

# 11. Imagination

I have always been fascinated to imagine the uncertain circumstances in which our ancestors – still barely different from animals, the language that allowed them to communicate with one another just recently born – in caves, around fires, on nights seething with the menace of lightning bolts, thunder claps, and growling beasts, began to invent and tell stories... From the time they began to dream collectively, to share their dreams, instigated by storytellers, they ceased to be tied to the treadmill of survival, a vortex of brutalizing tasks, and their life became dream, pleasure, fantasy, and a revolutionary plan: to break out of confinement and change and improve, a struggle to appease the desires and ambitions that stirred imagined lives in them, and the curiosity to clear away the mysteries that filled their surroundings.<sup>1</sup>

Mario Vargas Llosa

When Mario Vargas Llosa accepted the Nobel Prize for Literature in 2010, he used his own imagination to picture the transformative human moment of starting to tell stories. He spoke of imagination as liberating humans from the confines of reality to “dream collectively” – to enter the fantasy of the story, to change and improve reality, and to follow their curiosities to discover the mysteries of their world. He is not offering this story of transformation as a factual account of human history, and we do not take it that way; we simply follow him with our own imaginations and understand what he is saying. How is it that we suspend our own immediate realities so readily to enter the fiction? What is this capacity called “imagination”? And is it appropriately called a “way of knowing”?

No single concept of the human imagination has emerged from long centuries of fascination with our ability to picture to ourselves scenes or events – our images and our stories – that we are neither receiving through our sense perceptions nor recalling through our memories. One of

several concepts is imagination as a means of metaphysical apprehension. In the Vedic tradition within Hinduism, for example, it is a transcendent power, through which the gods “create and sustain the harmony of the universe”, and through which human beings grasp this harmony.<sup>2</sup> Greek philosopher Plato also attributed to imagination the metaphysical role of allowing human beings to bring to mind eternal forms beyond the world of the senses. English Romantic poet Samuel Taylor Coleridge had a different version of the metaphysical, within which he gave what he called “primary imagination” the role of echoing divine creation as human beings bring the world of their sense perceptions into existence for themselves. Other thinkers have assigned to imagination functions that are more psychological than metaphysical, often giving it a bridging role – bringing together thought and feeling, or the world of the senses and ideals. Often, too, the creative power of the imagination has been given the role of highest importance as it transforms the materials of experience into new forms and meanings. All of these treatments of the imagination are grounded in culture and traditions of thought, and prompt rich and complex questions on how the imagination actually works – if, indeed, there is a single, unified part of consciousness we can call “the imagination”.

Altogether, would we *expect* universal consensus on what experiences belong within the category “imagination”, and would we *expect* it to be assigned the same role in our minds within all the different perspectives of the world? Although ambiguity can often create difficulties for exchange of views, in this case we suggest that it is liberating – and splendidly appropriate for a human capacity that does not close and confine but opens and appeals to understanding beyond the facts of our immediate reality.

We could move in many directions to consider imagination, but we will choose paths that take us most directly to consider the central knowledge question: can imagination give us knowledge of ourselves and our world?

<sup>1</sup> Mario Vargas Llosa, Nobel Prize for Literature acceptance speech, [http://www.nobelprize.org/nobel\\_prizes/literature/laureates/2010/vargas\\_llosa-lecture.en.html](http://www.nobelprize.org/nobel_prizes/literature/laureates/2010/vargas_llosa-lecture.en.html), accessed 24 May 2012.

<sup>2</sup> “Imagination, non-western traditions”. <http://science.jrank.org/pages/9769/Imagination-Non-Western-Traditions.html> accessed 5 June 2012.

## Foolish flights and dangerous delusions

Not all accounts of the imagination are enthusiastic. It is easy to see how fantasies and daydreams might be regarded with disapproval within some contexts and how making things up might be seen as next door to lying. Probably all of us, too, have found that imagining scenarios has overtaken us at points when it interferes with what we feel we should be doing, and we have told ourselves to “snap out of it!” Of greater concern for imagination’s role in knowledge, though, is the way people deal with the borderline between fact and fiction.

For children, the borderline can be very blurry as they play, lost in worlds of their own imagining, engaging with the experiences and impressions of a world still new to them. Although they can “snap out of it” fairly readily, it can sometimes have a frightening grip on them as, terrified by the monsters in the shadows, they have not yet developed the means to dispel them as imaginary.

