eminent" and "everyday" creativity and its impact on life it is necessary to look at the process involved rather than the result. Reading has no physical output. Even so, despite its distinctive character seen in the light of other art forms there is a consensus that fiction evokes the creation of a narrative. The reader uses personal reading experiences in combination with actual everyday experiences to produce personal judgements that lead to positive outcomes.

Thus reading fiction can be seen to play a vital role in what might be called "existential self-formation" which is a vital element in any form of innovation. This is connected to the process of creating a unique, internal reality. In this way reading provides the impetus to boost creative, divergent thinking.

... READING FICTION CAN BE SEEN TO PLAY A VITAL ROLE IN WHAT MIGHT BE CALLED "EXISTENTIAL SELF-FORMATION" WHICH IS A VITAL ELEMENT IN ANY FORM OF INNOVATION

The British author of stories for children, poet, theologist and professor at Oxford University, C. S. Lewis (1898-1963) expressed the role of literature in the following way:

> *"Literature adds to reality, it does not simply describe it. It enriches the necessary competences that daily life requires and provides; and in this respect it irrigates the deserts that our daily lives have already become".*

Literature is not only a depiction of reality but adds values to it. It provides portrayals of thinking patterns and social norms in society food for thought and a tonic for creativity. Creativity depends on both conscious and unconscious mental functions. When art is integrated into a school or into our daily lives, there is less need to retreat or escape from the world. The education of the emotions is not merely a desirable option. It is essential for well-balanced actions and the effective use of the intellect.

WHEN ART IS INTEGRATED INTO A SCHOOL OR INTO OUR DAILY LIVES, THERE IS LESS NEED TO RETREAT OR ESCAPE FROM THE WORLD

As Nietzsche once said, "Art is a great means of making life possible". It enhances a participation in life and informs one about who one wants to be, what one might aspire to and allows one to become what one is

age of wisdom, it was the age of foolishness, it was the epoch

The present day view of creativity is that it is found in everyone as an inherent urge. Creativity is not only concerned with innovative breakthroughs by gifted individuals perhaps only once in a lifetime but can contribute to giving life greater purpose and meaning. Therefore "everyday creativity" as it is sometimes called has two facets – originality and meaningfulness. In education there are many factors involved in bringing this creative capability to the surface as a platform for innovative thinking. One of these components is confidence in self-expression. The use of literature differs from other art forms in that it does not readily come to physical self-expression. Another difference is that a minority of the population sing, play an instrument, paint or dance on a regular basis. The majority read fiction regularly. Thus reading primarily serves as a way of promoting the mute expression of ideas. Against this background one can understand the growing trend today of an increasing number of writers who do not see themselves primarily as authors but view their work as a well of inspiration for another, often very different profession. Below are two examples of very successful literary figures who work first and foremost in other domains. One is an eminent scientist, the other a craftsman.

CREATIVITY IS NOT ONLY CONCERNED WITH INNOVATIVE BREAKTHROUGHS BY GIFTED INDIVIDUALS ... BUT CAN CONTRIBUTE TO GIVING LIFE GREATER PURPOSE AND MEANING

PAOLO GIORDANO

Paolo Giordano (born 1982) is a young Italian author who won the prestigious prize for literature, Premio Strego, for his first novel "La solitudine dei numeri primi" ("The Solitude of Prime Numbers"). It has sold over one million copies and is translated into thirty languages. His second book "Il Corpo Umano" ("The Human Body") followed up his initial success. Holding a doctorate in Theoretical Particle Physics he represents a growing band of young authors including Mohsin Hamid (b.1971) who studied law at Havard, who are scientists by profession, and who later were to make their names in literature.

How does your work in Physics and Literature interact?
In Physics you can learn things that can be of use in writing. For example, patience and the ability to analyse.

And the way of thinking?
I have learnt in Physics how to get to the bottom of things. It means I don't stop when I get the first idea that can bring joy or disappointment. This process in the exact sciences is very precise. I was considered to be very quick if I might say so and science taught me order and tranquillity.

"ONE THING IS CERTAIN, READERS ARE NOT LOOKING FOR SUPERFICIAL NOVELS. THEY LOOK FOR BOOKS TO HELP THEM IN THEIR OWN STRIVINGS"

What makes a good read?
I really don't know. There is a complexity of factors involved. One thing is certain, readers are not looking for superficial novels. They look for books to help them in their own strivings.

Your first novel "The Solitude of Prime Numbers" has had an amazing success. The themes are psychological. How did you find the topics on which to write?
I had no previous insight about psychology. I didn't know anything about Asperger syndrome or anorexia. These things just came out of an unconscious place in me. First after publication other people made me aware of the fact that I was writing about characteristics of modern disorders. After the first book I met the strange world of publicity and found myself in a depressive crisis and I went into therapy. First then I started to read Psychology in order to follow my own therapeutic process. Fiction and Psychology is a tricky combination. You can learn too many things about yourself and cease to be spontaneous, to be an

author. Modern literature should precede Psychology. It should catch that which is in the air.

And the second book?
I knew what I had to write but cannot explain why. I was inspired by Norman Mailer's book about war "The Naked and the Dead" so I went to Afghanistan to see the war. Irrational feelings become rational in the process.

But there must be some episodes or factors in your childhood, in your meeting with others, in the environment that have brought these ideas to the surface?

"... AS A CHILD I WAS VERY AWARE OF WHAT WAS GOING ON ROUND ME AND OBSERVED OTHERS A LOT"

Not really. I cannot put my finger on anything. What I can say is that as a child I was very aware of what was going on round me and observed others a lot.

There is a growing trend that famous scientists turn to the arts and particularly to the writing of novels. If we say that in general there are two modes of thinking - a logical-mathematical and a narrative mode, do you think it is a growing necessity to bring about an interaction between these in order to bring about a divergent and more holistic thinking in young people?
I love physics. But deep inside me I felt I'm not really good enough. The writing was a tunnel I was digging to escape from my primary profession. When I studied physics all my fellow students did some form of art on the side. When you are dealing only with particles there is a need for something comprehensible that can be seen in the arts. The scientist next to me did not really know what I was working on. In literature there is a reader.

"THE WRITING WAS A TUNNEL I WAS DIGGING TO ESCAPE FROM MY PRIMARY PROFESSION"

And through writing you have become world famous.
I don't like being famous. I don't like appearances in public. I once thought to become a rock star but had no talent in that direction besides I would be fearful about standing on a stage. So the only way out was to try being an author where you can write in solitude. The farther you go on the basis of your personal experiences the better view you get of yourself.

If you had to choose in a few seconds between music, physics and literature what would it be?
Probably music.

Why?
Because it was the passion of my youth. The passions we have at that time of life are the most spontaneous because they are connected with dreams and wishes for the future. They never die. Due to music I became a better human being.

