

ITAL Final Report on “A Being Objective”

The central question of the project is, “How objective can you be in research?”

The animation-film we made hinges around this relationship between *objectivity and subjectivity* and our *quest to know the world*. Those involved in the project started to question this relationship more deeply - and we hope our animation can help others to do so to, at the University of Warwick and beyond.

A definition to start things off, and then a description and evaluation of the project.

A Definition of Objectivity

“Objectivity is a central philosophical concept, related to reality and truth. Generally, objectivity means the state or quality of being true even outside of a subject's individual biases, interpretations, feelings, and imaginings. A proposition is generally considered objectively true (to have objective truth) when its truth conditions are met without biases caused by feelings, ideas, opinions, etc., of a sentient subject. A second, broader meaning of the term refers to the ability in any context to judge fairly, without partiality or external influence. This second meaning of *objectivity* is sometimes used synonymously with *neutrality*”. [https://en.wikipedia.org/wiki/Objectivity_\(philosophy\)](https://en.wikipedia.org/wiki/Objectivity_(philosophy))

1. Spoiler Alert

At the behest-request of the people at the post screening pilot who asked for an explanation/guide to what the film is about, to help in its use as a teaching tool, here it is. If you like to work things out for yourself, then don't read section 1 of this report, or don't read it before seeing the film!

The opening sequence is a psychedelic looking chemistry reaction which sets up the mystery of things. It's called the *Belousov-Zhabotinsky Reaction* and was filmed in the Chemistry Department especially for this project. Just looking up the spelling of the reaction now on You Tube, I've just found that it is referenced in Noble Laureate Ilya Prigogine's book: "The End of Certainty", as an example of a chemical reaction that “*gains new properties when far from equilibrium*”. Interesting!

So.....a coiled spring bounces up from the grass, like a snake in the grass, representative of the life force, the spring, the energy in being, the being in objective. It bounces in word-play from *boing* to *being*, amid grass that isn't like grass, grass that's blue and pointy text, snipping and sniping, blades of grass that are a lead in to the dissector scissors that come later in scene one.

Scene one introduces the character Anna, Anna Lytic. She is not a spelling mistake! She's part fish-part woman, an automaton rattling as she moves, like a box of tools, rotating her scissor arm like a windmill. The blink of her eye focusses attention on *looking* - the necessary start to being objective. Look before you chop. She's in her domain, her dissecting chop, queen of her world (notice her modest crown). The personification of Objective. The world around her is messy, and she moves about it trying to tidy it up, sort it out. She's made up of what she does - lots of little bits, dissected parts, triangles organised into sections with other triangles, squares in another part with squares, dashes in another. Yet these pointy shapes are not altogether perfectly precise. Her hair is in straight lines, but not straight down as in ordinary hair, horizontal lines to imply the direction she is going in. Looking ahead and slightly downward, purposeful, her hair like blinkers excluding the peripheral. She is blue - the colour of coolness and objectivity, but has a vulnerability, an anxiety about her that you can see in the hesitant way she moves. She is 3-D - and three dimensions implies complexity, more than the one dimension implied by objective when it is a left alone with the word subjective.

Perhaps objective in a more complex way than our language allows. The language which governs our thinking compels us in opposites: we have female and male, hot and cold, emotional versus rational, creative versus analytic, as if one always excludes, or is set against the other. Added to this, male, cold and objective go together in this ordering of things, so we wanted the character to subvert this, mix up the lists, and be both female *and* objective, and objective *with a touch of* being. She is blue because that is the colour of objectivity, coolness and the scholarly. Many education institutions have blue in their logo. She isn't blue because she is a Coventry City supporter! (Though she might be). She's also a fish because of the expression "cold fish", to go with associations with objectivity - and because we would put her in a situation where she'd be out of her comfort zone, "a fish out of water".

Being curious, she looks down **the hole that appears in her world**. This world made of text. She watches the papers falling into this opening and looks in. What does this hole in the world represent? Whatever you want! "Is she having a breakdown?" - Pat Unwin said. Someone else said, "OMG, all my work is disappearing!" It was Larry Campbell's idea to include this hole, and it truly is inspired. To me it represents the opening into what lies beneath the external world: the dark, unknown, the unpredictable, our imagination, emotions, desires, dreams, anxieties, hopes. The subjective. Anna looks down into this world and witnesses the improbable. Mobile phones dance, become mobile, they swirl round, leave a vestige of their "real world" presence as they morph into the imaginary, flying out of the underground, and into the external world, representatives of the imagination, of the flight of the unpredictable. Anna backs away from these flying things but can't get away as sprinklings of the other-worldly go behind her and sweep her off her feet. Despite herself she's carried up and away, taking flight on this magic carpet, and as the music changes she changes colour slightly, becoming a "roaring girl", to the soundtrack by Pat Unwin. In the discussion after the screening the attention zoomed in on the horror of things falling into the hole, rather than what came out of it. It seemed to strike a chord.

