

THE UNIVERSITY of York

May 2010  
Issue 4

# PsychOut



One Year on...

The 'Anniversary' Issue



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**Want to get involved in the production of PsychOut?  
Simply email Grace at [psychout@yusu.org](mailto:psychout@yusu.org) for more information,  
no previous writing experience is required!!**



# Editor's Letter



**Grace Rice**

*Welcome to the first anniversary issue of PsychOut!! Over the past year PsychOut has been working to allow students to explore areas of psychology that are of interest to them as well as bridging the gap between the students and the department by illustrating the research which takes place here—long may it continue!! I would like to take some time to thank all of the amazing writers who have given up their time to contribute, in particular I would like to thank Adele, Ivan, Jo, Rob, Hannah, Matthew and Klaudia; without you the first issue would never have been published!!*

*With this being our birthday issue we thought it was only fitting to have an anniversary theme, read on to discover how fragapane effects certain people before their birthdays, how misleading body image in Barbie's can effect self esteem in children and to discover what happened to the participants of the worlds most famous psychological experiments...*

*All references to the included articles can be found online at: <http://www.york.ac.uk/depts/psych/psychsoc>*

*Finally, apologies to Richard for the mis-spelling of his name in the article on third year options last issue!!*

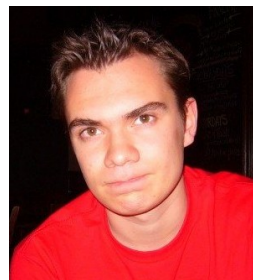
*PsychOut Love,  
Grace*



Hannah  
Belcher



Adele  
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Alex  
Reid



Ivan  
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Francina  
Clayton



Alex  
Knight



Hannah  
Voss



Jo  
Hartley





# Features

***Our Features Section is where large topics in Psychology are discussed. Previous articles include the history of Psychology, the effects of alcohol on behaviour and autistic savants...***

## **It's my party and I'll cry if I want to...**

Alex Knight

With this issue being the one year anniversary since the inception of PsychOut, it seemed only right to use some print space to discuss our infatuation or hatred with birthdays. Recent statistics have shown that we share our birthday with 0.274% of the world's population, over eighteen million people (this excludes those born on leap years). Although cultures vary, it is clear that some birthdays carry more value for society than others, from the classic-American-style "sweet 16" to the graceful hundredth birthday enjoyed by a rare few. Whilst some of us relish the date and follow the calendar religiously looking forward to the one day where the central focus is on us, others wince in a corner and dread the reminder that they are one year older. To what extent do our birthdays or ages really define who we are, and the place we take in society?

Both historically and culturally, birthdays appear to be most prominent when investigating rites of passage for individuals as part of a societal group. A rite of passage, also known as a coming of age ceremonies, experienced during the transition to adulthood during puberty. Rites of passage have



**Why is it that some people dread the idea of growing one year older?**

**"It appears that despite the majority of us looking forward to birthdays, they can be harrowing times for some people"**

two key focuses; the first is to stress the historical and cultural aspects of the group. Brookins (1996), for example, was able to illustrate that African-American youths who underwent activities informing about both their history and culture were more likely to promote these cultural values as well as assist in their own personal development and empower them to be an active force in social change in their communities.

Rites of passage also seem to be taken in to account in terms of psychosocial development in adolescence. Erikson (1968), for example, insisted that one important stage of development during pubertal period was that of identity formation. In a process termed by Erikson as "identification", the youth will select values from others that it will maintain in its own cultural

values system, whilst at the same time dismissing others which conflict with their own values. These rites of passage form the basis of values which can be accepted or rejected in Erikson's model. Dunham et al. (1986), in addition, believes that they also provide ethics and a sense of morality which is

required as an adult living in that society.

Although there appears to be cultural distinctions, other coming of age traditions may focus also upon the independence which has been gained by the adult as a result of their age. This seems to be more of a case amongst western cultures, where big birthdays that are celebrated signify important ages of responsibility, for example, eighteen or twenty-one for purchasing and consuming alcohol. Santrock (2002) suggests that even though birthday celebrations are not focused around these events, these are symbolic achievements which provide alternative rites of passage. Beccaria and Sande (2003) also suggest, interestingly through looking at alcohol use in Norway, that amongst Norwegian teenagers, a new trend of "rite of life projects" are emerging where misuse of responsibility i.e. intoxication through alcohol, is helping to form social identity during the transition to adulthood, as this leads to less fear of rejection from the peer group.

On a more macabre note, it appears that much of our later psyche may be defined by our birthday. Research is starting to suggest that people may be predisposed to suicidal tendencies which are somewhat related to this date. Chotai et al. (1999) noted that more suicides and suicide attempts are committed by those with birthdays in April and May. This may be that during foetal growth, the unborn child has experienced the lowest possible levels of serotonin and dopamine. Noble (2005) suggest that this reduced amount of photoperiod and light intensity leads to an elevation in prenatal stress. This then has resounding effects on the development of natural amines within the brain, especially when coupled with any genetic susceptibilities (Herlenius and Lagercrantz, 2001). This may then have further implications which endanger healthy psychological well-being.



**Globophobia (the fear of balloons) is one of the rare disorders associated with birthdays**

Unfortunately, it appears that despite the majority of us looking forward to birthdays, they can be harrowing times for people, especially those who suffer from related psychological disorders. These mostly take the forms of phobias, which are often irrational fears of things in the environment. Phobias are the most common of all anxiety disorders. Fragapane phobia, for example, has been termed to describe a phobia of your own birthday. Although cases are rare, it has been stated that the common symptoms of fragapane phobia are severe depression around the birthday period, as well as not wishing for anyone to acknowledge their birthday.

Although more research is required, (although difficult with the small number of cases), some common phobia treatments such as CBT (cognitive behavioural therapy) may be beneficial. We must not also forget phobias of things commonly found during birthday periods, such as balloons (globophobia) and clowns (coulrophobia). Unlike fragapane phobia though, globophobia and coulrophobia seem to manifest themselves with different symptoms. Instead of depression, presence of balloons or clowns often leads to dry mouth, excessive sweating, and occasionally panic attacks which may require medical attention.



