Tips for conducting a systematic review as part of a PhD

Are people smart lie detectors?
A new theory of belief formation

How social interactive skills develop in autism spectrum disorder and Williams syndrome

Psychopathy: An overview

Also in this issue:
Psychology people in profile: Professor Neil Rackham
Conference and workshop reviews
Are you a Society member looking to read The Psychologist on tablet, smartphone or e-reader?
Visit [www.thepsychologist.org.uk](http://www.thepsychologist.org.uk)
or scan

and log in to access your options
HELLO to all our readers and welcome to the 94th issue of the PsyPAG Quarterly. This issue is packed full of fantastic discussion and research-based articles, interviews, hints, tips and conference reviews which we are confident make for an excellent read.

Firstly, we would like to take this opportunity to introduce our new member to the Editorial Team: Charlotte Pennington from Edge Hill University. Welcome aboard Charlotte, it’s a pleasure to be working with you.

We open with a series of diverse discussion and research pieces. There really is something for everyone here. We have a number of articles discussing issues relevant to autism spectrum disorder (ASD). Silvia Doneva discusses the social skills of those with ASD and Williams Syndrome. Following on nicely, Jill McKnight discusses the experiences of parents who have a child with ASD.

Next, Patricia Lockwood discusses the development and measurement of psychopathy, and Chris Street provides insight into the detection of lies. Jasmine Hearn then reflects on her work with spinal cord injury patients. Finally, Saima Eman discusses the role of eyes in disruptive communication patterns.

We then move on to a number of articles which provide helpful information for postgraduates. Kate Doran presents a special ‘Psychology People in Profile’ article with Professor Neil Rackham, who discusses his very successful career after completing his postgraduate degree. Gillian Hendry provides a reflection of her experience of completing a PhD study visit. Charlotte Pennington then discusses the use of critical reflection as a means of improving teaching practices. Mei Yee Tang provides us with tips for conducting a systematic review, and Hazel Anderson discusses tips for conducting hypnosis research. Charlie Lea’s ‘Some positive psychological interpretations of the PhD experience’ discusses positive psychology in relation to completing a PhD. Annie Brookman discusses the debate surrounding open access publications, which is currently relevant to not only postgraduates, but all academics.

We also have a variety of conference and workshop reviews. Kelly Hubble provides an interesting piece regarding the benefits of attending a small conference. Finally, Jillian Adie reflects on her experience of running a workshop, while Robert Buck discusses his experience of being a participant at this.

A big thanks to all our contributors whose diverse research interests keep each Quarterly issue varied and exciting. If you have any comments on this issue or ideas for future articles, feel free to get in touch with us via email and Twitter. Happy reading everyone!

Claire Wilson
On behalf of the PsyPAG Quarterly Editorial Team
Welcome to the spring 2015 edition of the PsyPAG Quarterly. I hope you have all had a happy and productive start to the year. This year marks a very special year for PsyPAG, as our 30th Annual Conference is due to take place in July.

We are currently working very hard in organising what is guaranteed to be a very special conference, which will be held at the University of Glasgow from Wednesday 22 July to Friday 24 July 2015. I am delighted to announce that we have the following three keynote speakers confirmed: Professor Richard Wiseman (University of Hertfordshire), Dr Rachael Jack (University of Glasgow) and Professor Padraic Monaghan (Lancaster University). We also have a number of very special social events planned, including a conference dinner, which will be held in Glasgow University Union, with a traditional Scottish Ceilidh and a Civic Reception, which is being hosted for PsyPAG by Glasgow City Council. This will be held in the iconic City Chambers Building, located in George Square.

Special guests who will be in attendance include incoming British Psychological President Jamie Hacker Hughes, incoming Research Board Chair Professor Daryl O’Connor, Dr Jon Sutton and Dr Christian Jarrett from The Psychologist, to name a few. We are also inviting our alumni to celebrate this special anniversary with us this year. They have been invited to attend our civic reception and some are also running workshops at the conference.

Online conference registration is now open at our low cost postgraduate rates, with full conference rates and day rates being available. We also have early-bird registration rates, which will close on the 31 March, with full registration closing on 26 June. Abstract submissions for oral and poster presentations are also now open and close on Friday 12 June and we expect to receive a high volume of great submissions this year, from postgraduates working and researching in many areas of psychology. Make sure to get these dates in your diary!

We have conference bursaries available to help you attend our conference, and this year to mark this special anniversary we are offering thirty UK conference bursaries (for up to £100), as opposed to the ten we usually offer. All psychology postgraduates registered at a UK institution are eligible to apply for our bursary funds and the closing date for applications for this bursary is Friday 29th May 2015. We are also offering three international bursaries (for up to £300) for postgraduate psychology students from outside of the UK. The closing date for applications for these bursaries is Thursday 30 April 2015. To find out more about these bursaries and how to apply, please visit http://psypag.psy.gla.ac.uk/bursaries.

Our conference organising committee have set up a website where you can find out lots more about what we have planned (psypag.psy.gla.ac.uk). Also, to stay up-to-date with any conference developments, please follow our dedicated conference Twitter feed (@PsyPAG 2015) and like and follow us on Facebook (facebook.com/ PsyPAGAnnualConference).

This year we will be once again hosting a stand at the British Psychological Society’s Annual Conference, 5–7 May at the ACC Liverpool. Please come to say hello and to find out more about how PsyPAG can support you in your studies. In addition to our conference bursaries, we offer a range of popular bursaries to help support professional development, including attendance at conferences (both international and
domestic), workshop/training events, and study visits. We also offer standalone travel bursaries which can help towards travel costs to these events highlighted. I am also very pleased to announce that we recently launched a new research grant bursary, up to the amount of £300. This fund can be used to assist you in conducting research as part of your postgraduate studies. For example, this fund may help with paying participants in exchange for taking part in your research or helping with your travel costs when collecting data away from your university. You will find more information about each of these on our website at www.psypag.co.uk/bursaries-2.

PsyPAG also offer the following three awards: Master’s Award, Rising Researcher Award and DART-P/PsyPAG Teaching Award. Applications for these awards are now open, with the deadline for submission being 13 March 2015. Please see our website for further information: www.psypag.co.uk/awards.

We have also just produced our latest PsyPAG Newsletter, which has been distributed to psychology postgraduates across the UK. This is a resource which we create to help keep postgraduates up-to-date with the work that the PsyPAG committee carries out, including our latest news and updates. We intend to produce this newsletter three times a year in the spring, summer and winter, following our committee meetings. Hopefully, you have been receiving our newsletters, but if you have not and would like to be added to our contact list, please e-mail me at chair@psypag.co.uk. You can also find the PsyPAG Newsletter on our website (www.psypag.co.uk/news).

If you have any suggestions or feedback about how PsyPAG can provide further support for UK psychology postgraduates, please get in touch with me at the address below.

I would like to sincerely thank the PsyPAG committee for their continuous commitment and dedication and the Society’s Research Board for their fantastic support which allows PsyPAG to assist UK psychology postgraduates.

Wishing you luck as you continue with your studies and we look forward to welcoming many of you to Glasgow in July!