When the word "doors" set itself over the hole in the world, it referenced Aldous Huxley's "The Doors of Perception", doors, being like windows, or eyes, or holes in the world, offering openings, ways of seeing and experiencing.

The TV set provides a transition into **scene two, the tightrope scene**. The TV is also another window into a world - and the TV, being old, crackles with interference, interference representing subjectivity, a distraction from the quest to be objective, but also the crackles that bring the scene to life. Scene two also brings in the bees, the key representatives of subjectivity, who with their buzzing and flying about pose a threat to the objective character, who is endeavouring, despite them, to get across the tightrope to the objective - the lip of the chemical flask.

The flask is a real thing, set against the background of high rise buildings made of drawings. We had in mind the tightrope scene between the twin towers that Philippe Petit walked in 1974, and watched him on video many times as inspiration. The chemical flask is both a high rise and a container. But what for? What's in it? A metaphor perhaps, like knowledge, or maybe an emblem of the scientific-empirical, or simply a liquid. Why is it green? We liked the colour! The Objective character, personified as a blue stickman, is made out of the letters of the word, the O being his head. He is pushed along the tightrope by a bee - and this bee is the propulsion that moves him, gives him purpose. Walking the tightrope there's always the danger of falling, the line is fine and it's a long way down. Objective is vulnerable. But the character carries on even though he is shaking at times, rearranging himself at times, he still manages to keep on going even though he did scurry back. He eventually makes it to the lip of the flask and falls or dives in. Accidental or purposeful? Bubbling and mixing and this word-man changes from linear to curves - and out of the circle a

reaction/re-arrangement of letters occurs and he **changes from objective into the word subjective**. Enter the cheeky bee and the devilish bee with look of “we have triumphed”. In this section there are questions implied about how can we be objective if we become immersed in something, yet if we are not immersed in something, how can we feel truly alive?

The bee sounds in this scene were made by staff and students in one of the drawing workshops, where I became the conductor of the bees. Not your everyday experience. **The bees were invented by students, academics and support and technical staff from different departments in the university** who stretched the concept of a bee within 3 criteria: wings, stripes and a sting. They are fabulous inventions. Probably to point out the obvious, the bees are also a word play on the letter “b” which is also contained within the word objective itself.

Then to **third scene, altogether more quiet and reflective, as we move into another inside world - the brain**. This scene is probably the most complex. It flits between objective images of the brain, images that suggest thinking as an observable thing, and an atmosphere that conveys emotions of a subjective inner world. Butterflies flicker like passing thoughts. Delicate, transient. Images flicker at speed, many barely register. Spoken words are a poem - and a poem represents being, subjectivity. In here the divisions and connections and complexities of the objective-subjective divide or bridge become more entangled or apparent. Complexity, thoughtfulness and emotion are what I get from this scene - more questions than answers. Maybe too much going on. Like a brain.

There are notes from a student (Chemistry) and an academic (English) to convey different thinking styles. Animations suggest thought processes, calculations, drawing. There is a suggestion of patterns. (Finding patterns/meanings being the core of what it is to be human, as well as the core of the activity of being objective). The brain is depicted as an objective thing: through tractography, PET scans, angiograms and neurones, but also in its depiction as a moon, the moon being an outside thing, a shepherd to our earth. The implication being the brain is as distant from us, in our capacity to decipher it, as the moon is distant from our planet. But with another layer of complexity - as a brain-moon is both inside and outside. A resemblance, an imaginative construct - and resemblances are echoed again in the coral brain - and again in the branching animations, that are also echoes of neuronal branchings, one of which is an adapted molecule that moves like lightning flashes thinking.

The drawing of the young girl holding her teddy, sucking on it for comfort, on the page of the notebook in the opening of this scene, conveys something of the vulnerability of our inside selves, perhaps something of the fear of the blank page. The historical images of the brain in drawings and models suggests something of the way thinking about the brain has changed. Many drawings (another aspect of thinking) barely hit the screen - the anatomy of thinking, dismantling a question, something to suggest the neuronal gardens in the brain. But one drawing lingered upon, “Innards Consciousness”, is a jumble of words together with images that suggest a brain that is part intestine, heart and eye – a sort of dreamscape brain made up of many of the words that can be made from the word “plasticity”, something that shows the marvellous malleability of our brains.