And literature?
Reading came into my life at an early age, it was a passion. Writing came later and therefore it is more controlled.

EDMUND DE WAAL

Edmund de Waal (bo.1964) is a world famous ceramic artist and writer. He made his first pot at the age of five when he persuaded his father to take him to a ceramics class. At school he met Geoffrey Whiting a ceramics teacher who made a lasting impression on him. After completing school he studied English at Cambridge University, graduating in 1986. On leaving university he decided to follow his interest from childhood in pottery. At first he was not successful and started to study Japanese at Sheffield University followed by a year in Japan to practice the language. There he became acquainted with Japanese pot-making traditions. Returning to London in 1993 he established a potter's studio and studied the impulses put forward by Bauhaus. He became famous when he started working in porcelain and is exhibited in major museums throughout the world. Turning again to writing, his book "The Hare with Amber Eyes: a Hidden Inheritance" was published in 2010. It won acclaim, winning several prestigious literary prizes. In 2011 he was awarded the OBE in the U.K. for his services to art.

Edmund de Waal calls himself a maker of delicate pots in white and cream that are informed by a great deal of thoughts about literature.

How is it possible to juggle between being a famous potter and writer?
This should not be seen as a juggling act and it is not at all difficult to go from making a board of pots at the wheel to sitting down at a desk to write. It is not demanding at all, it is in the same space. The two arts should not be seen as separate but intertwined, they feed each other. Pots are thought through, they are humane. Returning to the wheel or desk the world falls away and a bag of clay or a notebook is there to be transformed. Both in writing and when turning pots you make it up as you go along. Sometimes it takes a different direction than was first thought. In this way words and clay are alive.

... IT IS NOT AT ALL DIFFICULT TO GO FROM MAKING A BOARD OF POTS AT THE WHEEL TO SITTING DOWN AT A DESK TO WRITE. IT IS NOT DEMANDING AT ALL, IT IS IN THE SAME SPACE

And the great importance you place on things?
The importance of things needs to be addressed. When you hold in your hand something that someone has made it is eventually passed on for someone else to hold. It can be passed on round the world from one owner to the next. In this way a story is created and this gives the object its value. This is the theme of the book: beautiful netsuke (Japanese carvings often in ivory used on traditional costumes) that are passed on from one person to another, from one generation to another, around the world.

A book and a pot are passed on ..... And bringing things to light means being in the public eye after the solitude of the wheel or desk?

The serious implication of writing the book was the engagements with its readers who write to me about all kinds of matters - exile or loss, what it means to try to understand objects and so on. We have a policy at the studio, if you are over ninety you get a response in one day, over eighty in one week and the over seventies have to wait until we have time.

«BOTH WRITING AND POT-MAKING INVOLVES BRINGING THINGS OUT OF THE SHADOWS AND INTO THE LIGHT»

Both writing and pot-making involves bringing things out of the shadows and into the light. I found inspiration in a book by the Japanese writer Junicho Tanizaki who wrote “In Praise of Shadows” which is about spatial aesthetics. Writing a book is a journey into shadows and bringing things into the light.

And your ambition?

My fantasy is that people will look back on my pots and think - rigorous yet quite passionate and humane. The book – it was hard work to find a voice to inhabit the experience of finding things out. It is about loss and diaspora and the survival of beautiful objects.

NOTES

[1] Solnit, Rebecca: *The Faraway Nearby.* Viking, London 2013.

[2] National Endowment for the Arts report 2008. see http.//www.nea.gov/research/ReadingonRise.pdf.

[3] *As in the U.K. where there have been many closures, 2010-11 146 closed and where borrowing fiction is down 5.4%, non-fiction 7.3% in the same period. The Guardian 10th Dec.2012.*
Recent research in Denmark, Norway and Sweden shows that the decrease in library loans is increasingly related to gender. For each of 116 fiction titles borrowed by 20-30 year old women a man in the same age group loaned 1. The same trends can also be seen amongst boys and girls. In 2011 2/3 of all fiction titles were written by women. International PISA 2000-9 shows that reading amongst boys is in steep decline whereas the figures for girls are stable.

[4] Jacobs, Alan: *The Pleasures of Reading in an Age of Distraction.* Oxford University Press, Oxford 2011.

[5] Emerson, Ralph Waldo: *Essays.* Phoenix, New York 1995

[6] Galimberti, Umberto: *L'ospit inquietante. Il nichilismo el giovani.* Feitrinelli Editore, Milan, 2007

[7] Pennac, Daniel: *The Rights of the Reader,* (transl. Sarah Adams, orig. *Comme un roman).* Walker Books, London 2010.

[8] Bruner, J.: Actual Minds, Possible Worlds. Havard Univ. Press, Cambridge (1998)

[9] Mar, R.A., Oatley, K., Hirsh, J., Dela Paz, J. & Peterson J.B.: *Bookworms versus nerds: exposure to fiction versus non-fiction, divergent associations with social ability and the simulation of fictional social worlds.* J Res Pers 40: 694-712. doi: 10.1016/jrp.2005.08.002. (2006?
Mar, R.A., Oatley, K. & Peterson J.B.: *Exploring the link between reading fiction and empathy. Ruling out individual differences and examining outcomes.* Communications 34: 407-428 doli:10.1515/COMM. 2009.025. (2009)

[10] *The House Was Quiet and the World Was Calm.*
The house was quiet and the world was calm,
The reader became the book, and summer night
Was like the conscious being of the book,
Except that the reader leaned over the page,
Wanted to lean, wanted much most to be
The scholar to whom the book is true, to whom
The summer night is like a perfection of thought,
The house was quiet because it had to be,
The quiet was part of the meaning, part of the mind
The access of perfection to the page.
And the world was calm. The truth in a calm world,
In which there is no other meaning, itself
Is calm, itself is summer and night, itself
Is the reader leaning late and reading there.
Wallace Stevens

[11] In the introduction to his "Household Words" published in the 1850's Dickens writes: "We aspire to live in the household affections and to be numbered among household thoughts of our readers. We hope to be a comrade and friend of many thousands of people, of both sexes and of all ages and conditions, on whose faces we may never look. We seek to bring to innumerous homes from the stirring world around us the knowledge of many social wonders".

[12] Eisenstein, Elizabeth: *Agent of Change - print and culture studies.* Cambridge University Press, Cambridge 1980.