Laura Neale
PsyPAG Chair
E-mail: chair@psypag.co.uk
Twitter: @PsyPAG
30th Annual Psychology Postgraduate Affairs Group Conference 2015
University of Glasgow
22-24 July 2015

Website is now live and registration is open! Please have at the social events and submit your abstract.

http://psypag.psy.gla.ac.uk

Follow us:
twitter.com/PsyPAG2015
NEURODEVELOPMENTAL disorders involve a disruption in the typical brain function which progresses in the course of the individual’s development (Dennis & Thompson, 2013). Consequently, these cerebral abnormalities later translate into a variety of physiological, behavioural and cognitive deficits, one of which is an aberrant pattern of social interactive skills. The present discussion focuses on the similarities and differences between the socio-communicative trajectories of two neurodevelopmental disorders: autism spectrum disorder (ASD), and its considered opposite, Williams syndrome (WS). The comparisons between the phenomena are made with respect to the five main components of social interaction – a basic need for socialisation, joint attention, emotion recognition, empathy and social cognition. By carefully considering each factor and referring to a wide variety of research, the present discussion attempts to not only account for the array of socio-interactive abnormalities in ASD and WS, but also to present evidence against the idea that these two disorders are qualitatively different.

Autism spectrum disorder, Williams syndrome and the social world

Autism spectrum disorder is a frequent neurodevelopmental condition occurring approximately 13 times per 10,000 live births (Fombonne, 2005). According to the criteria outlined in the Diagnostic and Statistical Manual of Mental Disorders (DSM-IV; American Psychological Association, 1994) autism has been characterised by deficits in communication, social interaction and characteristic patterns of restrictive and repetitive behaviours. In contrast, Williams syndrome is a rare genetic condition (1:7500; Fombonne, 2005) characterised developmentally by delays in language acquisition and impaired motor and visuospatial abilities (Brown et al., 2003). The necessity for involvement with the social world displayed by both ASD and WS infants is abnormal. Children with autism, for example, demonstrate a lack of social awareness, expressed by greater interest in objects than human faces (Swettenham et al., 1998). In a similar vein, these infants show impairments in social orientating – they fail to orientate to natural stimuli in the social world, such as attending to grown-ups or responding non-verbally to their own name (Osterling, Dawson & Munson, 2002). Nevertheless, these findings do not necessarily reflect a lack of motivation in ASD to fully engage with the social world. These could instead signal disruptions in the functioning of the attentional orienting mechanism in ASD (Courchesne, Chisum & Townsend, 1995; Dawson, 1991). It has been suggested that such difficulties could stem from an inherent inability in ASD to either rapidly shift attention (Courchesne et al., 1995) or represent social stimuli because of their complex and unpredictable nature (Dawson, 1991). In support of this, even very able ASD individuals have been reported to exhibit impairments in their orienting and selective attention (Casey et al., 1993; Wainwright-Sharp & Bryson, 1993). In contrast to ASD individuals, WS infants show a strong
preference for human faces and are often described as overly social (e.g. Dilts, Morris & Leonard, 1990). At first this may seem like an interaction-facilitating characteristic (Jones et al., 2000), however, the extent to which these infants tend to fixate on faces may lead them to often ignore the task at hand, which is very likely to disrupt social interaction in real life. Moreover, the latter has been interpreted as a gaze-modulation problem. In this sense, similarly to ASD infants, WS children show signs of impaired social orienting. In support, when comparing the visuospatial abilities of toddlers with Down syndrome (DS) and WS, Brown et al. (2003) found that WS children exhibited difficulties in saccade planning and could not fully explore the visual world. Taken together, a review of the involvement of ASD and WS individuals with the social world suggests abnormal orienting to social stimuli in both disorders.

**Joint attention patterns**
The prelinguistic skills of individuals diagnosed with ASD and WS also deviate from normality. Triadic joint attention is thought to be essential for the development of language since it represents the infants’ ability to share a common attentional focus with another person towards an object, which reflects knowledge of communicative intentions and linguistic reference (Puleo, 2010). There is evidence that children with ASD are overall better at responding to joint attention cues rather than at initiating such behaviour (e.g. MacDonald et al., 2006). The latter suggests that they must have some understanding of the purpose of joint attention. Still, children with autism often request objects by pointing (i.e. instrumental pointing) but are less likely than typically-developing (TD) children to use it to express their feelings about an object (i.e. declarative pointing; Warreyn, 2007). For example, in one study, 4 out of 5 autistic toddlers exhibited instrumental pointing and only one – declarative (Camaioni et al., 2003). Moreover, ASD individuals have also been reported to have difficulty making use of social cues to respond appropriately to events in the environment (a lack of social referencing; Brim, Townsend et al., 2009). Similarly, WS is also characterised by an aberrant prelinguistic pattern. In contrast to TD children, WS infants do not develop joint attention before they can speak (Bertrand, Mervis, Rice & Adamson, 1993). Neither are they likely to compensate for their delayed language with gestures (Singer Harris, Bellugi, Bates et al., 1997). Hence when compared to mentally-matched controls both the initiation and comprehension of declarative and instrumental pointing of WS children are below average (Laing et al., 2002). Moreover, it is plausible that social referencing serves a different function for WS children, since they were using it despite their lack of comprehension of its communicative purpose (Laing et al., 2002). Thus, joint attention seems to be hindered in both ASD and WS.

**Socio-perceptual intelligence**
Differences also persist in the perceptual abilities between the two disorders. According to Tager-Flusberg and Sullivan (2000) emotion-recognition and empathy are characteristics of the social-perceptual module of social intelligence which involves making judgements about the others’ mental states from pure perception. Autistic individuals display difficulties interpreting the emotion expressed in eyes (Baron-Cohen, Joliffe, Mortimore & Robertson, 1997). They are also less likely to make social attributions to objects. For instance, ASD children have problems with symbolic play (e.g. a triangle representing a human), displaying an inability to attribute intentionality to abstract concepts, especially in socially complex interactions (Bhatara, Quintin et al., 2009). These perceptual problems may stem from the finding that 85 per cent of ASD individuals may suffer from alexithymia – a sub-clinical condition marked by an inability to identify and interpret one’s emotions (Berthoz & Hill, 2005).
Thus, these perceptual difficulties seem to arise from the abnormal visual scan pattern in alexithymia (attending more to mouths than eyes) rather than the severity of ASD symptoms (Bird, Press & Richardson, 2011). Moreover, Silani and colleagues (2008) demonstrated that although alexithymic ASD individuals may feel an emotion (they displayed increased activation in the amygdala to unpleasant stimuli), they still showed a poor awareness of it, marked by hypoactivity in the anterior insula. Importantly, high scores on alexithymia correlated with a lack of empathy, suggesting that the conscious representation of emotions in oneself and others may rely on the same neural mechanism. In support of this, regardless of the type of condition (control or ASD), empathy has been found to be predicted by the participants’ degree of alexithymia (Bird et al., 2010).

In contrast, WS individuals are known for their good social-perceptual abilities. For instance, they perform better than participants with other genetic disorders like Prader-Willi syndrome (PWS) in identifying the emotional expression of eyes (Baron-Cohen et al., 1997). Furthermore, in this particular sample, half of the WS individuals were as good as TD participants. Additionally, WS individuals have been found to be highly emphatic and exhibit greater concern for others compared to PWS controls (Riby & Hancock, 2008). Still, there is evidence that WS patients have difficulties recognising negative emotions (Plesa-Skwerer et al., 2006). The latter has been found to correlate with a diminished activity in the amygdala in response to negative stimuli which might be indicative of a disrupted neurophysiological arousal to negative emotions (Meyer-Lindenberg et al., 2005). These findings suggest that WS individuals are overall more perceptive than individuals with ASD.