**In some cultures a landmark birthday may signify the transition into adulthood**

Clearly our birthdays and the events surrounding them play a significant part in the workings of our lives, especially during our adolescence where rites of passage, in both western and non-westernised cultures, are used to help young adults form their overall identity. Birthdays may also play a role in our overall psychological well-being even from an in-utero time period. However we face our birthdays, with anticipation or despair, I believe we can all appreciate

these words from the witty priest Larry Lorenzoni "Birthdays are good for you. Statistics have shown that people who have the most, live the longest".

# Plastic Ideals: Body shape in children's toys

Alex Reid

There has been much criticism of the western media for its endorsement of body-types that are largely unobtainable by the general population. The visible celebration of 'ectomorphic' (thin) and 'mesomorphic' (muscular) ideals in men and women, is largely at odds with the average body size of most western populations which is gravitating towards the decidedly 'endomorph' (rotund) end of the spectrum (Spitzer et al., 1999). This is not a healthy scenario and the media is subsequently considered a major contributing factor in the development of body-image disorders such as bulimia, anorexia and muscle dysmorphia (Pope, Gruber, and Olivardia, 2000). However, given the often complex and multi-faceted origins of such disorders it is always good when innovative investigators provide new angles of research.

As such, in the theme of 'psychological firsts' for this first year anniversary edition of PsychOut I have chosen to discuss some of the first studies to measure body size trends in popular children's toys. These investigations into girls dolls (Norton, Olds, Olive and Dank, 1996) and boys figurines (Pope, Olivardia, Gruber and Borowiecki, 1999) both had the same overarching research question: given the rise of body-image disorders in western populations, might we find evidence of these distorted ideals in toys aimed at children?

**The average woman modified to Barbie's proportions (2000 model onwards).**

**Pictured:**  
**Far left: Barbie, not to scale**  
**Second left: average woman**  
**Second right: average woman scaled to Barbie proportions**  
**Far right: average woman's hips scaled to Barbie's proportions**



The specific toys in focus were the girl orientated Barbie range (produced by Mattel) for and GI Joe, Action Man (The Hasbro Toy Company), and *Star Wars* characters (Kenner) for boys. Systematic measurements of these toys were made and subsequently scaled up to the height of an adult average human female, or male, respectively in a process called 'Allometric Scaling'. These new measurements were then compared with the upper and lower limits expected in normal and disordered populations of adults.

The findings for Barbie are somewhat grim. If she were human she would have a waist only 41 cm (16 inches) across making her figure unobtainable for the vast majority women in non-disordered and disordered populations alike. The estimates placed her figure as achievable by only 1 in 100,000 women. Perhaps the most sinister finding is that if Barbie were a real she would lack the 17 to 22 percent body fat women require to menstruate (Norton et al., 1996).

Anecdotally Barbie's moral influence over young girls has not always been a wholesome one.





**The 2010 Barbie's still illustrate the importance of body image in modern society**

In fact the 1963 "Barbie Baby-Sits" outfit came with a book entitled *How to Lose Weight* which included the sage advice: "Don't eat." (Sink-Eames, 1997). Interestingly, however, soon after the Norton et al. (1996) study Mattel announced they were increasing Barbie's hip size. This was allegedly to "better reflect contemporary society and role models...today's Barbie will be more natural looking." The 2000 onwards comparison to an average woman (pictured previously) still indicates a large discrepancy. Additionally, the most recent range of 2010 Barbie's, titled 'Back to Basics Barbie' (pictured above) indicates that, while Mattel may have the politically correct multicultural element down, they forgot to include a celebration the respective national dishes.

The boys toys did not fare much better. Firstly, a trend of progressive muscle mass was seen across the toy ranges measured over the last 30 years. For example, the muscle increase in the popular *Star Wars* characters Luke Skywalker and Han Solo (pictured) suggests the instillation of a home gym in the *Millennium Falcon*. Many of the figures measured displayed muscle mass in excess of 25kg/m<sup>2</sup> of muscle, which is considered a natural ceiling of muscular development without steroids (Leit, Pope and Gray, 1999). As Pope et al., (1999) point out, if one the most recent G.I. Joe models were human he would have muscles 'greater than any bodybuilder in history' (p-68). Interestingly the only male toy who seems to have missed the muscle-mass memo is Kenneth Carson, Barbie's under-the-thumb long-term boyfriend. Perhaps he was too busy feeding her 40 pets (seriously) or helping redecorate her new play mansion (it takes nine hours to put together – or 43 hours if we allometrically scale that to the average amount of time it takes to construct an Ikea flat pack). However, this anomaly is not considered

a particularly relevant exception to the muscle trend given Ken's dire levels of popularity amongst young boys (Pope et al., 1999).

Overall, we must be careful when interpreting causality to these findings. The implication of both papers taken to the extreme could have you worried that letting your child play with Lego will turn them into perpetually happy, dead eyed conformist. However, it should be said that both of the above studies took pains to only measure toys that were considered the standard representation of humanoid prototypes for both genders (Pope, et al., 2000). As such it raises an important question: are these toys actually affecting children's body image esteem? Unfortunately, there is preliminary evidence to suggest that girls, particularly young girls, do show increased levels of body dissatisfaction after exposure to a Barbie compared to controls (Dittmar, Halliwell, and Ive, 2006). To date no equivalent study has been conducted in boys.



**An increase in muscle mass can be visibly seen in the 1999 versions of two Star Wars characters used in Pope et al's (1999) study compared with the 1970's versions**

A large criticism of the media is that they forge unrealistic standards which the general population invariably follow. It is therefore an interesting parallel that 'dolls', a word derived from the Greek word *eiddon* meaning 'idol', may also promote unhealthy ideals (Norton et al., 1996). The real irony here that many of these toys do not need to be built like miniature Greek Gods in order to be interesting. For example, Luke Skywalker takes his powers from the force – a source of internal – not external strength. Just look at Yoda's diminutive proportions for proof! As for Barbie: the more outfits and accessories she possess the flatter the dimension of beauty she promotes will become. Altogether, it would therefore be undeniably refreshing to one day see a toy range simply titled 'Barbie: human'.