As adults, we expect the borderline to be clear. Although some people do suffer from delusions, we usually place their difficulty in telling the difference between the real and the unreal in the category of medical problems. Such delusion is not

### Discussion Activity

#### Imagination: Where does it take us?



Theo Dombrowski, *Imagine*.

#### Activity 1: Images of imagination

- The painting above is by Theo Dombrowski, longtime teacher of IB English literature. He calls it “Imagination”. Why do you think he did so?
- Find a visual image that, for you personally, captures your associations with imagination. In class, share your images with each other and explain why you picked the one you did. Are there any ideas about imagination that most of you have in common?

#### Activity 2: imagination in different fields of knowledge

Read the “voices” of professionals in many fields pictured in this chapter or elsewhere in this book, who use imagination as they create and apply their knowledge. Then discuss with others in your class the questions below.

- Oded Rose, entrepreneur
- Carlos Anciano Granadillo, doctor, surgeon
- Todd Waite, actor, director, teacher
- Heidi Li, performer of traditional Chinese opera
- Jane Clarke, psychotherapist and poet (chapter 6)
- Manini Chatterjee, journalist, writer, editor (chapter 13)
- James Cavers, professor and engineer (chapter 19)
- Patrick Decowski, nuclear physicist (chapter 19)
- As these professionals in different fields comment on the role of imagination in their own present work, what similarities do you find between them? What differences do you find as imagination is tapped for different purposes?
- In what ways do these contributors present imagination as working interactively with other ways of knowing? Compare, for instance, Todd Waite’s account of theatre with Carlos Anciano Granadillo’s account of medicine.
- In several of the contributions, imagination is associated with understanding other people. Why might working well with other people demand a degree of imagination?
- Pick *one* of your IB higher level subjects and *one* non-academic activity that you do. In what ways do you use imagination to gain, evaluate, understand, apply or enjoy knowledge in each of these two cases? Without imagination, would your knowledge be diminished?

the result of an active imagination, something we can “snap out of”.

When the term “delusion” is used not to indicate a biological disorder but a skewed belief about the world, then concern focuses on knowledge. We have to raise questions about the justifications for belief that people accept, the counter-claims that

You can't depend on your eyes when your imagination is out of focus.<sup>3</sup>

Mark Twain

### Voices

#### Oded Rose, IB Diploma graduate 1982

Oded Rose holds graduate degrees in Medicine, Business and International Relations. Other than raising five children, he runs a company that innovates in the water and energy markets and also leads a project to establish an international school in Israel.



#### Imagination in entrepreneurship

I once read that people can be divided to two types. This assertion, of course, is simplistic from the outset, but it helps to illustrate something about a human gift we call imagination. The short article I read went on to suggest that you either have imagination or you don't and gave as a test case buying a house. There are those who when they first

they ignore, and the implications for accepting beliefs that are so far from grounded interpretation that they can be rejected as false. Of course, as we have considered earlier (chapter 3), it is often difficult to draw a clear line between “true” and “false” on a scale of degrees of justification. Moreover, sometimes very new ideas are regarded at first as delusional. (And politicians are sometimes given to calling their opponents “delusional”!) However, even given some of the fuzziness in line-drawing, some knowledge claims simply lie beyond any reasonable belief. When people accept conspiracy theories and alien abductions, for instance, they make themselves vulnerable to taking ill-founded actions, sometimes

walk in see the house for *what it is* and there are those who see it for *what it could become*.

I fundamentally believe that everyone has imagination. It is one of a few things that make us human. I also believe that imagination can be developed especially at a young age. I see it with my own children. When my 3-year-old puts a puzzle together or my 6-year-old builds a Lego structure, then they use this something that is hard to describe, but allows them to see “into the future” and know where they want to get to. Kids have the best imagination. It is not yet spoiled by “reality” and by rules and laws of physics. When we imagine, in a way we become kids again.