**Socio-cognitive intelligence**

Both ASD and WS individuals appear to be impaired at the social-cognitive component of social intelligence, which involves comprehension of the mind as a representational system (Tager-Flusberg & Sullivan, 2000). This is coined as the ‘theory of mind’ (Baron-Cohen, 1991) and is tested by false-belief tasks showing whether an individual understands that others might have beliefs and intentions that are different from one’s own. Generally, ASD individuals perform much worse than controls on such tasks (only 20 per cent pass; Baron-Cohen, Leslie, & Frith, 1985). Moreover, a more recent study discovered that autistic children responded more accurately to control questions in narrated than in non-narrated false-belief stories, which substantiated the idea that these tasks are executively-demanding for ASD participants (McGregor & Bennett, 2008). Similarly, Tager-Flusberg and Sullivan (2000) found that only about 25 per cent of WS children passed their false-belief task. Furthermore, they performed no better than PWS controls when they had to reason about another person’s actions and were more likely to talk about the actor’s desire and emotion and less about their cognition.

The social-cognitive module has also been found to be closely related to language as this requires a complex integration of phonology, syntax and semantics, as well as the ability to understand the communicative intention of the utterance. Not surprisingly, ASD individuals have been reported to experience difficulties understanding figurative speech, such as irony, where the true meaning is just the opposite of the literal one (Happe, 1995). There is also evidence for an abnormal predominant reliance on phonology instead of semantics when acquiring new words in ASD (Norbury, Griffiths & Nation, 2010). Similarly, WS individuals have difficulties understanding ambiguous expressions and idioms. For example, they cannot comprehend the non-literal meaning of ‘she fell
apart’ (Semel & Rosner, 2003). Lastly, people with WS have been described as ‘hyperphonological’ since they do not exhibit the word frequency effect (ability to generate more high frequency than low frequency words) which suggests that as ASD individuals they rely more on phonology than semantics (Vicari et al., 1996). To sum up, both ASD and WS are associated with compromised theory of mind and language skills.

Conclusions
Despite often described as two opposite conditions, autism spectrum disorder and Williams syndrome seem to share many abnormalities in social interaction, such as disrupted social orienting, aberrant joint attention and difficulties in the social-cognitive component of intelligence. Differences have been found in their approach towards people. While ASD individuals appear to lack interest in socialising, WS individuals are overly warm and gregarious. However, this apparent discrepancy might be due to an attentional problem, rather than differences in their basic need for socialisation. Finally, the social-perceptual skills characterising the two disorders differ. Still, recent research has suggested that the perceptual impairments in autism could better be explained by a sub-clinical condition, alexithymia, rather than ASD. Along these lines, future research could focus on the development of disorder-specific interventions, addressing the outlined difficulties in WS and ASD from an early age.

Silviya P. Doneva
PhD student
University of Essex
dsdoneva@essex.ac.uk

References
How social interactive skills develop in ASD and Williams syndrome


EW DISORDERS can pose greater threat to the well-being of families and parents than autism (Woodgate, Ateah & Secco, 2008). To date, a wealth of literature has supported the notion that parents of children with autism spectrum disorder (ASD) are at significantly higher risk of experiencing difficulties. For example, parents of children diagnosed on the spectrum are said to report higher levels of stress, anxiety, depression and emotional exhaustion than parents of typically developing children and children with other developmental disorders such as Down syndrome (DS) and cerebral palsy (Brobst, Clopton & Hendrick, 2009). Some parents have summarised their experiences as ‘living in a world of our own’ (Woodgate et al., 2008), experiencing isolation and negative judgement from others while enduring relationship, financial and job-related stress, and being forced to give up on ‘typical, every day’ family activities (e.g. Hartley et al., 2010). Contrary to this however, not all research has documented negative aspects. King et al.’s (2006) qualitative research focused on belief systems of families. They found that raising a child with autism can be a life-changing experience for parents and that they can experience positive adaptations in the form of changed views of others and recognising positive contributions made by their child to themselves, their family and wider society.

The literature also tends to be mixed with regards to the individual experiences of mothers and fathers of children with autism. Some studies report that mothers experience higher levels of stress, depression, caregiving burdens and marital maladjustment than fathers, and also possess lower levels of coping (e.g. Dabrowska & Pisula, 2010). Studies have also stated that mothers feel more ‘stigmatised’ than fathers (e.g. Gray, 2002) and that fathers do not view their child’s autism as ‘life changing’ in the same way that mothers do (Milshtein, Yirmiya, Oppenheim, Koren-Karie & Levi, 2010). However, fathers have reported their families as less adaptive than mothers and report less positive perceptions and experiences of fatherhood (Hastings et al., 2005). Research has also found differences in terms of the impact of specific autistic behaviours and characteristics on mothers and fathers. Davis
and Carter (2008) reported that regulatory problems are associated with maternal stress, whereas externalising behaviours are more associated with paternal stress. Furthermore, some studies report that mothers and fathers have equal levels of stress and similar parenting experiences (e.g. Altiere & von Kluge, 2009).

**Quantitative-based research**

The literature outlined above tends to focus on mothers’ and fathers’ increased stress levels and potential for adjustment problems, but does not consider these factors within the context of the family. A narrow-minded view of parents’ experiences seems to be adopted as the child tends to be viewed as the ‘stressor’ testing parents’ means of coping (King et al., 2006). What is more importantly worth noting here is the fact that the majority of studies are quantitative in nature. Quantitative designs are useful for researching specific characteristics, such as stress and coping levels, which may be valuable for treating parental mental health problems, for example (Dabrowska & Pisula, 2010). However, what may be more vital is not to research explicit variables or determine which parent is more affected, but to carry out deeper explorations of parents’ experiences, to gain a better understanding of what having an autistic child actually means to a parent. Despite the increased understanding of what it is like to be a parent of a child with autism, more qualitative-focused research needs to be undertaken that strives to understand the meaning of childhood autism from the perspective of the parents (Woodgate et al., 2008). Qualitative research methods are more flexible and inductive than quantitative methodology, and they are also powerful and valuable in obtaining in-depth, subjective accounts of individual experience (Brocki & Wearden, 2006).

**Mother-focused research**

Equally important to note is that both quantitative and qualitative research has also focused predominantly on mothers’ experiences and tends to disregard fathers. Studies investigating both parents tend to keep the focus on mothers and some have worryingly only used mothers in their samples (e.g. Boyd, 2002). In fact, a review on general child psychopathology revealed that 48 per cent of studies assessed mothers exclusively and only one per cent assessed fathers (Cassano, Adrian, Veits & Zeman, 2006). The limited amount of research and knowledge that exists on fathers of autistic children and their experiences is concerning, yet the trend for studying mothers continues. The few studies that do exist have focused on intellectual disabilities in general or other disabilities such as hearing loss rather than ASD specifically (e.g. Ingber & Most, 2012; MacDonald, Hastings & Fitzsimons, 2010). Likewise, some studies have focused on topics such as the usefulness of father-led interventions rather than exploring fathers’ experiences (e.g. Elder, et al., 2005). Such studies are also quantitative in nature, highlighting that qualitative research focusing on the experiences of fathers is especially limited.

**The need for more father-focused, qualitative research**

The lack of qualitative research found on fathers of autistic children is concerning as father involvement can have positive outcomes for both children and parents (Flippin & Crais, 2011). Overlooking fathers’ views and perspectives in research may have negative consequences for families, especially those in single parent families; therefore, conducting research into fathers and their experiences is vital (Tamis-LeMonda, Shannon, Cabrera & Lamb, 2004). With the existing lack of qualitative, father-focused research, the aim of future research in this area should be to use qualitative methods to explore in-depth the lived experiences and perspectives of fathers who have a child with ASD. Such research could add to the current literature, shedding light on the specific and significant experiences of
fathers of autistic children and the impact of these on the family. By encouraging more father-focused qualitative research, we may be able to increase others’ insight into what it is really like to be the father of an autistic child, which in turn could help enhance services and ensure they involve fathers more effectively in order to improve support for families with autistic children as a whole.