When we were thinking through this scene we had the had idea of using the idea of the “ghost in the machine” by depicting the brain as a ghost train ride with doors opening and banging shut and things popping/leaping in/assailing from the sides, but it have would have been too difficult to shoot, so we changed tack (abandoning many other ideas in the process).

The breakthrough was **the brain moon**. Ian Mason created, and named an image “brain moon” when we were preparing neurone images for the Oculus project. This triggered off the brain moon poem - as I knew that there were some fantastically evocative names for the topography of the

moon, (https://en.wikipedia.org/wiki/List_of_maria_on_the_Moon) with names based on the wide spectrum of our varying emotional states. These names - seething bay, bay of rainbows, lake of hatred and ocean of storms - amount to a found poem. An alternative mapping of the brain as geography or phrenology of emotional states. How could I resist! When I recite the brain moon poem there is a disjunction between the words appearing on the screen and being spoken. A lag of time. This reflects something of how the brain works. It is known that we know before we know we know. On the brain-moon theme I also made a stream of consciousness of words tracing the tracks of neurones, as if there could be some correspondence between these neurones (actually mouse neurones but we will pass over that) and thoughts. That is a big question. How the material of our brain corresponds with experiences, consciousness, emotions and thoughts. Another thing related to the moon brain is that the moon in symbolism has been long associated with the female and with emotion. The brain also put me in mind of lips with its cleavage and this was one of the images that flitted up during the poem's recitation. But before the poem came into being there was a great visual sequence by Larry that indicated a shift in tone, a taking off, a being assailed, and a character that had been created out of the shape of some discarded metal left on the street, rattled and shook into a different mode of being, then entered the poem. The poem ends with a question.... "Am I the imprint of your ideas?" One response to the screening was, "It's overwhelming". And writing this up I can see what they mean - there is a lot going on ideas-wise. But then, that's the brain. A few people said it would lend itself to watching a few times and I think they're right. And maybe even with one or two scenes at a time. It is worth taking time to take a good look, digest and think about it.

Towards the closing part of the scene many images flick by, many from the Wellcome Trust bank of brain images (their historical ones are free to use). The haunting music begins, the spiralling thing like a clock or mechanism, an echo of the sound mechanism that started up Anna's motion in the opening scene, twirls, partly stutters around, perhaps signifying the passing of time, changes in ideas, in ourselves, imperfection... brings us to the end... without giving away any answers but perhaps leaving an atmosphere where questions or thoughts might vapourise.

2. Research

We exchanged around 50 animations and short videos, including on skateboarding and surfing (for movement ideas for Anna Lytic when she takes flight on the magic carpet) and on automatons and tightrope walking, as well as documentaries and theatricals on the brain and consciousness. Of these the Billie Whitelaw performance of "Not I" by Samuel Beckett - referenced in the scene 3 notes by Liz Barry - had the most direct influence, through choosing a monologue for this scene and through the lips of the brain moon image. Eric Carle's work gave ideas for the use of collage and Michel Gondry's interviews with Noam Chomsky showed how animation can combine with reality. Google images and books with historical and current images of the brain were scoured, a talk at Warwick University about brain imaging by the Director of the Cardiff University Brain Imaging Centre led to a link that enabled access to material for our film that could include the facility in the UK with the most advanced machines for brain imaging. The Wellcome Library was another bountiful source for brain images of the historical type. COURSERA online courses about the brain were dipped into, as were writings about consciousness, philosophy of mind and definitions of objectivity and subjectivity. Three trips were made. One to the Art-Science Festival at the University of Birmingham to look at three animations interpreting science, another to the Flatpack Festival in Birmingham to see animations connected with the body, and the third to the Wellcome Museum to visit the exhibition, "States of Mind and Tracing the Edges of Consciousness" and to the Natural History Museum where I chanced upon and took photos of brain coral.

Comments/suggestions/evaluations/next steps - from the post screening discussion

The academics at the session (from law and chemistry) said they would use and find the animation-film useful in their teaching, as a spur to discussing the relationship between subjectivity and objectivity in research, as did the representatives from IATL. There was a consensus that it could be useful in this area, but with the proviso that the video would need guidance/scaffolding for students and staff. On the basis of this Pat Unwin said, "We'll do a recording", which we've done. Plus this report is a guide for staff, a sort of translation.

Questions to frame the post screening discussion were prepared by Charoula and were around "Thoughts, Questions and Use". People used Postit notes to write down their private thoughts and these were the basis for discussion, hosted by Solange and Pat. About 30 people came to the screening, across the science and law divide, encompassing students, post docs, academics, technical and support staff and an artist. Nearly all the people had been involved in the project, contributing drawings, notes, ideas and technical skills.