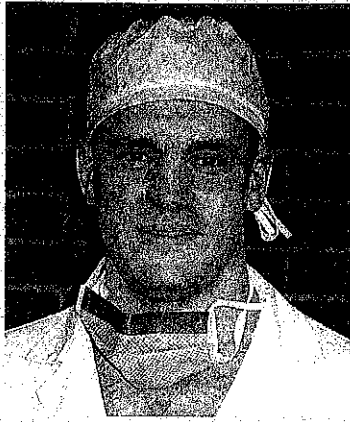
I am an entrepreneur. I have always been one. Entrepreneurship's biggest asset is imagination, the ability to create in your mind a situation, whether it is a product, or a service, or a project that does not exist today, but that could exist in the future – and then “fuse” it with the reality of today in a timeline. Since this is something new, you use imagination to create a pathway in your mind first, and then follow it by creating the necessary steps to get from now to then in the real world.

<sup>3</sup> Mark Twain, *A Connecticut Yankee in King Arthur's Court*, chapter 43. <http://www.literature.org/authors/twain-mark/connecticut/chapter-43.html>

## Voices

**Carlos Anciano Granadillo, IB Diploma graduate 1995**

*Carlos Anciano Granadillo, originally from Venezuela, trained in medicine in the United States. He is a physician and surgeon in a hospital in Pittsburgh, Pennsylvania.*

**Imagination in medicine**

On my way out of medical school I spent some months in the Venezuelan Amazon. I quickly learned that I need much more than just reason and medical knowledge to act effectively. On a single day up or down the Rio Negro I encountered at least three to four different local languages, along with their cultural idiosyncrasies. Without a common language to identify pain, discomfort, and other symptoms, I found *non-verbal communication* and *sense perception* – linked to *imagination* and *intuition* – vital in reaching a diagnosis. Malaria is evident not just in the “fever and chills every third day” one reads in books, but may be sensed more subtly in the woman sitting withdrawn on a separate rock by the river shore, or in the girl not running energetically with the others to meet the strange white guy that just jumped out of the boat.

with damaging implications for their lives and those around them. It is no accident that the term “overactive imagination” has negative implications, suggesting as it does that one has been *overtaken* by a mental process beyond reasonable control.

When there are potentially dangerous implications for how we deal with reality, we need to screen imaginative possibilities for those that are logically and physically possible.

We are taught human anatomy from sets of diagrams, online visuals, models, and textbooks. We memorize the nerves heading to the arm, the arteries in order branching to the body, and the veins travelling back to our hearts. In the present, as I work as a surgeon in a tertiary care reference center, these pieces of knowledge are just the Lego pieces I use in my head to *imagine* what I’ll find each day in every chest I go into. Every pulmonary artery branches with a similar pattern – but differently from person to person. Preparing a lung resection takes more than seeing a patient’s CT scan image and reviewing diagrams. It requires *imagining* the “en-vivo” paths these living trees of vessels take, and *picturing* where three or four 5mm incisions will allow you to reach them, control them, and take them. Perceiving the trends and patterns in the patient’s lung anatomy allows you to search *intuitively* for the critical areas of dissection to safely remove a lung cancer.

A baggage of concepts and sound technique take you only so far. The mental construct in my head paves the way to constantly readapting it on the go. Two plus two is never four in medicine, and minimally invasive surgery is more than just small incisions. In the hospital where I work, I still hear that voice I heard long ago by the jungle river, telling me to watch for subtle clues and use my imagination.

If something is imaginatively possible, that does not mean that it is real. Have you had any experiences where the opposite has been claimed? (Do you recall the role of constructive doubt and the checks for truth from chapter 2?)

## Imagination and creativity

If we are too quick to discard imagined possibilities, however, we may lose out both on our imagined worlds and on fresh insights into our real one. For one thing, the untrammelled imagination, not checked or confined, is often held to be of value in itself – putting us in touch with aspects of our own humanity, even giving a kind of transcendent vision. For another, the imagination can be prized as the creative spring from which fresh understanding flows.<sup>4</sup> English poet Samuel Taylor Coleridge called imagination (secondary imagination, in his distinction) “essentially vital” and claimed that it “dissolves, diffuses, dissipates, in order to re-create”.<sup>5</sup>

This “vital” force of imagination may lead us to draw on all we have seen and felt, all we have thought and wondered, to recombine it in new ways, and to take it beyond the bounds of the familiar and known. As we create our imaginary images and stories, we let our minds wander in the world. As scientist Peter Medawar points out, this creative capacity to “dissipate” and “re-create” the world is part of the genesis of both scientific and artistic achievements:

Scientific theories...begin as imaginative constructions. They begin, if you like, as stories, and the purpose of the critical or rectifying episode in scientific reasoning is precisely to find out whether or not these stories are stories about real life.... The scientific and poetic or imaginative accounts of the world are not distinguishable in their origins. They start in parallel, but diverge from one another at some later stage. We all tell stories, but the stories differ in the purposes we expect them to fulfil and in the kinds of evaluations to which they are exposed.<sup>6</sup>

Medawar’s comparison of “imaginative constructions” is an appealing one – though he does not specify what features of stories the scientific and imaginative accounts of the world have in common in their genesis. What raw materials of sense perception and thought do they use, and what kinds

of connections of association, sequence, or cause do they draw between them? As we have considered already in treating the role of the hypothesis and testing, science does need to constraint its imagination of possibilities, in the end, by the facts.

The rub between imagined possibilities and the constraint of factual truth is characteristic, too, of areas of knowledge that deal with human beings. In telling the story of the past, historian Tom Griffiths comments below on the “creative friction” between the documented past and the gaps to be filled by conjecture grounded in likelihood:

Imagination must work in creative friction with a given world, there are rules as well as freedoms, there are hard edges of reality one must respect. There is a world out there that humbles one, disciplines one. There are silences not of our making. These silences and this uncertainty are the historian’s creative opportunity – and should be part of any story we tell.<sup>7</sup>

In the arts, the imagination is rarely constrained in the same way by this “creative friction” of history, and the stories certainly do differ from the science “in the purposes we expect them to fulfil and in the kinds of evaluations to which they are exposed”. Yet the free range of the imagination in the arts also has its confines of various kinds – sometimes in content, sometimes in medium, sometimes in form.

## Knowing through fiction

Where scientists try to find the regularities and patterns in the world (objectively), storytellers and visual artists use the raw materials of the world – including patterns they perceive – to create patterns of their own (subjectively). They discipline their imaginative invention with the demands of form and structure. The result is work that is (ideally!) coherent aesthetically, and, in the extended stories of novels and plays, also coherent for its internal psychology and sequence. We can enter an imaginative world, while still recognizing the one we left behind. In other words, we enter, as Coleridge says, with “the willing suspension of disbelief”.<sup>8</sup>

<sup>4</sup> Lehrer, J. 5 June 2012. “The Virtues of Daydreaming,” *The New Yorker*. <http://www.newyorker.com/online/blogs/frontal-cortex/2012/06/the-virtues-of-daydreaming.html?printable=true&currentPage=all>, accessed 11 June 2012.

<sup>5</sup> Coleridge, S.T. 1817. *Biographia Literaria Chapter XIII, part 1*. P 304.

<sup>6</sup> Medawar, P. Reprinted 1987, first published 1982. “Science and Literature,” *Pluto’s Republic*. Oxford and New York. Oxford University Press. P 53.

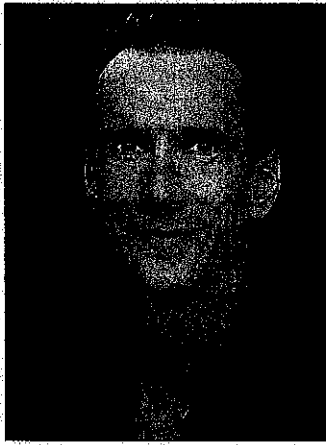
<sup>7</sup> Griffiths, T. 2009. “History and the Creative Imagination”. *History Australia*, Vol 6, number 3. <http://journals.publishing.monash.edu/ojs/index.php/ha/article/view/ha090074>.

<sup>8</sup> Coleridge, 1987. *Biographia Literaria*. Chapter XIV.

## Voices

**Todd Waite, IB Diploma graduate 1979**

Actor/Director/  
Teacher and recipient  
of the Lunt-  
Fontanne Fellowship  
for contribution to  
American theatre  
through acting and  
teaching, Todd Waite  
was a member of  
Canada's Shaw Theatre  
Festival, before moving  
to America in 2000 to join The Alley Theatre in  
Houston Texas where he currently resides.