Jill McNight MSc, BSc
University of Ulster and Research Assistant for Praxis Care, Northern Ireland
Mcknight-j1@email.ulster.ac.uk

References


WILE THERE is no clinical diagnosis of psychopathy in childhood, there is abundant evidence that psychopathic traits and behaviours can be observed in children. In childhood, high levels of antisocial behaviour may be diagnosed as conduct disorder (DSM-5). Particular subsets of children with conduct disorder can also have elevated levels of psychopathic traits, which are termed callous-unemotional traits in research studies and ‘limited prosocial emotions’ in the new DSM-5 guidelines. Callous-unemotional traits in children can persist into adulthood (Lynam, Caspi, Moffitt et al., 2007) and are highly heritable (Viding, Blair, Moffitt & Plomin, 2005). In contrast, antisocial behaviour in children without callous-unemotional traits appears to be primarily driven by environmental influences (Viding et al., 2005).

In terms of the pathways through which psychopathy develops, researchers have proposed that individuals with psychopathy have an atypical experience of distress, such as fear or sadness (Blair, 2013; there may also be impairments in the processing of other emotions, but a discussion of this is beyond the scope of this article), underpinned by dysfunction in specific neural systems. Genetic and environmental factors influence the development of these neural systems. Over development, the reduced ability to experience emotions results in impaired associations between antisocial actions and outcomes of causing distress in other people (Bird & Viding, 2014; Blair, 2013). Reduced distress in an infant also results in fewer opportunities in the environment for learning which cues reliably signal distress in other people (Bird & Viding, 2014; Blair, 2013). Researchers have argued that it is the reciprocal interaction between atypical emotional reactivity and the resulting interactions with the environment that can lead to the development of psychopathy (Bird & Viding, 2014; Blair, 2013).

Measuring psychopathy

In forensic settings, the most widely used and validated instrument for assessing psychopathy is the Hare Psychopathy Checklist Revised (PCL-R; Hare, 2003). The PCL-R conceptualises psychopathy as consisting of two dimensions, Factor 1 and Factor 2. Factor 1 is characterised by affective and interpersonal features, including reduced empathy and guilt. Factor 2 is characterised by antisocial behaviour and impulsivity (Hare, 2003).
In the typical population, psychopathic traits can be reliably measured, with these traits existing on a continuum. Self-report measures suitable for non-forensic samples include the Self-Report Psychopathy Scale (Paulhus, Neumann & Hare, in press), the Psychopathic Personality Inventory (Lilienfeld & Widows, 2005) and the Levenson Self-Report Psychopathy Scale (Levenson, Kiehl & Fitzpatrick, 1995). However, there is considerable debate as to the best method of assessment of psychopathic traits in typical populations. Part of the disagreement is due to low correlations of some of these scales with the PCL-R or different conceptualisations of psychopathy all together (Lilienfeld & Fowler, 2006). This raises the question of whether the construct of psychopathy measured by the PCL-R in forensic samples is the same as that measured by self-report scales in community samples. Nevertheless, findings from studies in community samples often mirror those observed in forensic samples in both behavioural and neural profiles (e.g. Lilienfeld & Fowler, 2006; and see discussion below), lending support to the claim that there is a common underlying construct.

**Behavioural profile associated with psychopathy**

In terms of the behavioural and neural profile associated with psychopathy, studies have examined forensic samples with high psychopathic traits, community samples with high psychopathic traits, and children with conduct disorder and varying levels of callous-unemotional traits. In the following two sections, studies from these different populations will be discussed, together with the assumption that they can all contribute to informing us about the profile of psychopathy.

Research on the behavioural and cognitive manifestations of psychopathy has mainly focused on emotion and reward processing impairments. For example, as discussed earlier, one of the most striking features of individuals with psychopathy is their reduced physiological response to others’ emotions (Blair et al., 1997). Similarly, in community samples, high levels of psychopathic traits are related to weaker affective responses to fearful faces and happy stories (Seara-Cardoso, Neumann, Roiser et al., 2012) and a general impairment across empathic responses to other people regardless of valence (Lockwood, Bird, Bridge & Viding, 2013a). Intriguingly, this affective empathic deficit does not appear to extend to problems with understanding other people’s thoughts – which distinguishes individuals with psychopathy/psychopathic traits from those with autism spectrum disorders/autistic traits (Lockwood et al., 2013a).

Reward processing impairments have been observed in children with conduct disorder during reinforcement-based decision making tasks, including the Iowa Gambling Task (Blair et al., 2001). In violent offenders with psychopathy, impairments have been observed in response reversal and passive avoidance learning (De Brito et al., 2013). Taken together, results from studies investigating emotion and reward processing suggest atypical emotion and reward processing is associated with psychopathic traits.

**Neural profile associated with psychopathy**

There has been a rapid expansion in neuroimaging studies investigating the brain basis of psychopathy in criminal psychopathy, community samples with high psychopathic traits and children with callous-unemotional traits. In line with the behavioural studies investigating psychopathy, neuroimaging research has mainly focused on emotion and reward processing impairments (although other areas of cognitive impairments have been investigated, they are beyond the scope of this overview). Broadly, atypical responses have been observed in the amygdala, insula, orbitofrontal cortex, anterior cingulate cortex and striatum – regions involved with emotion and reward processing in typical
populations. For example, relative to controls, those with psychopathy/high psychopathic traits show reduced amygdala response to emotional faces and social situations (Viding et al., 2012; Sebastian et al., 2012). When processing images of other people in pain, those with psychopathic traits have shown atypical neural responses in regions including the anterior insula and anterior cingulate cortex (Lockwood et al., 2013b; Decety, Skelly & Kiehl, 2013).

Using paradigms that index reward processing and decision-making, Pujara, Motzkin, Newman, Kiehl & Koenigs (2013) observed positive correlations between PCL-R scores and left ventral striatum activation to gains-losses. In community samples, Buckholtz et al. (2010) reported increased ventral striatum responses to monetary reward anticipation, and this response was associated with psychopathic traits. Finally, youths with psychopathic traits have been found to show reinforcement reward learning impairments in the caudate and ventromedial prefrontal cortex (White et al., 2013). This latter study was the first to use model-based fMRI in a sample of children with conduct problems. Model-based fMRI uses trial-by-trial behaviour to model parameters such as prediction error – the degree to which reinforcement is better or worse than expected. The model generated from the behaviour can then be applied to neuroimaging data to see which regions of the brain vary parametrically over time, with the size of the prediction error. The advantage of this approach is that it can tell us not just where in the brain there might be differences between those with and without psychopathy but also how different cognitive process are implemented (O’Doherty, Hampton & Kim, 2007).

**Conclusions and future directions**

Overall, the defining features of psychopathy include callousness/shallow affect and impulsive antisocial behaviour. The development of psychopathy is likely to result from genetic predispositions, dysfunction in specific neural systems, and the interplay between reduced emotional reactivity and resulting interactions with the environment. Atypical emotion and reward processing in forensic samples, community samples with high psychopathic traits, and children with conduct disorder and varying levels of callous-unemotional traits has been observed in both behavioural and neuroimaging studies.

Looking forward, the use of computational modelling techniques could help us to link behavioural and brain processes that might be disrupted in psychopathy, and perhaps get us closer to the specific mechanisms causing atypical processing. Intriguingly, recent evidence from neuroimaging suggests that reduced neural responses to others’ pain in individuals with psychopathy can be changed dependent on the instructions given to participants, and in particular if participants are explicitly instructed to empathise (Meffert, Gazzola, den Boer, Bartels & Keysers, 2013). However, it remains to be seen whether effortfully activating the neural response to others’ pain can foster empathy and empathic behaviour in individuals with high psychopathic traits. Nevertheless, factors that motivate effortful empathy in these individuals could be a key target for future research. In terms of understanding the development of psychopathy, researchers have argued that a longitudinal and genetically informed approach has the best chance of helping us elucidate how the developmental vulnerability to psychopathy unfolds. Ultimately, a key aim for the future will be to enable the findings from basic science to be translated into research informed approaches for clinical intervention in order to help individuals with psychopathy.