[13] Wolf, M. Proust and the Squid, The Story and the Science of the Reading Brain, Icon Books, Cambridge 2008

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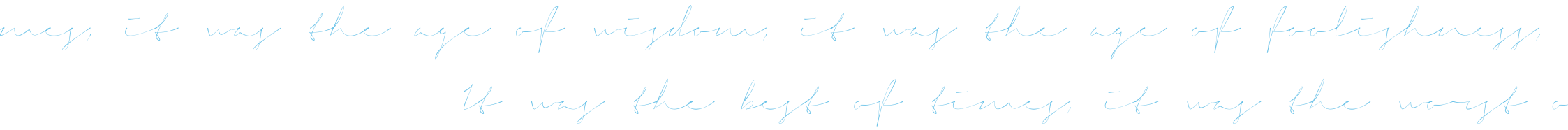

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At present engaged in holding master classes for teachers in an international project "Arts and the Creativity of the Mind : methods for our time". Fellow *Botín Platform for Innovation in Education*, Creativity Group.

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DANCE

Marja Kokkonen

Abstract

There is a close relationship between our personality and the way how we move. This chapter discusses how physical movement, coupled with visualisation, can help improve attention, speed, retention and enjoyment of learning as well as reduce stress and increase life satisfaction.

Dance is not just artistic interpretation or a form of exercise; it can also be an educational tool, and a therapy that combines creativity and wellbeing.

INTRODUCTION

In tribal societies, daily work was creative by nature, accompanied by rituals involving dance. In ancient civilizations, dance was performed at social occasions not only for religious purposes, but also in association with entertainment, celebrations, and secular recreation (McLean & Hurd, 2011, 36-38). In dance, little has changed, in essence, since the prehistoric and ancient times. Dance still has a very strong social component, but other approaches to dance can easily be seen in many definitions of dance which depend on whose eyes dance is seen through. For example, dance can be defined with an emphasis on the human body rhythmically moving through time and space with energy and effort (Kassing & Jay, 2003, 4). Alternatively, more anthropologically oriented definitions of dance focused on human behaviour that comprise purposeful, intentionally rhythmical, and culturally patterned sequences of non-verbal body movements and stillness in time and space with effort (Hanna, 2008, 492). In defining dance, neuroscience pays attention to emotionally expressive use of the body-mind interaction that involves both voluntary and involuntary neural systems (Dale, Hyatt, & Hollerman, 2007, 100).

The possibilities to categorize different dance forms or types are equally versatile. Dance forms can be sorted into categories on the basis of, for example, their historical roots (renaissance dance versus modern dance) or geographical roots (Afro-Caribbean versus South Asian dance), the extent to which the dances are choreographed (choreographed dances, such as ballet versus improvised dances, such as the Argentinian tango), or according to the number of dancers or the formation of dances (solo versus couple versus group dances; line dances versus circle dances). Maybe the most general yet simplistic dance classification is based on the "performance value" of dances. From this perspective, dances are either vernacular or performance dances. *Vernacular dances*, both folk and social dances, are typically learned informally through cultural and social networks and are associated with leisure and recreation (Malning, 2009). Folk dances, such as the Nordic polka or square dancing, are ethnic forms of vernacular dance which preserve heritage and group traditions. Historical social dances are ceremonial and ritual dances of former times that belonged to special occasions or were expected to produce special outcomes (such as rain, prayer, victory, health; Malning, 2009). More modern social dances, such as tango, salsa, or swing, express and reinforce social and cultural values and focus on the instrumental use of the body to somatically, kinetically, and musically connect dancers (Olszewski, 2008). No wonder dance has been seen as a crucial cohesion element in all human cultures (Wiltermuth & Heath, 2009).

... DANCE HAS BEEN SEEN AS A CRUCIAL COHESION ELEMENT IN ALL HUMAN CULTURES (WILTERMUTH & HEATH, 2009)

Performance dances, also known as theatre dances or concert style dances, such as ballet, modern, and jazz, are mostly staged dances. They are typically viewed as artistic presentations in front of an audience and are known to take years of specialized training (Hanna, 2006, 53). However, dance form categories are flexible and influenced by time. Social dances often spread beyond the local context, as pointed out by Malning (2009), and become national or worldwide transnational dances. Many of the social dances have also become performances when taken up by choreographers. Sometimes staged dances, too, cross over and become social dances which are then enjoyed by a larger circle of dance enthusiasts. When classical ballet performed on stage has transformed into adult ballet in dance studios and flamenco and hip hop have ended up on the stage from the streets, in my understanding it is a question of what Malning (2009, 11) refers to as "a kind of endless loop of creativity in which steps and styles are continually recycled, recombined, and reborn".

Since ancient times, people have danced in numerous styles and for various purposes. Today, dance is increasing in popularity, boosted by television dance series. "Oddly though", says the expert movement therapist Martha Eddy (2009, 22), "the growing body of research on creativity does not adequately address dance". Inspired by Eddy's astonishment, I will look at dance as an artistic performance, a pleasing and recreational form of exercise, as education, and as a therapy through the lenses of creativity and well-being. My ultimate goal is to give reasons why each of us – not just Madonna and I - should get into the groove.

DANCE AS PERFORMING ART
CONNECTING WITH CREATIVITY THROUGH MOVEMENT

Historically, dance has always been an inseparable part of another performance art, theatre. This is reflected in the terms "theatre dance" or "theatrical dance" that are used interchangeably for the artistic dances created by artists to be performed on the stage of the theatre. In the 19th century dance was, however, recognized as an independent art form (Hagendoorn, 2010). Dance as an art form consists of three inter-related processes: dance making, dancing, and dance appreciation. Each of these requires different skills and each has a different take on creativity. *Choreographers*, the dance "writers", need creative skills to create original dance compositions and movement sequences to express novel ideas or concepts. A strong cognitive emphasis on the process of dance making culminates in the concept of choreographic cognition, which includes those cognitive and mental processes needed to construct and refine movement material with the intention of creating a work of art (Stevens, 2005). Creativity in composing dance is seen in many parts of the process: in the recognition of an original idea, in the ability to express it in a bodily, visible form, in solving problems along the way, and in sequencing and linking the created parts into a seamless dance piece (Stevens, Malloch, McKehnie, & Steven, 2003).

CREATIVITY IN COMPOSING DANCE IS SEEN IN MANY PARTS OF THE PROCESS: IN THE RECOGNITION OF AN ORIGINAL IDEA, IN THE ABILITY TO EXPRESS IT IN A BODILY, VISIBLE FORM, IN SOLVING PROBLEMS ALONG THE WAY, AND IN SEQUENCING AND LINKING THE CREATED PARTS INTO A SEAMLESS DANCE PIECE (STEVENS, MALLOCH, MCKEHNIE, & STEVEN, 2003)

It has traditionally been argued, most likely because of the rigidity in classical ballet, that dancers need more interpretative and technical skills rather than creative skills to be able to interpret the ideas of the choreographer. Consequently, the mastery of technique and virtuosity has been seen as an important determinant of the artistic value of dance. But because emotions are inherent to successful dance (Hanna, 2008) and expressive skills, such as projection and an ability to convey a story or mood, are essential so-called performance skills in dance (Jefferson-Buchanan, 2012), expressive creativity is also required from the dancers.

