



After Alice Buckley finished her year on the Thinking Skills Programme in July, there hasn't been a monthly newsletter. However, new placement student Aaron Vick is taking up the reins of the newsletter and we aim to bring you monthly updates on our progress, as well as interesting information from the world of thinking skills, cognitive psychology and neuropsychology.

THINKING SKILLS CONGRESS:

The first annual Thinking Skills Congress was held on 4th July 2014 at Beckett House, Defence Academy. The aim was to discuss the development of thinking skills in Defence, with the help of a number of invited presentations. The presentations and a summary of discussions can be found on the TSP VLE*. The general consensus was that there are some contradictory needs in the current Defence organisation that hinder the ability to achieve agile and innovative thinking. There is some optimism that new concepts for Defence can address some of these difficulties, allowing more diversity, challenge and learning. The Congress was attended by around 50 invited people from different areas in Defence. The next Congress will be on 1st July 2015 at Beckett House.

*To access the VLE, please go <https://vle.cds.cranfield.ac.uk/>, Click 'Getting Started for Students', login as a guest, click on the 'Thinking Skills' link and then the 'Defence Thinking Skills Programme' link to access the resources

REPLACEMENT FOR THE TSP VLE:

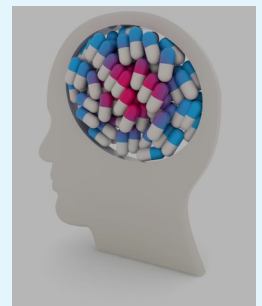
We are aware of the limitations of the VLE as a single point of access supporting all the functions we would like to offer. We have launched a new project to develop a portal that will allow access to all the resources, including academic literature, apps,

podcasts, teaching materials and the like, as well as forums and links to social media. This will let us to add our own comments and share experiences. If you have any requests or suggestions for the functionality of this new portal, please let us know. We aim for phase 1 to go live in January 2015. If anyone has a suggestion for a good name for this portal please send it in!

IN THE NEWS

SHOULD MORE PEOPLE USE 'SMART-DRUGS'?:

The increase in the use of so called smart drugs in recent years, with a recent survey suggesting around 1 in 5 UK HE students have taken them, poses the question whether more people should be using drugs such as Modafinil and Methylphenidate to enhance their cognitive abilities. Due to the wakefulness promoting and focus inducing aspects of these drugs, they are commonly prescribed to sufferers of narcolepsy and ADHD. However, despite being illegal to supply these drugs without a prescription they are still readily available on the internet. Research into this area shows subjects report feeling more alert, energetic and attentive after taking the drug and cognitive ability on tasks of digit-span, recognition tasks and declarative memory can often be improved. However, with conflicting evidence suggesting abilities such as working and long-term memory are not sufficiently improved, it is clear that more research needs to be done before a conclusion can be made. Despite this, with the low addictive potential and supposed minimal side effects of the drug, it is clear to see why many students are opting to take 'smart drugs' in an effort to give themselves an academic edge.



ON THE HORIZON

BRAIN TRANSPLANTS: FICTION OR REALITY?:

Since Dr Frankenstein first screamed “It’s alive!!”, brain transplants have been firmly entrenched in the realm of science fiction; as recently as 2008, Meg



Cabot’s *Airhead* trilogy explored the possibility of transplanting a human brain into a donor body (also known as a whole-body transplant). But could this become a viable medical procedure in the real world? And if so, what are the ethical implications?

Dr Sergio Canavero of the Turin Advanced Neuro-modulation Group, believes that the technology for human head transplantation with spinal linkage (transplanting the whole head rather than just the brain) has become a reality. In a 2013 article in *Surgical Neurology International*¹, he discusses a hypothetical procedure with reference to Robert White’s successful transplant of the head of a rhesus monkey in 1970. The main problem with White’s procedure and others like it is the connection of the patient’s spinal cord with that of the donor; this is generally considered medically impossible and without it, the patient is simply left paralysed in their new body. However, Dr Canavero believes that, with natural polymers such as polyethylene glycol and Chitosan, at least partial reattachment of the spinal cord is possible... in a 36-hour procedure involving a team of one hundred. Dr Canavero’s procedure involves cooling the patient’s head to 15°C and then removing both heads simultaneously, with the patient’s head to be reattached within the hour, all for the low, low price of an estimated £8.5 million.²

So transplanting a person into a different body may be possible. But what does this mean for the patient? Dr Canavero examines a few ethical considerations in his article, including the dilemma of the patient’s identity following the procedure, and the conditions the patient would have to fulfil in order to qualify. Dr Canavero proposes that the recipient would be “probably young, suffering from a condition leaving the brain and mind intact while devastating the body,” but with a multi-million price tag, it probably won’t be that simple. So, considering

there will probably be more patients who could benefit than transplants, how do we decide who is eligible? Would we have whole-body transplant lists as we do for organs such as hearts or kidneys or would the transplant be reserved for those who can pay for it as an elective surgery?

On the more philosophical side, does “identity” reside with the brain, or the body? Meg Cabot’s *Airhead* explores this when the protagonist, Em Watts, finds herself transplanted into a new body and is told that her identity is now that of her donor, while her old identity is legally dead; after all, her new fingerprints, DNA and other features identify her as that person. Is a transplant patient a person with a new body or a body with a new person? This isn’t rhetorical; the first patient will need to know. How would a whole body transplant affect, say, whether you are still legally married to your pre-transplant spouse? Are your life savings still yours? How, basically, would moving into someone else’s body affect your life? (By Harriet Phoenix)

REFERENCES:

¹ Canavero S. HEAVEN: The head anastomosis venture Project outline for the first human head transplantation with spinal linkage (GEMINI). *Surg Neurol Int* 2013;4, Suppl S1:335-42

² Dixon, Hayley, “First human head transplant now possible’, neurosurgeon claims,’ www.telegraph.co.uk/science, 02 July 2013

SEPTEMBER’S BRAIN TEASER:

What is the connection between these 4 items?

Purple Pound, Red Rose, Yellow Bird, Blue Tree

Answer in next month’s newsletter. Alternatively you can email me if you think you’ve found the link.

CONTACT US:

If you’ve enjoyed reading this and wish to be added to the monthly mailing list, want to submit a name for our new website or have any general feedback, please feel free to contact us.

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