**Patricia Lockwood**
Division of Psychology and Language Sciences, University College London
p.lockwood@ucl.ac.uk
References


WHAT gives a liar away? Think about it before you read any further. Go ahead and write it down somewhere. As a lie detection researcher, I get asked this question a lot. More often though, people volunteer the information when I tell them what I do for a living. I get cornered at parties and told how they know when someone is lying to them.

But the research conflicts strongly with what people believe. A worldwide study explored what cues people think gives a liar away (The Global Deception Research Team, 2006). In every one of the 75 countries tested, people said that liars avoid eye contact. Surprisingly, research consistently shows that liars do not make any more or less eye contact than truth-tellers (DePaulo et al., 2003). We are smart creatures, and when we lie (or rather, when others lie to us – because of course we never lie) we do not give ourselves away so easily (DePaulo et al., 2003). There is a tendency to think that nonverbal cues like eye contact are where we should look for ‘tells’ to deception, and it is even encouraged in contemporary police training manuals (Inbau et al., 2001). You would be better placed to consider the words liars choose, because here are where the more reliable cues are to be found (DePaulo et al., 2003). But even these more useful verbal clues are highly probabilistic and appear infrequently (DePaulo et al., 2003). In fact, some researchers have argued that most liars give away nothing (Levine, 2014).

So where does that leave us – can we possibly detect a lie? It turns out that people are poor lie detectors (Bond & DePaulo, 2006): we seem to be able to notice truths just a little above chance rates, but when it comes to spotting lies you may as well flip a coin. Although we know a great deal about lie detection accuracy, we know very little about how people try to make that judgment and why it so often goes wrong (Vrij & Granhag, 2012) because the research in this area has mostly been rather pragmatic, in an attempt to discover new detection techniques.

Perhaps the most reliable finding in this area, more so than the consistent poor accuracy finding, is that we are more likely to guess people are telling the truth rather than lying. This ‘truth bias’ finding replicates repeatedly over decades of research (Bond & DePaulo, 2006), and makes for an interesting place to start considering how people make lie-truth judgments, whether correctly or incorrectly.

It has often been thought of as a mark of an error in forming that lie or truth judgment (Gilbert, 1991; O’Sullivan, 2003). For instance, some argue that it would be rude to accuse people of being a liar, so we sacrifice lie detection accuracy and choose to be biased to say others are telling the truth (O’Sullivan, 2003). But what if this ‘truth bias’ was actually a sign of a smart judgment (Levine, 2014; Street, 2014; Street & Richardson, in press)?

Cues to deception are weak at best (DePaulo et al., 2003). This of course leaves room for a lot of uncertainty. This is the starting point for the Smart Lie Detector (SLD) account (Street, 2014; Street & Richardson, in press). How would you decide if your friend really does love those woollen trousers you knitted for them, or whether...
your partner is being honest when protesting their fidelity? If there are no good behavioural or verbal cues available to help make that judgment, as is usually the case, one strategy you could use is to rely on your past knowledge about the situation. For example, people tell the truth far more often than they lie (DePaulo et al., 1996), so it makes good sense to guess someone is telling the truth more often than lying, even if the speaker’s behaviour gives you no clue. This would look like a systematic error in judgment, making ‘too many’ truth judgments, but really this bias might be a marker of relying on more generalised context-relevant information to make the best guess when the more diagnostic individuating behaviours of the speaker are lacking, and so leave us unsure.

A number of cognitive theories (e.g. Gilbert, 1991; Levine, 2014) suggest the truth bias is not a reflection of a smart judgment, but rather that it is cognitively easier and/or quicker to form a truth belief than a lie belief. Believing information is true is just a default of the cognitive system (Levine, 2014), potentially an automatic and necessary one (Gilbert, 1991). To believe that a statement could be a lie means invoking a secondary process, which requires more time and effort to engage (Gilbert, 1991; Levine, 2014). These authors consider truth as the ‘default’ belief.

Under these accounts, people should always be more inclined to make truth judgments. However, there is evidence that when the context suggests people are more likely to lie than tell the truth (e.g. speaking with prisoners or salespeople), we are biased towards disbelieving what others are saying (e.g. DePaulo & DePaulo, 1989). Police officers, who expect most people to lie to them (Moston et al., 1992), also show a bias towards disbelieving (Meissner & Kassin, 2002). Indeed, if people have reason to think most statements shouldn’t be believed, then lie judgments are processed and reached quicker than truth judgments (Street & Richardson, 2014), suggesting a truth belief does not come faster or easier than a lie belief; it is all a matter of context. Even children whose cognitive functions are still developing do not always show a truth bias: they decide whether to believe others or not based on their knowledge of how often that person has been accurate or inaccurate in the past (Brosseau-Liard & Birch, 2011). Children and adults alike use their knowledge of a person’s prior history of honesty to decide whether to believe them or not (Sperber et al., 2010). This form of generalised information can help to inform a guess (i.e. it is correlated with the honesty of the current statement), but of course they are not direct cues to distinguish whether the current statement is the truth or not (i.e. it is not causally related to honesty of the current statement).

Importantly, the SLD position goes beyond claiming that people rely on context information to make their judgment. It claims people rely on that information only when more individuating, causally related cues are lacking, or at least leave the rater uncertain. Put another way, when it is not possible to tell whether the current statement is true or false, people compensate by relying on other more generalised cues that help make an informed, but imperfect guess.

Returning to the behaviour of children, they do not always rely on more general person-based knowledge about how accurate a speaker has been in the past. If someone demonstrably has perfect knowledge on this occasion, children believe that speaker even if they have usually been inaccurate in the past (Brosseau-Liard & Birch, 2011). They utilise more diagnostic information when it is present. Adults also show this form of adaptive decision-making. When we have little information about a person, we judge them based on overgeneralised stereotypes. But as we learn more and more about that person, we rely less on such generalised schemas and more on an individuated representation of that individual (Kunda et al., 2002). Similarly, people make little use of base-rate information when there is more individuating information at hand, but as those individuating cues become less diag-
nostic they shift towards using more generalised base-rate information (Bar-Hillel, 1990). It seems people use diagnostic, individuating information when it is present, but in its absence they rely on more generalised but informed rules of thumb.

The SLD position was directly tested in a recent study (Street et al., 2014). Participants were trained on the diagnosticity of four cues, which were present 50 per cent (i.e. perfectly non-diagnostic), 60 per cent, 70 per cent, and 80 per cent (highly diagnostic) of the time when people lied, respectively, about whether they had cheated on a trivia game or not. After being trained on these cues, participants were told one of two things about the context of the speakers’ claims: some participants were told speakers could only obtain the cash prize if they lied, while other participants were told speakers could obtain the cash prize if they told the truth. This information only gives a general indication as to whether speakers should be more inclined to lie or tell the truth. The more individuating information is available from the four cues: they are causally related to whether the current statement is a lie or truth. The SLD position predicts that as cue diagnosticities decrease, people rely more on the context information. We found support for the SLD position: people were biased more towards the context information when cue diagnosticities were low, but context had practically no effect when cue diagnosticities were high. This finding was supported with a computational model (Street et al., 2014).

For the longest time we have characterised lie detectors as inaccurate and biased. I would argue it is time to rid ourselves of this pessimistic error-prone view and shift to a more optimistic smart-guess position: we compensate in uncertain environments by making informed guesses when the cues to deception are lacking.