Dancers also need creative skills in improvisation; responding spontaneously to music to generate new movements is one of the fundamental creative processes in the art of dance. In fact, modern/contemporary dancers, who commonly improvise and perform more freely also on stage, are higher in verbal and figural creativity than jazz/musical dancers or ballet dancers and characterized as being more capable of breaking conventional rules or modes of thinking (Fink & Woschnjak, 2011). Neuroimaging studies on creative thinking in dancers have additionally revealed that while the dancers were instructed to

DANCERS ALSO NEED CREATIVE SKILLS IN IMPROVISATION; RESPONDING SPONTANEOUSLY TO MUSIC TO GENERATE NEW MOVEMENTS IS ONE OF THE FUNDAMENTAL CREATIVE PROCESSES IN THE ART OF DANCE

mentally perform a dance as originally or creatively as possible, professional dancers showed more right-hemispheric alpha synchronization (i.e. an exceptional electrical activity in the right hemispheres of their brains.) than the novice dancers (Fink, Graif, & Neubauer, 2009).

In addition to improvisation, dancers often lean on somatic practices to enhance their artistic, creative capabilities. The concept of "somatics" refers to a group of bodywork disciplines emphasizing the felt-sense, the internal subjective experience of the body (Hanna, 1970). Somatic practices (body/mind disciplines, somatic therapy, movement awareness) are generally oriented towards a health-promoting functioning of the body/mind (Jackson, 2005). Enghouser (2007) argues that only by listening to the body and its voice, not by imitating is creative discovery and the development into a performing artist possible. Somatic practices, especially movement awareness, have indeed been used to strengthen the aesthetic judgment, and to enhance the creativity and the expressiveness of dancers. Dancers trust their kinesthetic and vestibular system, so called proprioception, while judging their movements aesthetically. Focusing on the awareness of sensations trains the dancers to be even more sensitive to what they feel inside their muscles and joints while dancing. It also helps dancers to create their own unique movements and allows them to mentally step back from their disciplined, often quite standardized ways of moving. In addition to dance aesthetics, somatics has had a strong influence on choreographic styles in the last twenty years (Edinborough, 2012).

ENGHOUSER (2007) ARGUES THAT ONLY BY LISTENING TO THE BODY AND ITS VOICE, NOT BY IMITATING, CREATIVE DISCOVERY AND THE DEVELOPMENT INTO A PERFORMING ARTIST IS POSSIBLE

Choreographing dances and dancing them does not make dance a performing art if dances are not performed to and appreciated by others. While viewing dance, *spectators* experience dance visually, much like paintings and sculptures, but not statically, because dance is both temporally and spatially defined. As essentially emotional and non-verbally communicative, dance performance, at its best, "moves us" or "talks to us". This affective dialogue has led Christensen and Calvo-Merino (2013) to regard the dancers' emotional expression and the spectator's subsequent emotion perception and recognition as the most important aspects of the aesthetic experience in dance. Empirically, too, emotions have been found to be recognizable in dancers' movements (Burger, Thompson, Saarikallio, Luck, & Toiviainen, 2013) and to be central to the aesthetic experience of dance performances; Vukadinović and Marković (2011) showed that affective evaluation (how sensitive, seductive, elegant), together with exceptionality (how expressive, unique and ineffable) and dynamism (how powerful, strong) were at the core of the aesthetic experience of dance performances. Also in the interpretation stage of the process of dance appreciation, it is essential to try to find out what was communicated through dance and what feelings the character evoked (Ashley, 2012).

... DANCE PERFORMANCE, AT ITS BEST, "MOVES US" OR "TALKS TO US"

In neuroscience, effort has been put into the research of aesthetic experiences to explore what brain processes occur when an individual watches dance (Cross & Ticini, 2010). Researchers have been increasingly fascinated by the so-called mirror neurons, that is, the brain activity in the premotor and parietal cortexes during the passive observation of movements. Laboratory studies from the fields of neuroaesthetics or neurodance have revealed that observing an action actually causes much of the same brain activity as does producing the action. However, spectators' neurological responses to dance have been influences by

their visual or motor experience in dance. More specifically, spectators who are motorically inexperienced in ballet, but who have watched balled frequently and thus have become visually experienced in terms of ballet movements without actual physical training, showed enhanced corticospinal excitability while watching ballet – they mirrored the observed dance movements with appropriate muscular participation (Jola, Abedian-Amiri, Kuppuswamy, Pollick, & Grosbras, 2012). As for the dancers themselves, their brain activity in the pre-motor areas of brain has been found to be stronger while watching movements that they could execute (Christensen & Calvo-Merino, 2013). Mirror neuron research has also inspired the examination of kinesthetic empathy, that is, the feeling of taking part in a dancer's movement and related emotions and ideas while watching dance (Jola, Ehrenberg, & Reynolds, 2012). This phenomenon known to occasionally take place in dance audiences has led to practical applications that aim to improve emotional and cognitive empathy through the promotion of kinesthetic empathy. For example, Behrends, Müller, and Dziobek (2012) have created an empathy-fostering movement and dance intervention where high-functioning adults on the autism spectrum participate in ten structured, 90-minute units per week. In these sessions, interactional movement and motoric cooperation, such as imitation of one's partner's movement, synchronous movement with other people or to music, and creating a joint choreography or other motoric cooperation are used to foster empathy and other prosocial capabilities.

DANCE AS EXERCISE - CONNECTING WITH CREATIVITY THROUGH ENHANCED WELLBEING

It has been recently argued that dance has mainly been seen as a personal, individualized form of communication and expression (LaPointe-Crump, 2006) and a form of the performing arts (Alpert, 2011) while dance as a form of exercise and its considerable health benefits have been mostly ignored. This seems rather surprising, given the evidence of how physically, psychologically, socially, and cognitively beneficial dance is.

From the point of view of physical well-being, as a result of a total body workout, dance enhances cardiovascular health (da Mota et al., 2011), burns calories (Alpert, 2011; Bremer, 2007), and is thus very useful in combating the health hazards of excessive weight gain and cardiac risk in both children and adults (Malkogeorgos, Zaggelidou, & Georgescu, 2011; Ward, 2008). Dance classes improve many of the motor abilities, such as flexibility, coordination, and agility, in preadolescent and adolescent children (Aldemir, Ramazanoğlu, Çamlıgüney, & Kaya, 2011), and the aerobic power, muscle endurance, strength, and flexibility of the lower body, static and dynamic balance/agility, and gait speed in elderly adults (Keogh, Kilding, Pidgeon, Ashley, & Gillis, 2009). Many of these improvements contribute to older adults' fall prevention (Alpert, 2011; Malkogeorgos et al., 2011). Additionally, the positive effects of a weekly ballet class on the functional mobility of individuals with Parkinson's disease are noteworthy – leading to a decrease in the rigidity scores, and improvement in hand movements, finger tips, and facial expression–(Heiberger et al., 2011). For the ballet dancers themselves, aerobic interval training and local muscular endurance training intervention have had a positive effect on their ballet performances (Twitchett, Angioi, Koutedakis, & Wyon, 2011).