# What happens to our first memories?

Francina Clayton

Picturing it now, my family running as fast as we can as a black horse charges towards us. I grab onto a wall and throw myself over, just in time. This did happen, but with me playing a less dramatic role at just 7 months old asleep in a back carrier, it is unlikely that I can really remember this event. So why is it that every detail is as vivid as though it were yesterday? Also, why is it that even those with an impeccable memory struggle to remember most events from early childhood?



*Childhood amnesia* describes our inability to remember early autobiographical events. The degree of this amnesia ranges from people with highly accurate childhood recollections to those with large gaps of relatively recent experience.

## Early Memory Ability

Childhood amnesia does not refer to a complete lack of memory; in fact young infants have demonstrated effective memory skills. Rovee-Collier and Gerhardstein (1997) reported that infants as young as 3 months were able to remember the connection between kicking their leg in order to make a hanging mobile move. This connection could be remembered for up to 4 weeks when the infants were provided with a brief visual reminder 24 hours before testing.

## The Role of Brain and Language Development

One possible explanation for this childhood amnesia could be the immaturity of the hippocampus region in the frontal lobe which directs memory. The hippocampus is believed to begin maturing at 9 months. Liston and Kagan (2002) found that 13 month old infants were unable to recall an event that was shown to them at 9 months old; however 28 month olds were able to recall events shown to them at 17 months. The rapid increase of neural connections in the first two years of life leads to a further increase in the speed and efficiency of cognitive processes such as memory.

A further constraint on early childhood memory is the lack of language acquired in the first two years of life. Event knowledge is stored conceptually in memory and it is difficult to imagine a successful way of doing this without the use of language. Particular details of a memory may be associated with complex words not understood at an early age. Language also enables us to reminisce about previous events, arguably a form of rehearsal, allowing information to be stored successfully in long term memory.

## Imagination Inflation

Recent research into childhood amnesia has provided an explanation for my inaccurate childhood recollections. And no, its nothing to do with Freud or any repressed childhood event! Goff and Roediger (1998) showed that it is our imagination that

**What causes us to forget such striking moments from our childhood?**

**“Particular details of a memory may be associated with complex words not available at an early age”**



perceptual detail is added until we become increasingly likely to confuse imagination with reality. Building on this idea of "imagination inflation" Bernstein et al. (2002) suggested that increased familiarity (through replaying the story) could explain the creation of false, though perhaps more thrilling childhood recollections.

For further reading relating to early memory in children: 'Remembering the times of our lives' Patricia J Bauer.

## Creativity: Ideas into Numbers

Hannah Voss

Psychologists try to measure things scientifically. Like in physics, biology and chemistry, the more objectively something can be assessed, the more solid conclusions can be drawn about it. For the core sciences, trying to measure factors of interest on an objective scale rarely poses a problem however psychology differs in that it deals with the human mind and behaviour, which can be very qualitative and subjective.

Creativity is one example of a human trait that is not conducive to being restrained by numbers and figures. One of the reasons why it is so hard to measure is due to the fact that it is a very abstract concept; creativity cannot be 'seen', and is generally linked to arts such as writing, drawing and performing. Unlike traits such as mathematical ability and reaction time, creativity cannot be measured easily by undertaking an objective test, and over the years, many psychologists have tried to devise scales on which creativity can be measured.

The field of psychometrics has devised several tests of creativity, for example giving participants a synopsis of a book and asking them to come up with an original title for it (Guilford et al, 1967). Another test involves asking participants to think of unusual uses for everyday objects. These tests however,

expose a real problem with trying to measure something like creativity. Because responses are not standardised (participants could give an infinite number of answers), the creativity of each individual response depends on how the experimenter perceives it. We need only to look at the great disparity in critic's opinions of works of modern art to know that each individual rates creativity very differently.

This is the main criticism of psychometric testing; if everyone perceives creativity in different ways, how can it ever be measured in a valid way? And how can an objective scale ever be created?

However, Treffinger (2009) has argued that whilst it can never be called easy, trying to measure creativity is a worthwhile task. He argues that the most important information that can be gained from trying to measure creativity is to discover individual's potential for being creative, and as such try to design 'effective and appropriate programming' to maximise this potential.

It seems that whilst psychologists may never be able to create a 'perfect' test to measure creativity, they may be able to draw some useful information from studying it.

If previous research can be used to discover how creativity can be cultivated in the population, this can be considered just as useful.

**"Treffinger (2009) has argued that whilst it can never be called easy. Trying to measure creativity is a worthwhile task."**



**Individual perceptions of art is just one illustration of the subjectivity of creativity**

# Third Year Choices

Ivan Alvarez and Adele Goman

***This is the second instalment in our series on third year choices. In this instalment Ivan and Adele explain the structure of the advanced modules and interview Richard Dearden on what it's like studying the clinical modules.***

## Advanced modules

### *What are they?*

The last choice you need to make is which advance modules you are going to take, each worth 7% of your final mark. You will complete 4 modules, two during the autumn term and two during the spring term.

### *How do I choose?*

At the end of your second year you will hand in a form with your four preferred module choices for each term. Ideally, you should get the first two you selected but if you include a very popular module you might find yourself assigned to your third or fourth choices.

### *What are they?*

Advance modules usually entail 6 or 7 seminars through the term which, depending on the module, will include a short lecture by the seminar organizer and student presentations. With the exception of the clinical modules, both modules are assessed in one 3 hour exam, where you will have to answer 2 essay type questions for each module.

### *What is available?*

This will vary from year to year but a good guidance is looking at the departmental website. You can look at individual seminars and explore what topics are covered in each module.

### *What should I choose?*

As always, this would depend on your interests and your career direction. It is often recommended to select modules that compliment each other if they are more beneficial to you but if a more eclectic mix suits your tastes better, then go for it. Modules that will inform and help you with your project topic are often a good idea and if you are wanting to pursue a career in clinical psychology, the clinical modules are a great opportunity.

## Clinical Advanced Modules

PsychOut asked third year Richard Dearden for his views on the clinical modules

### *What is the structure of the clinical modules like?*

The overall structure of how seminars operate is similar to tutorials, however more emphasis is placed on active involvement and group discussion. I have enjoyed the role-play exercises where we practice our Socratic dialogue skills and create psychological formulations.