Chris N.H. Street
Department of Psychology, University of British Columbia, Vancouver, BC; c.street@psych.ubc.ca; Twitter: @cnhstreet & @SpottingLies

About the author
Chris N.H. Street obtained his PhD from University College London and was awarded the PsyPAG Rising Researcher award for Outstanding PhD Research. He is now a Post-doctoral Research Fellow at the University of British Columbia. His research explores the cognitive processes underlying lie detection and belief formation. He is currently pursuing the idea that people are smart lie detectors, and are making informed judgments from the very unreliable cues to deception.

Symposium at SARMAC 2015
A symposium on this topic is being submitted to the SARMAC 2015 conference, chaired by the author. The symposium will be adversarial, contrasting default truth theories with flexible and adaptive theories. Speakers include the authors of prominent accounts in this area: Tim Levine, Norbert Schwarz, Eryn Newman, Erik Asp, and Chris Street.

References


OBSESSIVE Compulsive Disorder (OCD) is categorised as an anxiety disorder because the central factors are apprehension and discomfort, both of which are usually increased by obsessions and decreased by compulsions or rituals (Jenik, Baer & Minichiello, 1990). According to DSM-IV-TR (2000) a patient with OCD may have either obsessive thoughts or compulsive action (e.g. impulses, images, ideas, doubts, fears, ruminations, or checking, cleaning, counting respectively or a combination of both.

Numerous psychological theories (e.g. psychodynamics, behaviourism and cognitivism) explain those factors which may cause OCD. Among many other explanations of OCD, family theory focuses on the mental health of relatives of OCD patients. However, there is no one ‘official’ definition of mental health. Cultural differences, subjective assessments and competing professional theories all affect how mental health is defined (Patel & Prince, 2010).

The literature (e.g. Jenik et al., 1990) suggests that first degree relatives of OCD patients have a higher than normal prevalence of psychiatric disorders, including OCD. Similarly, Ramos-Cerqueira et al. (2008) reported that 42 per cent of their studied caregivers of OCD have scored positively for common mental health disorders, such as depression. High prevalence rates for OCD in immediate relatives have led researchers to speculate about the mechanisms through which parents may influence the development and maintain OCD in the patient. Parents may model caution, avoidance or fearfulfulness that may cause obsessive compulsive symptoms to develop in a child (Barrett, Shott & Healy, 2002).

Therefore, it may be possible that a parent’s psychological state may influence a child’s mental health. It is important to involve parents of OCD patients in the psychological management plan because research (e.g. Pollack & Carter, 1999) reported that parents’ coping styles may play a significant role in the development and maintenance of this disorder throughout the child’s life.

Coping can be defined as continuous change in cognitive and behavioural efforts to manage specific external or internal demands that are assessed as physically and mentally demanding as well as beyond the resources of the person (Folkman & Lazarus, 1984). Lazarus and Folkman (1984) proposed two ways of coping as emotion-focused coping (e.g. avoidance, minimisation and distancing) and problem-focused coping (e.g. strategies for altering environmental pressure, resources, procedures and learning new skills). Derisley, Libby, Clark and Reynolds (2005) reported that parents of children with obsessive compulsive disorder used significantly more cognitive and behavioural avoidance coping strategies than non-clinical parents. Similarly, Geffken, Storch, Duke, Monacol, Lewin and Goodman (2006) reported denial, disengagement, social support and religious coping in care givers of patients with obsessive compulsive disorder.
In Pakistan, OCD is an under researched area as there are only few published research papers on it (e.g. Jabeen & Kausar, 2010). There is a little literature on mental health and coping strategies in the parents of OCD patients. The estimated lifetime prevalence of OCD is generally in the range of 1.7–4.0 per cent in adults (DSM-IV-TR, 2000). It may indicate that the parents' mental health and coping strategies possibly play a role in the development as well as in the maintenance of this disorder.

In the present study it was hypothesised that there is a difference in the mental health and coping strategies of the parents of OCD patients and the parents of individuals who have no psychological disorders. This research will provide research-based evidence on mental health and coping strategies of obsessive compulsive disorder in Lahore, Pakistan, which may highlight the importance of the active involvement of family in the treatment plan of the patient.

**Methodology**

**Sample**

Non-probability sampling was used, with the sample comprising two groups: clinical and non-clinical. The clinical group consisted of 25 mothers and 25 fathers of OCD patient(s) diagnosed without remission by at least one psychiatrist. The sample for the clinical group was collected from Mayo Hospital, Sir Ganga Ram Hospital and Services Hospital, Lahore. The non-clinical group consisted of 25 mothers and 25 fathers from the general population. The data for this group was collected from Mughal Pura, Baghban Pura, Misri Shah and Bund Road, Lahore, Pakistan.

**Instruments**

(i) DSM-IV TR criteria of OCD was used to confirm the diagnosis. Moreover, the same criteria were used to screen out the children of parents of non-clinical group.

(ii) Symptom Checklist-R was used to assess the mental health of the parents of the OCD patients. It consists of six subscales measuring six different psychological disorders; namely, depression, somatoform, anxiety, obsessive compulsive disorder, schizophrenia and level of frustration tolerance. Each subscale was validated against a related, translated and adapted test or inventory, measuring the same symptom. The reported validity was between \( r = .21-.74 \), with test-retest reliability between \( r = .74-.96 \) (Rehman, Dawood, Rehman, Mansoor & Ali, 2009).

(iii) Ways of Coping Questionnaire (WC-Q; Folkman et al., 1984) was used to measure the ways of coping of parents of OCD patients. It features 67 items, measuring two main coping strategies: emotion-focused coping and problem-focused coping. The emotion-focused coping was measured by six subscales: distancing, self-controlling, seeking social support, accepting responsibility, escape avoidance and positive reappraisal. Problem-focused coping was measured by two subscales: ‘confrontive coping’ and ‘planful problem solving’. Internal consistency reliabilities were reported between .56 and .85 (Folkman et al., 1984). In this study an Urdu translated version of the WC-Q was used (Sitwat, 2005).

**Procedure**

Diagnostic criteria for OCD in DSM-IV-TR were first translated into Urdu. Before collecting data official permission was taken from the Head of the Hospital Psychiatry Department. The researchers obtained written consent from patients and their parents independently. Moreover, participants were also provided with the brief description of the aims and objectives of the study. Data was then gathered for both groups simultaneously.

**Statistics**

The data was analysed through independent sample t-test, using SPSS-10. An independent sample t-test was used to compare the means of the two groups.
Results
There was a significant mean difference in the scores for mental health between groups, clinical group (M = 119.36, SD = 52.78) and non-clinical group (M = 62.20, SD = 29.68, t = 6.674, df = 98, p < .05). This suggested that the parents of OCD patients reported more mental health problems as compared with parents of those individuals who did not have OCD. There was a significant mean difference in the scores for five-out-of-six mental disorders between groups: clinical group (M = 28.76, SD = 11.55) and non-clinical group depression (M = 14.58, SD = 6.69, t = -7.511, df = 98, p < .05); clinical group (M = 33.82, SD = 19.96) and non-clinical group anxiety (M = 12.18, SD = 7.57, t = -7.168, df = 98, p < .05); clinical group (M = 31.50, SD = 10.40) and non-clinical group OCD (M = 4.24, SD = 5.13; t = -7.874, df = 98, p < .05); clinical group (M = 31.50, SD = 10.40) and non-clinical group level of frustration tolerance (LFT) (M = 16.86, SD = 8.85, t = -7.579, df = 98, p < .05); and clinical group (M=2.80, SD= 4.78) and non-clinical group schizophrenia (M = .46, SD = 1.09, t = -3.412, df = 98, p < .05). These results indicated that the parents of OCD patients scored higher on a variety of mental illness indicators compared to parents of those without OCD.