It was suggested the film could be the subject of an article in the TES (Mary disinclined to do this but suggested IATL might). Perhaps material could be lifted from this report. The name Chris Burrows, local education journalist was mentioned.

One respondent said that the video could be used to ask questions, getting students to generate their own questions and thoughts, another said that it could be used like an exercise in objectivity. And I like the sound of that. If the video is considered as something to be figured out/investigated, the first step is observation, the second description, third is questions-responses and the fourth is dissection and the inferring of meaning. Is that what Anna Lytic might prescribe?! How objective is it possible to be in deciphering "A being Objective"?

3. Last words

On parameters of objectivity and subjectivity the project has been a real success. Our video "The Making-of" gives objective facts about the project (numbers of this and that) as well a sense of immersion and delight people had in the drawing workshops and as a response to the screening (their subjectivities). So no need to repeat here. But to distil the key processes and outcomes: 4 drawing workshops with 40 bee drawings from students and staff were incorporated into a collaborative animation-film of 9 min duration, available on You Tube from Dec 15th 2016, screened at the IATL funding teaching event on Dec 14th 2016 and to be available on the IATL website from Jan 2017.

Importantly - the project did a great job of involving students at each stage: namely, in the drawing, model-making, interview about the model-making and stop-motion process, providing notes, sound-checking of the room and film ready for the screening, setting up the room for the film, being the person on the computer pressing buttons as film projectionist, doing the interviewing and filming for "the making-of" and interviewing and filming for the immediate post-screening feedback. This in addition to being there to watch the film for the pilot screening.

Just in now - an email from Cardiff University Brain Imaging Centre (CUBRIC). CUBRIC provided key images of the brain for scene 3. Bethany Routley said, "The video looks great - really interesting to see our imagery represented so creatively!" So, good to know that in the process we kept our image contributors happy.

Some of the brain image drawings that were flickered through in scene have been shown on the Ultra high definition screen in the atrium of the Oculus New Teaching and Learning Building, from

the date of the opening in October to the time of writing this report (December). Brain images from research we couldn't use because they were too small were cloned into brain wallpaper and could be used there. As could images we didn't include so as to have a tight cut. It was necessary to have images flick through quickly in scene 3 to simulate the speed of our brains. We have included a warning of the flickering at the start of the film on the advice of Amy Howes (even though it meets BBC guidelines) to alert people who may be photo-sensitive. The film can be shown as three separate scenes, so it may be an option to use just the first two scenes for teaching purposes if this is an issue.

What wasn't discussed post-screening was the possibility of its use (the third scene) in discussions of consciousness, the brain-mind, identity and the influence of education on. ("I am, am I, the imprint of your ideas"). The animation could be used to open/add to discussions in these areas.

It was a real privilege and delight to work with the talented and inspiring film-maker-animator Larry Campbell - and to collaborate with so many lovely people across the university, seeing their inventiveness come to life in drawing. I've thoroughly enjoyed being part of this project (even the forms and the report writing, as tedious as they are, couldn't detract from it). I think we've put together a highly imaginative, original-unusual animation-film that can be used to ignite a very important question in education/research. It has to be extremely good value for IATL. We are very happy with the film and really appreciate that IATL gave us this opportunity.

4. Out of this and into another project idea

With the use of the flask and tightrope in scene two of "A being Objective", the focus was on the experimental-empirical as a route to knowledge. **The gap left is the knowledge gained from reading - and what is taken, left and changed in this process.** A new project "*I danger*" is the proposed next step: "I danger" is an anagram of reading - and a word play of homophones (I and eye). It implies that reading is a danger to the self (and perhaps to the reading material). The proposed project is an animation-film based on the journey of an eye that falls into a book/text. It would be based on storyboards generated by students. Two academics are very keen to collaborate on this (E. Strausz, C. Tzanakou) as is Larry Campbell and myself. It's a great idea *and* a unique word combination not found on Google.... Might IATL consider funding it?

Mary Courtney - On behalf of myself, Larry Campbell and the many contributors to the project.
December 2017 mary@marycourtneypoetry.co.uk

Selected References

Michel Gondry Is the Man who is Tall Happy? Animated interviews with Noam Chomsky <https://www.youtube.com/watch?v=cv66xFD7s7g>

Billie Whitelaw performing "Not I" by Samuel Beckett (1973) <https://www.youtube.com/watch?v=M4LDwfKxr-M>

Early CGI facial animation (1974) <https://www.youtube.com/watch?v=SPMFhcC4SvQ>

Eric Carle Papa Get the Moon for Me <https://www.youtube.com/watch?v=lewuMMaIC8A>

Philippe Petit's Tightrope Walk, World Trade Centre, August 7th 1974 <https://www.youtube.com/watch?v=8jov-HMaOPQ>

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