### *What is the workload like compared to other modules?*

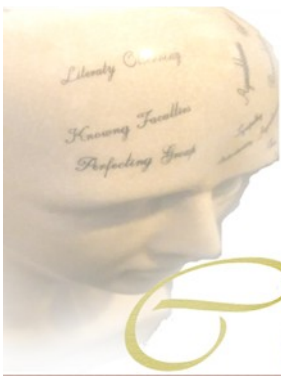
The clinical module has an extra component compared to other modules, which is a mini-literature survey being summarised as an oral presentation constituting half the module mark.

### *Are you enjoying the clinical modules?*

Generally I am enjoying the modules but I believe one thing is of particular issue to everyone. There are only four definite places out of twelve on the York/Hull link for the Doctorate Clinical Psychology programme, which leads, in my opinion, to a very competitive atmosphere. This has actually motivated me to work harder but at times proves stressful.

### *What advice would you give to current second years considering applying for the clinical modules?*

Above all, write a decent personal statement; make yourself stand out from the crowd. Have some (it doesn't need to be loads, trust me) work experience. Do not simply list the amount of experience you have, but say what skills, knowledge etc you have gained, what you enjoyed and how this relates to you wanting to do the modules. Also, read through the module content, and relate to them both personally and in terms of the experience you have.



# Classic Psychology



**Welcome to our Classical Psychology section; in this section early theorists and practices within Psychology will be discussed because we don't want to forget where it all began!!**

## The Curious Case of Phineas Gage

Jo Hartley



**Gage pictured with the iron rod that caused a complete frontal lobotomy of his cortex**

neurologically, this is not the full story. Personality, as defined as the 'complex of all the attributes- behavioural, temperamental, emotional and mental that characterizes a unique individual' is at part under the control of the frontal lobes. Believed to affect our judgements, impulse control and social and sexual behaviours (Kolb and

When asked to describe a 'personality', the usual response would be to list the many characteristics, traits and behaviours that make an individual unique. Likewise, when asked to describe how this personality develops, we look to the detailed past of the individual and turn to their upbringing and experiences that we believe makes the person who they are.

However,

**"The first link between personality and the frontal cortex was demonstrated through the case of Phineas Gage"**

Wilshaw, 1990), the frontal lobes play an important part in determining and controlling our personality. Furthermore, damage resulting from such areas can have a large impact on the way an individual behaves, with the frontal lobes being the most affected area as a result of brain injury, thus explaining the huge change we witness as a result of such damage.

The first link found between personality and frontal cortex was demonstrated with the infamous case of Phineas Gage.

Gage worked as a railroad construction worker and was widely considered by his employers as the best employee they had. However, an accident on September 13<sup>th</sup>, 1848 was to change this. Whilst carrying out his duties of compacting holes in the rail line Gage failed to add sand to the explosive mixture, a mistake that caused the combination to detonate and sent an iron rod into the air and promptly through his skull. The iron rod, measuring 3ft and 7in and weighing 13 ½ pounds entered Gage's left cheek and left his brain through the top of his head, completely destroying his left frontal lobe. Remarkably, just minutes after the accident, Gage was able to speak and walk as normal, with seemingly little effect to his conscious





An image depicting where the rod entered the skull, leading to the destruction of his personality

state or well-being. Furthermore, despite later haemorrhaging, Gage survived the accident, continuing to lead a healthy life up until 1860.

However, despite any major physical long term effects, major changes were noted in Gage's personality and behaviour. Once considered a star employee, Gage became 'impatient, irreverent and easily an-

gered' (Damasio, 1991). He showed problems with planning, abnormal emotions and even demonstrated childish behaviour; to the point that his friends and relatives said he was 'no longer Gage'.

Post mortem studies of the brain carried out by Dr Harlow revealed the rod to have caused a complete frontal lobotomy on Gage which led to major changes in his personality.

More recent findings in which neuroimaging and original brain measurements were used to reconstruct the accident revealed that the damage extended along both the left and right parietal cortices, consequently affecting his decision making and processing of emotion (Damasio, 1994). Such effects were further evident in two patients with similar brain damage by Anderson in 1999. Anderson described how these patients grew up into adults who were 'inconsiderate to the point of being dangerous psychopaths', thus demonstrating major personality changes as a result of prefrontal injury.

The case of Gage was the first to highlight the effect of the brain and in particular the prefrontal cortex on the personality and behavioural traits of an individual. Such findings were thus highly influential in the neuroscience field, leading experts to discount previously held beliefs. One of the most famous of these was the belief of humourism, supported by Galen. Galen believed that personality was affected by the balance of four hu-

mours in the body; the blood, black bile, yellow bile and phlegm. A greater amount of one of these in the body led to a particular behavioural trait becoming dominant, for example an increase in blood led to cheerful personalities, black bile to depressive traits, yellow bile to anger and phlegm led to a cold and apathetic individual.

Such beliefs as this were widely held in the psychological world, with no indication of any neurological effects on personality. However, the case of Phineas Gage overturned this view, leading to the discovery that the cortex, and in particular the frontal lobes, play a prominent role in our personality and the way we behave.



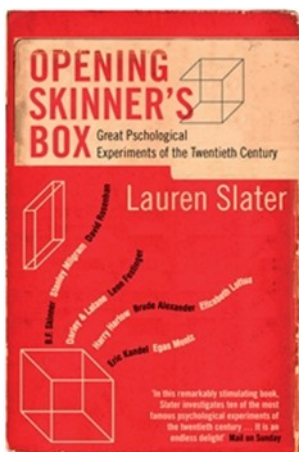
An artistic impression of the four humours and their respective personality traits  
 Phlegmaticus (top left)  
 Cholericus (top right)  
 Sanguineus (bottom left)  
 Melancholicus (bottom right)



**Pop Psychology refers to the culturally relevant aspects of psychology which serve to promote a healthier lifestyle and give people scientific insight into aspects of their everyday life.**

## The Lost Narratives: The stories behind the worlds greatest psychological experiments

Hannah Belcher



**Based on the book "Opening Skinner's Box" by Lauren Slater.**

**Opening Skinner's Box  
By Lauren Slater**

What happened to Milgram's emotionally harmed participants? Did B.F. Skinner really lock his daughter in a box? If such experiments were repeated today would they yield the same results? What are often missing from scientific journals are the stories behind the studies. All the life and passion that fuelled them reduced to a set of stats. Lauren Slater, author of "Opening Skinner's Box", endeavours to go back in time and recapture the lost narratives of ten of the world's greatest psychological experiments. Exploring the myths that have for so long plagued the psychologists in question. In doing so Slater has created another branch of psychology, the psychology of psychology. It is clear that these experiments would not have existed if it were not for the remarkable men and women driving them, and so

their lives and experiences become as important as the studies themselves. This article has taken just three of the studies involved, providing just snippets of Slater's fascinating discoveries.