For coping styles, significant mean differences were observed between the clinical group (M = 92.20, SD = 19.02) and non-clinical groups (M = 86.18, SD = 19.10, t = -1.579, df = 98, p < .05). Also, there were significant differences in scores on emotion-focused coping for four out of six groups. Parents of OCD children scored lower in self-controlling (M = 6.20, SD = 4.25) compared to non-clinical parents (M = 9.20, SD = 3.94, t = 3.66, df = 98, p < .05), higher in clinical group accepting responsibility (M = 5.82, SD = 2.86) than non-clinical group (M = 3.64, SD = 2.35, t = -4.17, df = 98, p < .05), and higher in escape avoidance (M = 13.90, SD = 5.57) than non-clinical group (M = 6.74, SD = 3.63, t = -7.618, df = 98, p < .05). However, no significant differences were found on problem-focused coping subscales.

Discussion
The results of the study revealed significant differences between clinical and non-clinical groups on both mental health and coping strategies. Analysis of the results showed that the parents of OCD patients reported psychiatric problems more than parents of individuals without OCD. There was a significant mean difference on the five subscales of symptom checklist (i.e. depression, anxiety, OCD, LFT and schizophrenia).

Similarly, on the ways of coping questionnaire both groups showed mean difference on emotion-focused coping, and problem-focused coping. The results showed that the clinical group was significantly different on self-controlling, escape avoidance and accepting responsibility from the non-clinical group. However, no significant mean difference was revealed on the subscales of problem-focused coping.

Similarly, Ahlstom and Wenneberg (2002) concluded that people under prolonged stress are more likely to use distancing and less likely to use accepting responsibility. Moreover, they also reported that people under prolonged stress were less likely to use problem-focused coping when compared with the control group. However, in the present study no significant difference was found between groups on the use of problem-focused coping. Parents of non-OCD children may have less stress to deal with.

The findings about the mental health of the parents of OCD patients are in line with previous literature (e.g. Nestadt, et al., 2001; Ramos-Cerqueira et al., 2008), which suggested that all anxiety and affective disorders are more frequently reported by the relatives of OCD patients. It is interesting to note that both groups are not significantly different on somatoform disorder. The possible reason for presenting these physical symptoms might be that in Pakistan, culturally, physical problems get more attention.
than emotional or psychological ones. That is why people in non-clinical group also showed these symptoms as a tool to attain their secondary gains.

**Limitations and recommendations**

The present study is not free from methodological limitations. The sample size was small; therefore, generalisability of the results is questionable. In addition, the sample was collected from Pakistani government hospitals featuring mostly people from lower socio-economic groups. Moreover, at the time of testing local norms of the Ways of Coping Questionnaire had not been developed; therefore, western norms were used. Also, the researcher could not screen the whole family of the non-clinical group because not all family members were available at the time of testing. The researcher hence relied on the verbal account of the parent.

The results of the study indicate the need for Pakistani parents of OCD patients to be screened for mental disorders. It may be possible that their mental health may not permit them to comply with the treatment of the OCD patients. Their involvement in pharmacological and psychological treatment may give the dual benefit. However, the results of the current study might not reveal that parental mental health contribute in the development and maintenance of the OCD in the patient. Moreover, clinical psychologists should include those strategies that help parents to build up more problem-focused coping, which may ultimately help them to resolve all problems more effectively.

**Mujeeba Ashraf**
Postgraduate student, University of St Andrews; Mujeebaashraf009@gmail.com

**Afshi Yahya Khan**
Centre for Clinical Psychology, University of the Punjab, Lahore

**References**


VITAL to the qualitative paradigm, reflexivity rejects the idea that a researcher can become completely objective towards a phenomenon. Instead, researchers should reflect upon their position in relation to the research, continually questioning how and why decisions were made and results occurred. This is an ongoing process that begins at research subject choice and continues through to the write up of an analysis. Throughout my qualitative research, I have engaged in personal reflexivity in order to consider how I may have influenced the process and findings. Reflexivity involves examining the researchers preconceptions regarding the research questions and situating their contextual background by acknowledging reasons for engaging in the research, as well as how results may have emerged from the data. I will provide some of my personal reflexivity from an Interpretative Phenomenological Analysis (IPA) study of pain following spinal cord injury (SCI), in the hope that readers can understand why I chose to research this topic and how I came to make sense of the sensitive data I obtained.

Preparing for my research journey
Before considering what I would research, I spent a year working on an acute care ward within a specialist spinal injury unit. Prior to this position, I had little knowledge of SCI and was shocked at the extent to which the injury could alter an individual’s life so devastatingly. At the same time, the 2012 Olympics and Paralympics were ongoing, and I repeatedly noticed that I held a sense of commitment to increasing the awareness of SCI and its consequences, but also to increasing patient awareness of what they can still achieve after an injury. It was then I knew that I wanted to research something of value to this population, in order to improve their lives after injury.

I also saw spinal patients who had persistent debilitating pain after their injury, which was also psychologically debilitating for them. I often encountered patients questioning how could they have no feeling from a certain point down, and yet still feel such intense pain. Embarking upon my research journey then, I chose to research pain management for those with SCI in the hope of contributing to improving the psychological well-being of the population in future. I began by looking into the literature, noticing that the majority of research surrounding pain following SCI was quantitative, with a rather fractured understanding of SCI-specific pain and its management. After noticing this, I began to question the literature. How could researchers understand SCI-specific pain without having an SCI? How could they possibly attempt to manage a pain that they could not experience without having an SCI? These questions enabled me to choose to research the lived experience of pain following SCI, using the IPA methodology. This approach places particular emphasis on understanding what is important to the individual in the experience (Smith, Flowers & Larkin, 2009), some-
thing that had previously been neglected in the available SCI literature.

One of my key reflections, enabling me to keep an open mind, was my early assumption that patients with pain would reflect upon life negatively. Upon looking back and reflecting on this, I came to realise that I may have been heavily influenced by my previous reading of literature that focused on psychological consequences of pain following SCI, such as depression and anxiety, despite literature also suggesting that positive adjustment following injury is common.

Maintaining a non-judgmental attitude
During the data collection process, I undertook a reflexive diary before and after interviews I conducted with patients. I took time to reflect upon the dynamics of the interaction, attempting to capture thoughts and feelings in order to maintain transparency during the research process. I noted themes that piqued my interest, and other events that occurred during the interview, considering the effects that these may have had on the interview.

It may be argued that the outcome of an interview is the product of the complex interactions between each patient and myself. For example, I asked patients to give me more information on topics that they mentioned that I had not previously anticipated. Further, during my first interview I noted feelings of surprise at the comment ‘I don’t take medication for my pain’. This highlighted a fore-assumption that I held, believing that all SCI patients with pain would be taking medication as a method of managing it. A beneficial result of this reflexivity ensured that I became more aware of the strength of previous assumptions and their potential influence upon the data, allowing myself to strengthen my ability to step away from such previous assumptions.

One of my most concerning reflections was upon my interpretations of the data provided. Patients often chose to discuss their negative experiences of encounters with healthcare professionals, and as such, my interpretations may reflect negatively upon the medical profession. However, I believe that by remaining true to the patients’ data without undermining medical staff, and allowing others to read and understand their experiences, more benefits can be gained through the improvement of pain management and rehabilitation for the SCI population.