**Imagination in theatre**

Theatre offers a knowledge that is fueled not by fact and arguments, but by imagination. Theatre is a fiction which reveals truth. By the end of a good play the dance between the imagination of the playwright and the willing belief of the audience allows understanding into the huge range of our shared or conflicting motivations, values, fears, joys, God(s), and societal assumptions and expectations. This knowledge deeply affects our lives because our understanding of them, and the decisions we

A reader's imaginative engagement in fictional worlds has fairly recently caught the attention of cognitive scientists and been dubbed "propositional imagining" or "imagining that...". We accept within the fictional frame that Othello loved but murdered Desdemona or that Harry Potter had magic powers as he used his wand. When we accept the fiction until the moment we "snap out of it" are we using imagination as a *way of knowing*?

We direct you to the discussion activity on "Imaginative fiction" to consider the role of imagination in developing empathy and furthering human understanding – drawing on some of the finest of our subjectivity.

make as to whether we conform or resist these assumptions, make us who we are in relation to the world.

The knowledge gained in viewing any art is not a series of facts, but rather a complex knowing that encompasses empathy, intuition, philosophy, and spiritual belief... all influenced by memory (both individual and collective past experience) and expectations regarding the future.

There is no fact-based, purely rational way to traverse society's thicket of irrational, personal social "realities", because they are constructs, countless constructs, and changing ones at that. And yet understanding them is essential to our happiness, and essential to creating a context for determining how we will use scientific knowledge (because we relate to them based on our needs and beliefs).

At its best theatre of the imagination appeals to the subconscious; it insinuates past our pre-determined opinions and reflexive defensiveness and joins us to a collective memory; and it intimates our collective future. In this way it not only helps us to perceive truths, but reveals and even creates new ones.

Imagine no possessions  
I wonder if you can  
No need for greed or hunger  
A brotherhood of man  
Imagine all the people sharing all the world

You, you may say  
I'm a dreamer, but I'm not the only one  
I hope some day you'll join us  
And the world will live as one.

*John Lennon, musician.*

## Imagination: a TOK way of knowing

For all that imagination can stimulate us to create new knowledge in factual areas or open us to new “human-scapes” in fiction, probably one of its greatest gifts is to carry us into visions of worlds beyond our present reality. For many of the seven billion inhabitants of this planet, the present reality is one of hardship. For the planet itself, the present reality is steadily growing worse. A world of poverty, environmental degradation, and conflict, however, is not the only possibility for our human future. The world does not have to be this way. *Another world is possible!*

Imagination can certainly take us into grim dystopias of the future or apocalyptic finales – but it can equally give us visions of hope to inspire us. We can imagine people putting down their guns, sharing resources so that everyone has enough, and caring for their fields and forests, sustainably. Through the power of imagination, aided by knowledge gained through other ways, we can project the results of much better present choices

beyond a far horizon. Imagination certainly does give us images and stories of things that are not. However, in many cases it also gives us stories of what *could be*, if we *will* it so – and if we act towards making it real. Imagination has the power, if we will fly with it, to give us hope, create alternatives, find solutions, and bring into reality the world that in the present is only in our dreams.

Counter-factual and unreal, imagination does not perform the same role in knowing as perception, reason, or language. Nevertheless, it may be the spark that ignites the others to create the warming, dancing fire around which we tell our stories. Imagination contributes to our discovery and invention, our images of the world dissolved and recreated, and our potent visions of possible futures.

### For Reflection

In many contexts, being “subjective” is something to avoid. In what contexts is the subjective power of the imagination something to celebrate?



Storyteller in Egypt, wood engraving, circa 1894

With what storytelling traditions are you familiar yourself? In our day, who takes the role of the storyteller? Where do you go yourself to be told stories, and what, for you, counts as a *really good story*? To what extent do you enter a fiction with what Coleridge calls “the willing suspension of disbelief”?

## Voices

## Heidi Li, IB Diploma graduate 2005



Heidi Li, born in Hong Kong, has been a Chinese opera singer from a young age. After living in Canada, the UK and France, she is now living in Italy, pursuing her artistic career as a Jazz singer and songwriter while continuing to promote the traditional art abroad. <http://www.heidili.com>

### Imagination and knowledge of conventions in Chinese opera

It can be tricky to turn a new spectator, whether foreign or Chinese, into a long-term Chinese opera fan due to its complexity. Despite its vibrant acrobatic scenes and extravagant costumes, its long-hour performances, acute vocals and unfamiliar stage movements can be demanding for the audience. To truly appreciate the traditional art, it requires patience to put one's imagination into reading all the stylized symbolic stage actions, and to get a deeper understanding of the complex art form through careful observation.