### **Stanley Milgram – Obedience to Authority**

Stanley Milgram was just 21 when he began his controversial study into obedience. Prior to this he had not taken any psychology course and described himself as a lyricist at heart, often writing children's stories and reading poetry. He had grown up in post war America, where reports of the German SS officers horrific treatment of the Jews was flooding the airways. Many psychologists of the time believed that the officers must have been disposed to cruelty before serving in the SS, Milgram instead, emphasised the power a certain situation can have. His wife described how he often run his own experiments just for fun, barging into a queue then observing the reactions, pointing at the sky then watching who looked up.

Milgram had a sense of humour and also a lot of passion for what he did. Every detail of his most famous obedience experiment was



**Stanley Milgram conducting one of his experiments on the subway**

Meticulously planned out.

Every psychology student across the world will know the details of this experiment, the white lab coat worn by the experimenter, the 65% of participants who obeyed to the highest voltage, the nervous

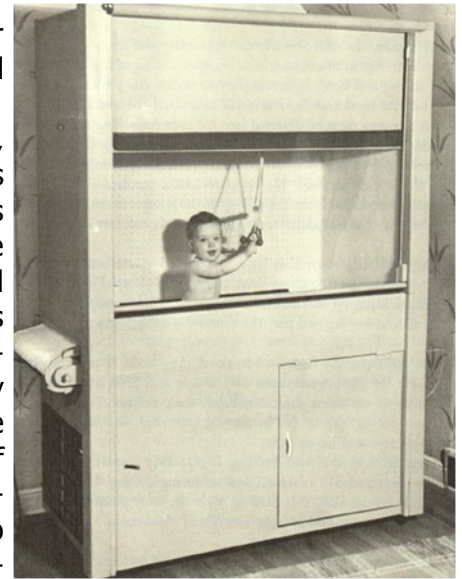
laughter emitted from the unwilling participants. Follow up investigations comparing the 65% who obeyed and the 35% of defied found no obvious personality trait or life experiences responsible. Generally Catholics seemed more obedient than Jews, and the longer spent in the military the more obedient subjects seemed to be, also obedient subjects seemed to be less close to their fathers in childhood and had received little punishment.

Lauren Slater decided to investigate this by hunting down some of the participants herself. One who was described as being a defiant explained how he had stopped at 150V due to worry about his own heart, an unlikely defiant, he had been in the military for years and was currently working in a corporate firm. Another ex-participant who fully obeyed describes how his hands 'still hurt with what he did', he arrived at the experiment depressed, ready to give up on the world and just didn't care. Despite this negative experience he was glad he took part, in fact Milgram received hundreds of similar letters from participants thanking him. The experiment however, sparked a great ethical debate and Milgram was turned down from every university he applied to thereafter. He eventually died at a very early age after suffering five heart attacks; his wife describes how he was always certain he wouldn't live to a very old age, so always lived life in the fast lane, achieving everything he set his mind to.

**"Skinner hoped by putting his daughter into the 'baby box' it would positively reinforce her, making her more confident. His daughter is now an artist who taught her cat to play the piano..."**

## **B.F. Skinner - Behaviourism**

B.F. Skinner was another passionate and philosophical soul at heart, although reports of his studies and the science he created would have us believe otherwise. He firmly believed in the importance of rewards and reinforcements to shape behaviour, there was no such thing as free will, and he had visions of a



**Skinner's daughter Deborah in his controversial 'Baby Box'**

worldwide community where the government would consist of behavioural psychologists who could condition their citizens.

Skinner's work was greatly influenced by people like Pavlov and Thorndike, who had discovered the basics of classic conditioning using animals. Rumours began circulating about the infamous B.F. Skinner and before long he was being accused of keeping his daughter shut in a box for the first two years of her life so he could train her. Nothing could have been further from the truth. Upon investigating the 'baby box' Slater finds it has been dismantled but uncovers an article from 1945 in 'Ladies Home Journal'. So was it a cruel holding device where he could train his latest project? No, it was a glorified playpen with temperature control and padded walls to protect his child. He had hoped that by putting her in it for a few hours a day it would positively reinforce her, making her more confident about her environment. His daughter is an artist who taught her cat to

investigating the 'baby box' Slater finds it has been dismantled but uncovers an article from 1945 in 'Ladies Home Journal'. So was it a cruel holding device where he could train his latest project? No, it was a glorified playpen with temperature control and padded walls to protect his child. He had hoped that by putting her in it for a few hours a day it would positively reinforce her, making her more confident about her environment. His daughter is an artist who taught her cat to



play the piano.

She describes her father as a loving family man who created happiness out of his theory and didn't believe in punishment; he was in fact responsible for the abolishment of corporal punishment in California. His desk which he had been sat at hours before his death is perfectly preserved, a notebook lies open reading his last written words; "Pigeons playing ping pong" and "Am I a humanist?".

### David Rosenhan – On Being Sane in Insane Places



David Rosenhan

In the 1970s David Rosenhan went one step further than just testing his participants, he became one. Alongside eight of his friends he endeavoured to test how well psychiatrists could distinguish the 'sane' from the 'insane', fuelling a debate that is still relevant today. He and his participants attempted to get admitted to different types of hospital all claiming to keep hearing a voice saying "thud".