DANCE HAS BEEN FOUND TO REDUCE STRESS AND INCREASE LIFE SATISFACTION (OLVERA, 2008)

The interconnected psychological and social health benefits of dance are also numerous. Dance has been found to reduce stress and increase life satisfaction (Olvera, 2008). It also provides an outlet for releasing emotional expression, allows for creativity (Alpert, 2011), reduces depression and insomnia (Pinniger, Thorsteinsson, Brown, & McKinley, 2013), and increases positive emotions such as happiness, joy (Knestaut, Devine, & Verlezza, 2010), determination, enthusiasm, inspiration, and alertness (Quiroga Murcia, Kreutz, Clift, & Bongard, 2010). The social aspect of dance can help ease loneliness (Alpert, 2011), promote cultural

awareness or pride in minority individuals (Olvera, 2008), and facilitate sympathy and understanding towards other people and cultures and elicit strong feelings of togetherness and affiliation (Quiroga Murcia et al., 2010).

Finally, dance influences cognitive processing. Laboratory studies have strikingly demonstrated how mere movement, not even dance, can influence thought. Thomas and Lleras (2009) directed research participants' arm movements either in a consistent (swinging) or inconsistent (stretching) manner related to the problem solution and significantly affected their chances of successfully solving a demanding insight problem; participants who were asked to swing their hands were more likely to solve the problem than those who stretched their hands. More recently, Slepian and Ambady (2012) succeeded in proving that movement and creative, flexible thinking are generally interrelated; participants who made fluid hand movements demonstrated greater creativity in three domains (i.e. creative generation, cognitive flexibility, and remote associations). Creativity has also been enhanced by eye movement only; participants with a strong preference for using either their right or their left hand, who initially were less creative than "mixed-handers" (i.e. those who used both hands), showed increases in some of their creativity scores after making specific horizontal eye movements that supposedly boosted the level of interaction between the left and right hemisphere of the brain (Shobe, Ross, & Fleck, 2009).

MORE RECENTLY, SLEPIAN AND AMBADY (2012) SUCCEEDED IN PROVING THAT MOVEMENT AND CREATIVE, FLEXIBLE THINKING ARE GENERALLY INTERRELATED

As for dance, enhancing the temporal and prefrontal brain activity responsible for the improvement of memory, improving the ability to multitask and plan, helping the older brain to form new interconnections to work faster, and improving attention, are all examples of the cognitive outcomes of dance (Alpert, 2011). Because the population around the world is aging fast, researchers have especially focused on the links between physical fitness and cognitive performance in elderly adults. Evidence has showed that six months of the Cha-Cha dance exercise improved cognitive functioning such as verbal fluency, word list recognition and word list delayed recall in older adults with metabolic syndrome (Kim et al. 2011), and that a one-hour solo dance class for six months enhanced not only subjective well-being, posture, tactile and motor performance, but also cognition and attention in 60 to 94 year olds (Kattenstroth, Kalisch, Holt, Tegenthoff, & Dinse, 2013). Interestingly, dancing has been reported to lower the risk of developing Alzheimer's disease in seniors over 75 years of age by 76% (vs. 69% for those playing an instrument and 38% for those doing crossword puzzles; Verghese et al., 2003). As for children, a three-month dance programme brought positive changes in imagination, a vital component of creativity, in 3 to 5 year old preschoolers with speech and language delays (Jay, 1991). Results based on the videogame (so-called "exer-game") called *Dance Dance Revolution* that is controlled by the dance-like full-body physical movements of the player show that "dance gaming" may be useful for the management of behavioural disturbance (the decrease of repetitive behaviour) and for increasing cognitive control in children on the autism spectrum (Anderson-Hanley, Tureck, & Schneiderman, 2011).

DANCE AS EDUCATION

STEPS TO CREATIVITY AND CREATIVE TEACHING

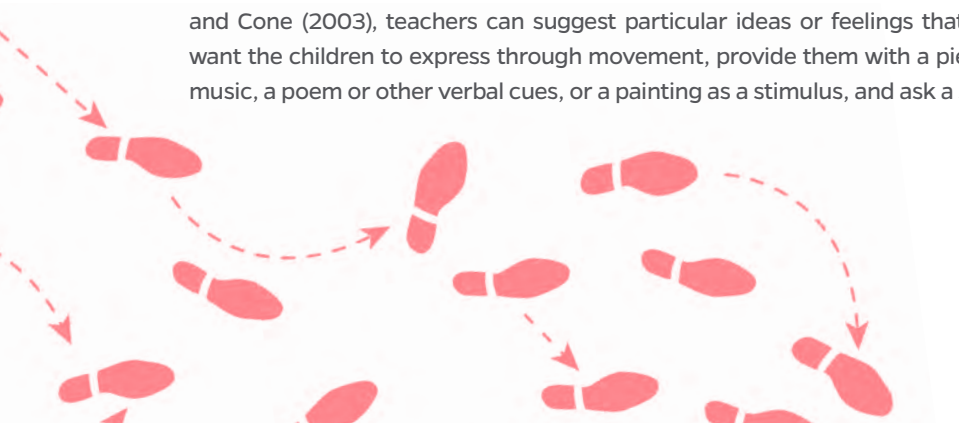
According to Keun and Hunt (2006), creativity is primarily a learnt behaviour comprising discoveries of novel, innovative, and practical solutions to problems, which can be encouraged through the arts, notably dance. If creativity is seen as being something that can be taught through dance, dance also becomes an educational issue that can be approached from at least two angles. Firstly, dance is an obvious learning objective in its own right (Giguere,

2011; Hanna, 2008). Secondly, dance can be regarded as an educational tool to instrumentally acquire, reinforce, and assess learning of skills other than the physical (Jackson, 2005).

ACCORDING TO KEUN AND HUNT (2006), CREATIVITY IS PRIMARILY A LEARNT BEHAVIOUR COMPRISING DISCOVERIES OF NOVEL, INNOVATIVE, AND PRACTICAL SOLUTIONS TO PROBLEMS, WHICH CAN BE ENCOURAGED THROUGH THE ARTS, NOTABLY DANCE

Moffett (2012) argues that even dance students in dance studios, where movement is primary and where dance education is given by trained dance specialists, should be challenged to think critically, reason analytically, experiment, and solve problems in motion. In practice, professional dance teachers seem to regard embodied knowledge - layered through sensing movement from within, the use of a thinking body-mind, and moving with whole self-awareness – as a foundation for creativity (Chappell, 2007a,b). In previous approaches to creativity in dance education, the creativity has been conceived more as a thinking skill, a form of self-expression, and something rooted in play (Chappell, Craft, Rolfe, & Jobbins, 2009).