Chinese opera once was a popular entertainment, long before movies, TV and pop music came along.

It was an art for the people, the rich and the poor, the educated and the illiterate. It acted as a medium of oral education, narrating shared history, myths and legends to the majority population. For this purpose, stage space is limited; scenography is kept to the minimal. So, how is it possible to narrate all sorts of Chinese traditional tales and folklore – which can also involve supernatural characters? The symbolic stage movements of Chinese opera actors and actresses, sometimes with the help of their costumes and a few props, are the key to bringing onto the stage scenes that can be meaningfully played in a confined space.

There are no random moves or gestures invented by the actors themselves; all the movements are highly schematized, guided by opera acting conventions and the principle of beauty. A professional Chinese opera actor is often trained from a young age in order to acquire all the essential skills, from walking to singing, from speech delivery to gymnastic skills. All actors or actresses specialize to interpret stock roles, each of which follows distinct rules on how to act, move and sing in a specific manner. The stage movements are also symbolic. For example, walking in fast paces in large circles or in the form of the number eight is the standard representation of travelling in long distances; the swinging of ponytails in a circular motion expresses a character's frustration or extreme grief.

As soon as one grips the logic of Chinese opera acting principles, such understanding can then be applied across all performances. *Imagination* eventually plays a lesser role for an experienced spectator as *knowledge of the conventions* becomes the main tool for appreciating Chinese opera performances.



## Discussion Activity

### Imaginative fiction

There is no point in undertaking the following discussion activity if you simply float around in abstractions. Ground your responses in your own personal experience of imaginative fiction, whether of novels, plays or movies. You might also find relevant your experience of songs and other music, the visual arts, or even imaginary play using the Internet and video games. Do *not* in the process of sharing examples, though, forget about the general questions to which you are responding. Being able to walk the line between too-general-and-floaty-abstract and too-specific-wandering-off-the-topic-into-retelling-stories is a skill to develop not just for TOK but also for your other IB subjects.

#### 1 Imagination as a means toward empathy

When you visualized a man or a woman carefully, you could always begin to feel pity ... that was a quality God's image carried with it ... when you saw the lines at the corners of the eyes, the shape of the mouth, how the hair grew, it was impossible to hate. Hate was just a failure of imagination.<sup>9</sup>

Graham Greene

First read the quotation above from novelist Graham Greene and then prepare your ideas for discussion of the following questions:

- What is the role of imagination in the development of empathy for others? Can you give examples?

- What is the role of literature, film, and other works of the imagination in developing empathy? Can you give examples from your recent experience of these creative forms?

#### 2 Imagination as a means towards further understanding

Narrative has never been merely entertainment for me. It is, I believe, one of the principal ways in which we absorb knowledge.<sup>10</sup>

Toni Morrison

First read the quotation above from novelist Toni Morrison, and then think about specific novels, movies, or visual works that have affected you. Prepare your ideas for discussion of the following questions:

- What knowledge do you gain of history, psychology, culture, ethics, or any other discipline through fiction? If you read a work of literature, do you know more at the end? Do movies set elsewhere in the world give you any kind of knowledge? Give examples.
- Quite aside from factual information, do you gain any sense of insight or wisdom from a good novel, film, or painting? Do you gain any further understanding of the human condition – that is, what it is to be a human being in the fullest, most complex sense? Give examples.

<sup>9</sup> Greene, G. 1940. *The Power and the Glory*. P 102.

<sup>10</sup> Toni Morrison. 1993. "The Bird in our Hand: Is it Living or Dead?" Nobel Prize acceptance speech. *Azerbaijan International*, Autumn 1998 (6.3), [http://www.azer.com/aiweb/categories/magazine/63\\_folder/63\\_articles/63\\_morrison\\_nobel.html](http://www.azer.com/aiweb/categories/magazine/63_folder/63_articles/63_morrison_nobel.html) accessed 24 May 2012.