Rosenhan clearly had a sense of humour to pick such a cartoon voice, yet all the participants were believed and diagnosed with serious psychiatric disorders. Very little was reported about what precisely went on behind the doors of the mental hospitals, Rosenhan later reported how he saw patients being abused. Many psychiatrists now claim that with all the new diagnostics in place Rosenhan's study would not be successful. Lauren Slater decided to try. She purposefully did not wash or shave for five days then visited her local mental institution claiming to hear the voice 'thud'. On her first visit she was not admitted but was prescribed an anti-psychotic and anti-depressant, she tried this 8 more times all with similar results, always being denied admission but gaining the drugs. Rosenhan himself ended up with a mysterious illness after the tragic death of his wife and daughter,

**"Rosenhan clearly had a sense of humour to pick such a cartoon voice, yet all of the participants were believed and diagnosed with serious psychiatric disorders"**

ter, which left him paralysed.

### About the author

The author, Lauren Slater, holds a doctorate in Psychology and has herself been the victim of serious mental illness during her adolescence. Her book

'Opening Skinner's Box' has been described as "one of the first major books to bridge the gap between academic and popular psychology." Her writing style has, however, received much criticism.

She is like many of the great psychologists she describes, an author and creator

at heart. As such her work has been criticised for at times bending the truth to fit her narrative. This book certainly shouldn't be used as a textbook but it does provide a very entertaining read. For all those drowning in stats, at the end of their tether with psychology as a science, add this to your key reading list!



Psychologist and author  
Lauren Slater



***Welcome to the Psych Soc section, here you will find everything that is going on within the best society at York! From academic talks to the latest in a long line of nights out!!***

## **PsychSoc Committee Elections!!**

Coming up next week (week 3) are the nominations for PsychSoc elections!! With the new committee being announced at the end of Week 4. If you are interested in running for any of the listed positions please email **psychsoc@yusu.org** with your full name, year, the post you wish to apply for and a brief outline of what you would like to achieve. No previous experience in any of the roles is necessary

As a current member of the society I can honestly say it is one of the best things I have done so far. Not only does it tick the 'looks good on your CV box' but it also allows you to become more involved in the department and with members of staff (all good experience for identifying potential supervisors in the third year!).

**Chair:** Face of the society– promoting any events in lectures and to members of the department/ communicating with members of the society through email

**Secretary:** Organizational role. Organizing committee meetings, including booking the rooms.

**Treasurer:** Monetary issues– withdrawing and handing in money from events and Freshers week.

**Welfare (x2):** Developing the mentor system/ merchandise

**Social Secs (x2):** Organizing beginning of term and end of term socials/ organizing larger socials to Leeds or Newcastle etc

**Academic Officer:** Organizing varied academic events and talks within the department

**Press and Publicity:** Creating publicity for the society in the form of posters/ managing the Facebook and website

**Ordinary Member (x2):** Giving extra help during Freshers Week or on events.

**Editor:** Editing and managing the publishing of PsychOut.

# Meet the Staff

***Welcome to the Staff Section where members of the Psychology Department are able to write about their previous, current and upcoming research projects within the department***

## Centre for Usable Home Technology

Andrew Monk



I am director of the Centre for Usable Home Technology (CUHTec). This is a collaboration between researchers in Psychology, Computer Science and Electronics that aims to understand what people want from the technology in their homes. Our starting point is that too many products and services arise from technology looking for a need. We prefer to start

with the needs, understand them thoroughly and then use this understanding to find technologies that can help.

We have done quite a lot of work on leisure activities. What people do when they are talking over photos and how the way that the photos are displayed effects that conversation. This has led to some basic psychology to find ways of measuring social enjoyment and engagement. Another topic is being pursued by my Ph D student Hye-sook Kim is how to connect families where one person is living abroad. This has involved understanding the needs of families when communicating emotions such as love and reassurance.

CUHTec is best known for our work on caring technologies. We have been working closely with the users and suppliers of telecare services. These services use sensors to get help if someone, typically and older person, falls or has some other kind of emergency. Two million people in the UK have these systems. Most of them would not be able to carry on living in their own homes without them. We have been studying these people to find what they think about issues such as privacy and dignity in order to inform the design the next generation of telecare services. It is hard to get anyone to talk meaningfully about what they do in their homes, particularly frail older people so this work has involved developing new techniques for working with older people.

It is also hard to communicate research results to the designers and service providers we think should use them. To this end we have a smart home on the university campus that we call the Responsive Home. This was featured on The One Show (BBC1) on December 18. It contains a number of concept designs suggested by our research and we use it as a kind of exhibition space to communicate those ideas. We also use it as a laboratory when we need a "homely" space. For example, the work on photo sharing referred to above involved filming people in the Responsive



Home.

I will finish this article with brief description of a project I am working on at the moment. This project is concerned with the opportunities provided by technology for supporting people with dementia who are living at home. Such people will generally have mild to moderate dementia and many will be living with a spouse or relative. The majority wish to remain living independently for as long as feasibly possible; improving quality of life and reducing the demands on institutional care.

The number of people with dementia is predicted to double in the next 40 years, rising to 1.7 million by 2050. We need to explore different methods of health and social care provision to meet this demand and facilitate independent living. Assistive technologies provide a possible solution. However, older people, especially those with dementia, are rarely involved in the development of assistive technologies. This often results in unrealistic proposals that do not fulfil the most important needs of patients and their informal carers.

One significant barrier to independent living that these people face is difficulty in planning and carrying out multi-step domestic tasks. Previous research has proposed a limited number of technological interventions to assist with tasks, such as, washing your hands or preparing a cup of tea.

A Ph D student Jo Wherton conducted interview studies to understand in detail the problems people with dementia have with kitchen tasks and the social and environmental context of these problems. This understanding allows us to select the most important tasks to support and to provide the contextual constraints on design.

Drawing on Jo's work we have developed a way of describing a kitchen task and the cognitive work needed to carry it out. This uses a technique called syndetic modelling to explain the difficulties these people have with selected multi-step kitchen tasks. The models will be used to predict the effi-

cacy of different prompting methods at different points in the task. For example, instructions given at times of high working memory load will be disruptive where as "ambient" cues, such as lights or sound effects that simply draw attention to the next action, will not.