Outside dance academies, universities, art schools, and private dance studios, dance education is typically offered by physical education teachers, classroom teachers, and music teachers, who teach so-called creative dance especially as part of elementary school children's dance education with less focus on the form (i.e. less focus on the dance technique). In creative dance, the children use their bodies and movement elements to express their thoughts and feelings under the guidance of the teacher. As advised by Bergmann (1995) and Chen and Cone (2003), teachers can suggest particular ideas or feelings that they want the children to express through movement, provide them with a piece of music, a poem or other verbal cues, or a painting as a stimulus, and ask a series of open-ended questions to encourage movement exploration, clarification, and refinement. It is also argued that developing a domain-intrinsic knowing of dance in preschool and early primary school children is important; sudden and extended movements, symmetrical and asymmetrical movements, coordination with others and with music, and the distinction between doing something simultaneously and doing the same movement as someone else, after the other person has begun the movement are important learning objectives in dance for children (Pramling Samuelsson, Asplund Carlsson, Olsson, Pramling, & Wallerstedt, 2009). Alternatively, Rudolph Laban's Laban Movement Analysis (LMA) allows dance educators to teach holistically the primary movement components of Body, Effort, Shape, and Space, through which any dance form, for example hip hop (Rhodes, 2006) can be analysed.



In addition to professional dance training or creative dance, dance and movement have also been used as a tool in mainstream education. It has been documented that physical movement coupled with pretend imagery can help attention, speed, retention, and enjoyment of learning (Lorezo-Laza, Ideishi, & Ideishi, 2007). Dance has been taught in an interdisciplinary manner together with other subjects, like poetry, history, and languages (Bowie & Soriano, 2011; Harding, 2006; Rhodes, 2006).

IT HAS BEEN DOCUMENTED THAT PHYSICAL MOVEMENT COUPLED WITH PRETEND IMAGERY CAN HELP ATTENTION, SPEED, RETENTION, AND ENJOYMENT OF LEARNING (LOREZO-LAZA, IDEISHI, & IDEISHI, 2007)

Dance that establishes a playful learning environment that stimulates spontaneity and supports especially children's full-bodied development and well-being (Jefferson-Buchanan, 2012) has also been used in education to promote development other than academic. Thom (2010) expects the successful affective experiences while experimenting with expressive movements to develop

preschoolers' somatic and social awareness, and their ability to recognize, regulate, and express emotions. Empirically, participation in an eight-week creative dance/movement programme has been found to improve preschoolers' social competence and decrease their internalizing problems (e.g., depression, withdrawal, and anxiety) and externalizing behaviours (e.g., aggression; Lobo & Winsler, 2006). Finally, the greatness of dance as an educational tool lies in the emotions that it arouses. Emotions are very useful in addressing wider educational issues such as physical violence, homophobia, gender expression, difference, and diversity (Gard, 2008; Risner, 2007).

DANCE AND MOVEMENT AS THERAPY
WAYS OF RECONNECTING TO YOUR CREATIVE SELF

People have always used dance for therapeutic and healing purposes. Since prehistoric times ritual dances have been interwoven with the most significant events and milestones in people's lives, such as fertility, birth, sickness, warfare, drought, famine, and death. Nowadays, the psychotherapeutic use of creative, expressive movement and dance through which an individual can engage in the process of personal integration and growth, is most generally called "dance therapy", "dance/movement therapy", or "dance/movement psychotherapy". On the one hand, dance/movement therapy has been seen as one of the expressive art therapies (Federman, 2011) or creative arts therapies with a unique focus on both the physical aspects of movement and the creative aspects of dance (Travaglia & Treefoot, 2010). Dance/movement therapy also belongs to the heterogeneous family of body oriented psychotherapies together with, for example, concentrative movement therapy and functional relaxation, that generally modulate emotional processing, emotion regulation, movement behaviour and bodily self-awareness to influence psychological problems and processes (Röhricht, 2009). Nevertheless, regarding dance and movement as therapy means, in principle, that it is based on the idea of there being a strong connection between personality/mind and the way an individual moves, and believing that changes in movement bring along health-enhancing emotional, intellectual, and physical changes.

According to Panagiotopoulou (2011), *Dance/movement therapy* (DMT) can be distinguished from *Expression Primitive*. Influenced by modern dance, DMT was established in the USA during the 1940s as a result of its healing effects on hospitalized psychiatric patients. DMT and its many variations aim to holistically improve the mental and physical well-being of a person by means of creative improvisation. Because the body serves as a therapeutic tool, the conscious perception, balance, and movement of the body (i.e. the kinaesthetic ability; Federman, 2011), improvisational movement experiences, creative expression, the integration of relaxation techniques and imagery (Ginsburges & Goodill, 2009) are addressed through DMT. It is believed that as a result of the changes in movement patterns, a psychic change can take place, which in turn influences the person's movement patterns and body posture (Federman, 2011). DMT utilizes not only the interrelationships between the body and the mind and motion and emotion, but also on the social interaction between the participating individuals. Typically, in individual or group sessions of DMT the participating dance therapist is an observer of the individuals' creative expression (with or without music) in so called authentic movement. Authentic movement is the movement that the client finds in his or her own body while closing their eyes and moving in response to his or her sensations, emotions, memories and movement impulses.

IT IS BELIEVED THAT AS A RESULT OF THE CHANGES IN MOVEMENT PATTERNS, A PSYCHIC CHANGE CAN TAKE PLACE, WHICH IN TURN INFLUENCES THE PERSON'S MOVEMENT PATTERNS AND BODY POSTURE (FEDERMAN, 2011)

Although initially created in the USA in the 1950s, Expression Primitive was further developed in France in the 1970s and 1980s. Differentiating itself from the Western dance forms that were seen as too ego-centered (Schott-Billmann, 1992), more anthropological Expression Primitive draws from indigenous

people's dances, and emphasizes its roots in Caribbean ritualistic dances and shamanistic traditions. As a result, Expression Primitive offers dance therapy only in group sessions, where the participants escape narcissism by means of vocalization and follow and repeat what is verbally or physically prescribed by the dance therapist with a drumbeat accompaniment, recalling the human heart beat (Schott-Billmann, 2005).