Our colleagues at Newcastle University are using ad hoc wireless sensor networks to infer salient aspects of the environment as well as the actions and intentions of people in a kitchen. The equipment will use a varied array of active and passive sensors (e.g. RFID and mote-interfaced accelerometers). The syndetic models will be used in both the integration of this sensor data and the generation of situated multimodal and crossmodal cues and prompts. The result will be a flexible sensing and prompting framework that can be deployed in an existing kitchen.

**“The number of people with dementia is predicted to double in the next 40 years. We need to explore different methods of health and social care to meet this demand”**

The next step is to use iterative participative design methods that allow people with dementia and their carers to help us to refine these prototypes by using them in the lab and in their own homes. The result will be flexible

technologies to prompt people through simple tasks in a natural way. The project will also provide person-centred outcomes for assessing the effectiveness of future work in this area.

If you are interested in this kind of applied psychology there are a number of funded Ph D places advertised nationally each year. The best place to find them is using the jiscmail announcement list accessible at <http://www.jiscmail.ac.uk/lists/bcs-hci.html>

You can find out more about CUHTec, and see pictures of the Responsive home at <http://www.cuhtec.org.uk/>

# Semantic Memory

Beth Jeffries



My research group is investigating the organisation of semantic memory in the mind and brain. Semantic memory encompasses the meaning of words, objects, people, sounds and actions. As such, it plays a vital role in almost everything we do, including speaking and understanding lan-

guage, interacting appropriately with people, using tools and interpreting ongoing and past events. We use two main methods to examine this central aspect of our mental lives. We study patients who have disorders of semantic memory following dementia or stroke, and we also use a technique called transcranial magnetic stimulation (TMS) to briefly disrupt semantic processing in healthy volunteers, allowing us to simulate some of the effects of brain damage, albeit in a transient and subtle form.

Given the central place of semantic memory in our mental lives, it is unsurprising that semantic impairment has a devastating impact on social interaction, employment and activities of daily living. Sadly, disorders of semantic cognition are also a common consequence of dementia and stroke. Our research compares the nature of the semantic impairment in different groups of patients, who have damage in different brain areas, to draw inferences about how semantic processing is organised in the brain.

One group of patients that have revolutionised our understanding of the neural basis of se-

manic memory are those with semantic dementia. Patients with semantic dementia have progressive loss of semantic information, yet other aspects of cognition are essentially intact: they have good memory for recent events (they can answer questions like “what did you do at the weekend?”),

they are not confused and they have good non-verbal reasoning skills, unlike patients with Alzheimer’s disease. Semantic dementia patients have difficulty understanding all stimuli – pictures, words, sounds and objects. They also have atrophy in a very specific part of the brain – the temporal pole in both the left and right hemispheres. This suggests that this brain region forms a central store of semantic representations.

People who have semantic memory problems following stroke have damage in completely different brain regions – left frontal or temporoparietal cortex – yet they can fail the same range of verbal and non-verbal semantic tasks. A lot of our recent work has been trying to address this puzzle. We have found that the nature of the semantic disorder in stroke aphasia is different from semantic

**“Given the central place of semantic memory in our mental lives, it is unsurprising that semantic impairment has a devastating impact on social interaction”**

dementia: the stroke patients retain a considerable amount of knowledge but have difficulty applying this information in a controlled, flexible way to suit the task in hand. For example, they may retrieve detailed information about a particular concept in one task but not another and they show much better performance when the cognitive control demands of semantic tasks are minimised (for example, by using fewer response options, or by providing cues that help to direct semantic activation in an appropriate way for the task). Current work by my PhD students, Azizah Almaghyuli and Hannah Gardener, is examining the nature of the semantic control deficits in stroke aphasic patients

dementia: the stroke patients retain a considerable amount of knowledge but have difficulty applying this information in a controlled, flexible way to suit the task in hand. For example, they may retrieve detailed information about a particular concept in one task but not another and they show much better performance when the cognitive control demands of semantic tasks are minimised (for example, by using fewer response options, or by providing cues that help to direct semantic activation in an appropriate way for the task). Current work by my PhD students, Azizah Almaghyuli and Hannah Gardener, is examining the nature of the semantic control deficits in stroke aphasic patients

in more detail. We hope to better understand the contribution of frontal and temporoparietal regions to semantic control and explore the implications for the rehabilitation of brain-injured patients.

Another strand of my research, in collaboration with Carin Whitney (postdoc) and Katya Krieger-Redwood (PhD student), uses transcranial magnetic stimulation (TMS) at the York Neuroimaging Centre to interfere briefly with the function of specific parts of the brain in healthy participants. A coil is placed on the scalp, which generates a magnetic field in the underlying brain: this causes the nerve cells to fire. When this is done repeatedly for ten minutes, tasks supported by that brain region are temporarily disrupted – for example, if semantic regions are stimulated, people are slower to make semantic but not phonological decisions.

## Participants, hypotheses & Dreams

Annelies Vredeveltd

When I was an undergraduate student, I could not really imagine what it would be like to do a PhD. Research, yes, but how can you do research all day long? After doing a PhD for over a year, I have a slightly better idea of what we do, and I'd like to share this knowledge with all of you out there who are considering applying for a PhD or are simply curious to know what their tutors do all day.

My research is about eyewitness memory, and how we can help witnesses to remember more. In practice, I investigate this question by showing my participants a video of crime and asking them to recall what happened with different interview instructions. Although conducting these 'eyewitness' interviews was rather exciting at the beginning of my PhD, by now I have asked the same questions for over a hundred times, so it does get a bit tedious after a while. Nevertheless, once I have collected all my data and put it all into SPSS, it is all worth it when I get my very own results... I think the most exciting moments of my PhD are probably at the end of each experiment, when I click the button to run my main analysis for the first time, definitely makes my stomach flip every time!

Doing the research itself is not the only thing

We have been stimulating brain regions that are damaged in dementia and stroke patients with comprehension problems. As the patients we study typically have large lesions, we use TMS as a complementary method to allow us to draw more precise conclusions about the neural substrates that underpin semantic representation and control. With colleagues at the University of Manchester, we have shown that both left and right temporal poles play a vital role in representing the meaning of both words and pictures, particularly at a specific level (for example, the meaning of "Dalmatian" as opposed to dog), confirming our conclusions from patients with semantic dementia. In future studies, we hope to use TMS to study the way in which semantic cognition emerges from the interactions between different brain regions.

PhD students do though; at least as important is presenting your findings in various ways. A large part of my time is allocated to writing: chapters for my thesis, abstracts and summaries for conferences, and statements for funding applications.

Probably the best thing about doing a PhD is that you get to present your findings to others in your field, which can be at various exotic locations throughout the world. Last summer I went to Sorrento in Italy to give a talk on my work, and besides the great professional networking opportunities, I also took advantage of the chance to travel to several places in Italy. Next March, I'm giving another presentation at an important conference in Vancouver, and making use of the trip to visit several places in Canada and North America. I have also arranged to go on a





three-month research visit to New York next autumn, so clearly my PhD allows me to do what I love most: travelling and meeting new people.

Next to data collection, statistical analyses, writing, and conferences, I spend a significant amount of my time on teaching. I really enjoy running tutorials, from guiding freshers through the APA rules to getting second-years interested in false memories. I am enrolled in the Preparing Future Academics programme, which is designed to help me develop my teaching methods further. And with teaching comes the responsibility of marking essays too – one of my less favourite

teaching tasks I must admit, although it can be inspiring to read the select few excellent undergraduate essays from time to time.

Finally, the question on the mind of worried PhD-aspirers: do PhD-students still have a life? Although I do spend a rather excessive amount of time in the office, fortunately I still manage to find the time to play volleyball three times a week, sing in the university choir, take a Spanish course, and even occasionally go to Ziggy's or the Willow – I am still a student after all.

**“When I click the button to run my main analysis for the first time, it definitely makes my stomach flip every time!”**

If you are a postgraduate student and would like to get involved with PsychOut then please email us at:

**psychout@yusu.org** for more information!

**Editors Note:** This is a reminder that any of the references for any of the articles are available online at:

<http://www.york.ac.uk/depts/psych/psychsoc>



***Would you like to know more about our staff in Psychology Department than their e-mail address and psychology field? If yes, then become a regular reader of our interview section! In each issue, we will interview a guest who will tell us about their attitude towards psychology, current research and provide students with success tips.***

For our anniversary issue, Adele Goman speaks to Peter Thompson about choosing psychology, working with NASA and the price of fame...

#### **For me psychology is...**

I think for me I just want to know how the brain works, that's it. I think all those complicated bits of psychology which most people are interested in such as emotion and feelings are way too difficult to understand. I reckon that how information gets into the system is just about understandable.



#### **Why and when did you choose psychology as your field of expertise?**

I did a degree at the University of Reading and in my first year I had to do three subjects — psychology, maths and physics. At the end of the year I had to decide which subject to continue with and when you've done maths and physics it's not too difficult to choose psychology, simply because it's far more interesting!

I had lectures on visual perception on Saturday mornings, which astonishingly I attended. They turned out to be inspirational. I thought it was brilliant that we could ask questions about how we see the world and actually answer them. So that was all I really wanted to do, I hated much of the rest of psychology!

#### **How did you develop your career in psychology?**

I wasn't really sure what I wanted to do after I finished my degree but I thought a PhD would be nice. My housemates at the time were applying to do PGCEs so I applied and did a PGCE. However I then decided that I didn't want to teach in schools for the rest of my life as I'm not good with children...just ask my son! So I did a PhD at Cambridge, which at the time was the place to be for working on visual research. After the PhD I won a fellowship, which enabled me to go to the University of Pennsylvania for two years. After this I thought I should get a job and there was an advert for a lectureship in York so I applied for it.

**Do you notice anything odd about these photos?**



Peter Venables (the head of department at the time) phoned me up in America and asked me to come to an interview. However I was really busy at the time and I thought that to go there would be a bit inconvenient so I said I wouldn't go. However when I told my wife that York had offered me an interview which I had said no to, she said "Well you better go and phone them up and tell them the answer is yes!" So I did!

...how about now?



### **Tell us a bit about your research area.**

I'm interested in the perception of motion and have been investigating this since I was at Cambridge. But I have picked up other things along the way; for example, I had the fortune of stumbling upon the Margaret Thatcher Illusion (above).

### **You say 'stumble' as if it were an accident.**

Well it was a complete accident! I was cutting up her face (as one does), as I wanted to show that when you look at things from far away you don't see the fine detail. So I thought that if I transformed someone's face so that the fine details would make it look horrible, like turning the eyes or mouth upside down, then when you looked at it from a short distance you would see all those fine details and it would look hideous, while if you looked at it from far away it would look normal.

So I had cut up the picture and put it side by side with a normal version and when I looked at the pictures the right way up one did look hideous and one looked normal. I went out of the room to get some sellotape and when I came back I approached the pictures on the floor from the direction where they were upside down, and they looked remarkably similar. I thought that was really interesting. So I taped them up and showed them to some people in the department the next morning and then sent the paper off to Perception!

### **What advice would you give students hoping to achieve their goals?**

Go for it! There are two things you need: patience and a real belief that you can actually achieve anything. The best thing you can do is lower your aspirations, so long as you set yourself obtainable goals, that is the key to being happy. I think happiness comes from contentment and knowing that what you are doing, you are doing to the best of your ability. However, if you're not good at it, do something else!

### **What has been the most memorable or rewarding moment in your career?**

I spent the best part of a year working for NASA, which was fantastic but the most rewarding moments come when students say how much they enjoyed, and appreciated, my teaching.

### **You appeared on 'QI' this year and 'Its only a theory' last year, how has this increase in 'fame' impacted you and your work?**

It hasn't changed me at all; I still talk to people in the department. Other people find it more impressive than I do, I mean it was terrific fun, but it is just that, fun and a laugh. But professionally it has not done me any good at all, it's just fun, it's not real and not important, it's only television.

### **This week's issue is all about firsts and anniversaries. According to your personal webpage it has been 35 years since your first publication. What do you expect research into visual perception will reveal in the next 35 years?**

That's actually a long time in science and things change fairly rapidly. The change in the last 35 years has been largely driven by new technologies. In the next 35 years maybe brain imaging will produce something interesting, but I don't know what that would be.