Although these two dance therapy models have been developed in different cultural contexts and are based on different ideologies, both of them have proved effective (Panagiotopoulou, 2011). DMT has been found to improve, for example, the health-related quality of life, body consciousness (e.g. posture, tension, mindful walking), and mental presentations linked to self-body image in obese females (Muller-Pinget, Carrard, Ybarra, & Golay, 2012), to enhance quality of life in cancer patients (Bradt, Goodill, & Dileo, 2011; Kiepe, Stöckigt, & Keil, 2012), to reduce psychological distress in patients with depression (Kiepe et al., 2012), to increase the acceptance of physical characteristics and self-confidence of adolescents (Fourie & Lessing, 2010), and to facilitate the development of healthy sexuality (Kierr, 2011). Expression Primitive has also been shown to lead to observable positive changes in, for example, psychological state (increased happiness) and brain physiology (increased EEG activity related to a relaxed awake state) of psychiatric patients suffering from psychotic and depressive disorders (Margariti et al., 2012). Strassel and colleagues (2011), in their systematic review of the effectiveness of dance therapy, have recognized the following therapeutically valuable multisensory, emotional, cognitive, and somatic factors that might explain the health benefits of dance therapy: continuous social interaction and learning a new activity, music, physical training, enjoyment and engagement in exercise, and nonverbal emotion expression. All in all, dance and movement therapy is currently recommended as an add-on therapy for conditions that cannot be eased by means of conventional medical treatments (Strassel et al., 2011). It seems, however, that the component of dance as such is not necessary to achieve therapeutic benefits. Well-being can be increased through paying attention to bodily sensations while moving. This so-called somatic movement is essential in the field of Somatic Movement Education and Therapy (SME&T), which involves "listening to the body" and responding to these sensations by consciously altering movement habits and movement choices (Eddy, 2009). By both subtle movements of breath or touch and large movement tasks, the aim is to strengthen the body-mind connection, increase sensory and motor awareness, and thus promote individuals' embodied self-organization (Batson & Schwarz, 2007).

CONCLUSION

The American psychologist Robert Sternberg (2006, 95-96), an expert on higher mental functions, has stated that "*Creativity is, by its nature, propulsion. It moves a field from some point to another".* Even more literally, dance and movement take us to new places. Through dance and movement, individuals can engage creatively in an integrative process to promote their emotional, cognitive, physical and social well-being, learning, and growth. Whether executed or watched, dance and movement feed creativity, evoke emotions, and offer people an ancient way of experiencing and non-verbally expressing emotions. Creative ideas can be experimented with, and body-mind connection can be appreciated to holistically promote healing and learning. Because dance is inherently playful, because it can be performed at any level of expertise, and because it can be combined with any of the other art forms, dance has the potential to interest and motivate people from all age groups, and attract especially those individuals who are willing to look at themselves, layer by layer, in their longing for the core of humanity.

"CREATIVITY IS, BY ITS NATURE, PROPULSION. IT MOVES A FIELD FROM SOME POINT TO ANOTHER"(STERNBERG, 2006) EVEN MORE LITERALLY, DANCE AND MOVEMENT TAKE US TO NEW PLACES

Tero Saarinen Company (TSC; www.terosaarinen.com), founded by dancer-choreographer Tero Saarinen in 1996, aims to promote a humane worldview and basic human values through the language of dance, while also increasing people's understanding of their own physicality and its significance for a good life. Saarinen's own background in Butoh, classical ballet, Western contemporary dance, and martial arts is reflected in his unique, "organic" movement language that plays with balance, and off-balance. TSC has performed in nearly 40 countries. Master classes aimed at professional dancers and dance students are at the core of the company's international teaching programme, but workshops based on Saarinen's movement technique have proven to work well for a variety of target groups. **Maria Nurmela,** a TSC dancer since 2003, is in charge of the company's community outreach projects that use dance as a pedagogical tool. She has worked with children as young as 4-6 (at Scuola Allende Elementare, Reggio Emilia, Italy in 2013) as well as with teenagers in projects at the Helsinki-based Apollo School in 2012-2013. In the Apollo project, Maria and fellow TSC dancer Mikko Lampinen led a series of workshops on the theme of *"I am present"* with the aim of increasing interaction, communality, body awareness and creativity in secondary and upper secondary school students through contemporary dance. Half of the participating students are immigrants, so the project also wishes to enhance their integration into Finnish society and the school system. "*The starting point is in the individual strengths, but group formation and doing and experiencing as a group also have extreme significance*", explains Maria, and continues: "*Tero Saarinen deeply values the eternal connection between dance and live music. Consequently, it is important in the Apollo project that children experience working with two musicians who improvise and create music while we are dancing. We listen to the music, and we listen to each other, and the ideas in movement feed their music, and their music feeds us. In my opinion, it is important for the children to witness the invariably changing process, the deepening collaboration, the 100% presence, listening to each other, and acceptance".* These same themes – listening, presence, and acceptance – are essential to her teaching philosophy in the Apollo project that reached its fulfilment in 2013 with a dance piece entitled *Tapestry of Dreams from Those who Throw Themselves into the Moment* at Helsinki's Alexander Theatre, bringing together the pupils, their parents, and the school staff. In Maria's opinion, the best thing in her work as a dance educator was to see how the dance students held up their heads and tried out contemporary dance that was unfamiliar to them. "*In the Apollo project*", she says "*this courage united the youngsters to throw themselves into the unknown, to be sensitive to the new, to trust themselves, and to encourage others. The moments in which the movement started to speak to them, and inspire them with new mental images, were unspeakable precious".* A later 18-hour extension to the original project gave Muslim girls an opportunity to deal with the awakening of womanhood and physical changes through dance.

"THIS COURAGE UNITED THE YOUNGSTERS TO THROW THEMSELVES INTO THE UNKNOWN, TO BE SENSITIVE TO THE NEW, TO TRUST THEMSELVES, AND TO ENCOURAGE OTHERS" (MARIA NURMELA)

In the context of using dance as a pedagogical tool, Tero believes in the honesty from which dance and movement well. "*Through dance we plumb the primitive primal force that lives in each of us, the genuine, naked, and intuitive core of existence*", he clarifies. For Maria, "*dance makes it possible to get in touch with those emotions that are in the shadows - dance makes them conscious, understood. Through dance many skills can also be learnt, such as recognizing emotions, consideration, acceptance, tolerance, and intercultural communication without spoken language. Dance is also a great way to maintain the childhood playfulness in all of us, regardless of age and gender".*

"THROUGH DANCE WE PLUMB THE PRIMITIVE PRIMAL FORCE THAT LIVES IN EACH OF US, THE GENUINE, NAKED, AND INTUITIVE CORE OF EXISTENCE" (TERO SAARINEN)

TERO SAARINEN

Kaari Martin – flamenco as contemporary art

Dancer and choreographer Kaari Martin (b. 1972) had a goal of becoming a concert pianist, before , at the age of 16, she saw the film Blood Wedding (Bogas de sangre) by Carlos Saura. She drank in the surrealism of the movie, and started taking dance lessons right away. Later she studied flamenco under the guidance of the world's top flamenco artists such as Antonio Canales, Ángel Rojas and Rafaela Carrasco.

In 2002, together with her husband Roni Martin (musician, composer) she established Compañía Kaari & Roni Martin, a dance company that has a recognisable, strongly Nordic style (www.compania.fi). It has broadened the conception of flamenco as an international form of contemporary art, and broken down barriers between different art forms. The group opts to work only with top professionals in the field, and thus has long-term collaborative relationships with the most prestigious Spanish musicians and dancers.

"Our choreographies combine a wealth of modern dance influences with flamenco. The result is a kinetic language all of our own, and the music composed by Roni for our works is contemporary music that nevertheless respects the flamenco idiom. For us, flamenco is a means of self-expression and of creating fresh contemporary art", Kaari explains.

"THE CORE OF OUR PIECES IS THE DRAMATURGY MADE UP OF DANCE AND MUSIC" (KAARI MARTIN)

Kaari puts artistic expression before single technique. "I never consciously chose to start combining contemporary dance and flamenco; my style has been born of a desire to express myself freely" she says. "I do not think that I dance flamenco in one moment, and contemporary dance in another. It is completely different when you are training in the dance class; then we can talk more purely about different techniques. But when you take your piece onto the stage, it is most important to have a whole art piece, not a presentation of any individual technique".

In Kaari's and Roni's visually comprehensive pieces dance and music are so interwoven that it is impossible to say where her work ends and his begins. "The core of our pieces is the dramaturgy made up of dance and music. It is great to work together with Roni because, among other things, he has the same attitude towards doing and he offers a good perspective on the dance world", Kaari points out.

KAARI MARTIN

Compañía Kaari & Roni Martin has also received international recognition for its work. In December 2012, their work The Raven won first prize in all categories open to a solo choreography in the Certamen de Coreografia de Flamenco y Danza Española choreography competition - the first time ever in the competition's 20-year history that a foreign company received the first prize in this competition. Kaari won best choreography, Roni won best composition for a dance piece and Erika Turunen won best costume design. "Flamenco gives my art the best possible frame. I can combine my ideas of dance and music and use my creativity freely – especially because I am not Spanish", Kaari ponders. "To many Spanish people, tradition might also be a baggage from which it is difficult to break free. Flamenco is, however, born from the collision of so many cultures, that why wouldn't we take it even further and look at it also from a Nordic perspective?"

According to Kaari, flamenco requires spontaneous creativity. Improvisation typical of flamenco is based on creative interaction between other dancers and musicians". Improvisation on the stage takes total presence, professional skills, and trust in other artists", she explains.

"Flamenco dancing is highly expressive but abstract, leaving a lot of room for interpretation. In this way it feeds the imagination of both the spectator and the dancer. In addition, the traditional flamenco lyrics and letras, are full of metaphors; you can tell a person's whole life story in just a few sentences" Kaari concludes.

IMPROVISATION TYPICAL OF FLAMENCO IS BASED ON CREATIVE INTERACTION BETWEEN OTHER DANCERS AND MUSICIANS. "IMPROVISATION ON THE STAGE TAKES TOTAL PRESENCE, PROFESSIONAL SKILLS, AND TRUST IN OTHER ARTISTS" (KAARI MARTIN)

TWO DANCE-MOVEMENT THERAPISTS

Maarit Ylönen, who has danced since she was little, recalls three turning points in her life that changed her attitude to dance and movement. Firstly, while working in Nicaragua in development cooperation, she saw how much vitality the poor children gained through dance. After adopting two children from Central America and undergoing several back operations, the role of dance and movement in well-being became even more apparent to her. Eventually, Maarit, who was a physical education teacher at the time, found her way to studying dance-movement therapy in the same year as **Marko Punkanen**, musician and music therapist, whose life had not only been filled with music, but also with movement, as he had practiced martial arts for many years. Since graduating in 2000, they have been actively involved with dance-movement therapy training and, most recently, with joint research projects on the effects of dance-movement therapy on depression. In their private practices, Marko, who is also a trauma psychotherapist, uses dance-movement therapy successfully with severely traumatized people whose early attachment has been violated. "*These traumas took place such a long time ago that traumas cannot be remembered as such. They have been restored through somatic memory, and dance and movement can be used to integrate body and mind that have been dissociated in early childhood*", explains Marko. Maarit's clients often suffer from bipolar or personality disorders, anxiety, or a distorted body image. She is also experienced in using dance-movement therapy with groups of children, family groups, and with groups of parents and their children.

Maarit's and Marko's other specialities and interests in life contribute to their approaches to dance-movement therapy. As an expert in vibroacoustic therapy, Marko believes that both hyper- and hypo-arousal of the autonomic nervous system can be helped through movement. "*However*", he continues, "*there are no pat answers to what the body needs, which is why one has to listen to oneself in dance and movement*. "Maarit, who has also specialized in solution-focused psychotherapy and expressive art therapy, emphasizes the meaning of the unspoken: "*In my opinion, dance and movement are so empowering because they are all about listening to and being aware of your body, because they are non-verbally communicative, and because they are symbolic. The symbolic power of dance as an art form reaches emotions and cognitions, too"*. For Marko and Maarit, creativity is a basic human need: "*When life becomes pure performing, ill-being follows. When there is room for creative self-expression, we feel better. Body becomes a means when there is a creative impulse, a creative need. But it works the other way around, too. When creativity is blocked, but you keep on moving, the movement start to change, and it becomes creative",* Marko explains.

"WHEN CREATIVITY IS BLOCKED, BUT YOU KEEP ON MOVING, THE MOVEMENT START TO CHANGE, AND IT BECOMES CREATIVE" (MARKO PUNKANEN)

MAARIT YLÖNEN

MARKO PUNKANEN

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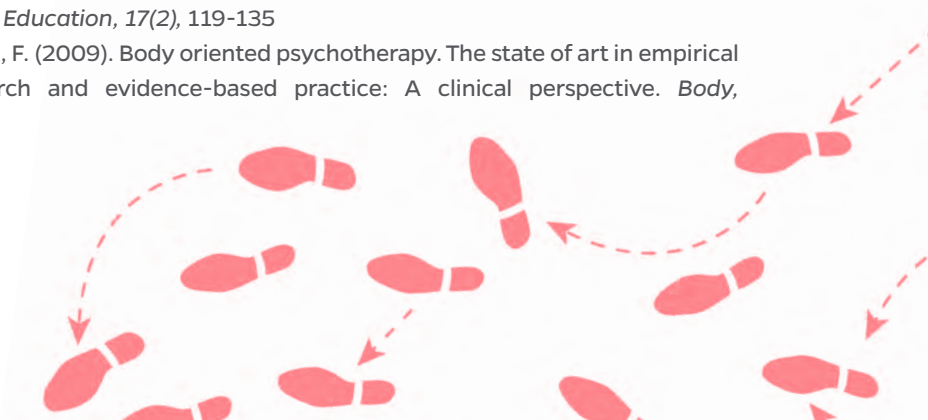

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