Furthermore, I also chose not to take the data or interpretations back to the patients who took part. It is my belief that the consequences of member checking outweigh any potential benefits. All patients spoke negatively of the biomedical approach, perhaps due to feeling at ease during their interview. If I were to take the data back to participants, this may give them the opportunity to remove or edit comments in a socially desirable manner. Consequently, this would not reflect the truth of the experience, and it may be unethical to lose such truth.

Development as a researcher
Prior to commencing my qualitative research I found myself unquestioningly embracing the positivist approach, preferring numbers and causal laws to human behaviour. Throughout the process of this research, however, I became continually aware of a newfound respect, enjoyment and appreciation for qualitative research, and myself as a qualitative researcher, with the ability to open up new avenues for research as a result of qualitative work.

Furthermore, from my own experience of the interviews and analysis, and the themes that emerged, I know that it is not possible for me to fully understand the experience, but that the SCI population does want to be understood. This makes clear to me the value of my research in illuminating our understanding of pain after SCI.

Because data can be repeatedly analysed and interpreted, it took five drafts to reach my final write up of the results, when I finally felt some sense of gestalt or ‘good enough’ interpretation of the data. A number of discussions with my supervisors regarding
themes occurred, during which interpretations were discussed, such that the supervisors understood the themes adequately. I hope that this is reflected in future articles that I aim to publish, and in my thesis, and that the reader is able to recognise the effort that I have put into continually reflecting upon the research process and to disentangle the various experiences. I hope that this research will continue to illuminate the understanding of those who play significant roles in the well-being of the SCI population, such as healthcare professionals, friends, family and researchers.

I have been privileged to reach a deeper understanding of the experience, thanks to the patients that took part, through immersing myself in the participant accounts. Patients shared their personal and meaningful experiences with me, for which I am very grateful. As a result of this work I believe I can unquestionably say that I am very much looking forward to embarking upon my next journey with IPA, and developing my skills as an academic and a researcher.

The full version of this article is currently under review: Hearn, J.H., Cotter, I., Fine, P. & Finlay, K.A. (in submission). Disability and rehabilitation.

Jasmine Hearn  
DPhil student, University of Buckingham  
jasmine.hearn@buckingham.ac.uk

References
CLIMBED UP the steps of the bus and grabbed the nearest vacant space. Suddenly, a glow captured my attention. As I looked, it was a beautiful baby smiling at me! It reminded me of my 10-month-old son whose face bloomed like a Cheshire cat’s as soon as his eyes met mine. The eyes reflected a pleasant and a contagious emotion.

Somehow, the eyes are good at expressing positive emotions (Calvo & Fernández-Martín, 2012). This article emphasises the significance of eyes with respect to their function in communication and learning by examining the empirical research in this area. It also discusses the evidence regarding problems with eye contact, which could result in disruptive behaviour. Finally, this article suggests the need to investigate the role of eyes in disruptive communication patterns that lead towards antisocial personality traits.

Eye fixation has received much attention with respect to consumer behaviours. Consumer psychologists measure cognitive aspects such as attention through eye tracking studies (e.g. van der Laan et al., 2015). For example, it has been demonstrated (e.g. van der Laan et al., 2015) that even though the choice decisions of the consumer determine the total duration of fixation on an object, the first fixation on an object does not determine the buying choice of the consumer. Another eye tracking study (Ju, 2014) has shown that people tend to focus more on the graphics as compared to the text in an advertisement, but the text is also important. Therefore, eye tracking studies focus on the cognitive aspects of the consumer.

Moreover, eye tracking studies (e.g. Maurer & McCandliss, 2008) provide insight into the development of cognitive skills in children such as visual word processing. For example, pointing towards the object is related to the gaze directed towards that object, which is in turn associated with vocabulary (Benjamin et al., 2014). Thus, eye tracking studies show how gaze leads towards learning. Furthermore, eyes seem to facilitate learning about passive emotions such as fear and sadness amongst infants (Jacob, 1995; Rigato et al., 2013; West, 2013). Apart from eye movement, research has shown that changes in pupil size determine the level of interest in something (Honma, 2013). Therefore, the dilation or constriction of the pupil in the eyes provides information about the emotional and cognitive state of a mind (Demos et al., 2008; Jun et al., 2013). It might be inferred therefore that eyes are an inherent tool for learning and communication regardless of whether it is cognitive or emotional content (Navarro, 2009).

Eyes are not only a medium for conveying information to bring changes in the external environment, but also receive information (Macrae et al., 2002) and bring changes to the internal environment. For example, eye gaze can bring change in the external environment by triggering an action or movements amongst people (Sato & Itakura, 2013). A single eye gaze can help in disciplining a child, or create feelings of reverence, or the passionate beating of a heart. Similarly, eyes can bring change in the external environment through the display of mental states such as indifference, joy, anger, aversion, fatigue, listlessness, and so forth (Akechi et al., 2013; Sato & Itakura, 2013). On the other hand, eyes are a recipient of
information that bring changes in the internal environment of thoughts and emotions. For example, during eye contact, when you attend to another person’s eyes, your internal environment of emotions and thoughts is likely to change depending upon the display of thoughts and emotions through the eyes of the person who made eye contact with you (Moul, Killcross & Dadds, 2012).

Even though eyes have the power to bring about physical or emotional change in all types of environments in addition to mere expression and perception of emotions, miscommunication still might occur and lead towards problematic behaviour. Miscommunication can occur because every person has a different perception according to his/her personality or social context. For example, a socially anxious person might perceive an eye contact as extraordinarily stressful as compared to the one who is comfortable in social situations (Honma, 2013). On the other hand, people with callous and unemotional (CU) traits (i.e. without guilt, remorse or empathy) are known to avoid eye contact (e.g. Bons, Scheepers, Rommelse & Buitelaar, 2010). CU traits might be conceptualised in the form of an image of a rigid, cruel person who cannot align his emotions with the distressed emotions of others.

Therefore, people with CU traits might not perceive, recognise or attend to certain emotions such as fear and distress (e.g. Han et al., 2012; Sebastian et al., 2013). It has been argued (Keysar, Lin & Barr, 2003) that misperception or misinterpretation can occur to a certain extent. However, misunderstanding or lack of understanding amongst people with CU traits appears to cross the normal limits. This suggests that there must be something very different with eyes of a person with CU traits, which leads towards misinterpretation or alienation from others’ emotions. Thus, individuals with CU traits might not be capable of bringing a change within their own internal emotional environment and could potentially be dangerous for the society.

Eye tracking studies (e.g. Bons et al., 2010) have started observing the gaze of individuals with CU traits and suggest that such individuals do not make an eye contact. However, no eye tracking study apparently shows how eyes of such individuals express or perceive emotion; neither is there any evidence showing how eyes of these individuals interact in social situations. Furthermore, one also needs to find out if such eyes could lead towards reciprocal flow of emotions, and produce empathy (i.e. understanding of others’ thoughts, emotions, facial expressions and social norms) if they are forced to make an eye contact with another pair of eyes (Dadds et al., 2011; Han et al., 2012).

In conclusion, it might be inferred that eyes as an agent of communication have a pivotal involvement in both prosocial and disruptive behaviours. If eyes contribute towards the development of cognitive skills, and express and perceive meaningful emotions, which in turn lead towards certain behaviours as well as brain activation, then they might also be involved in disruptive communication and behaviour patterns. Further neurobiological investigations are needed to answer questions about the way the eyes of individuals with CU traits express emotions and communicate with others. Consequently, follow up studies might indicate the way in which thoughts and emotions of people with CU traits might be positively synchronised through the training of the gaze reflected through their enigmatic eyes and thus lead towards improved communication and prosocial behaviours.

Saima Eman
PhD student, Department of Psychology, University of Sheffield; Lecturer in Psychology, Lahore College for Women University, Pakistan; saima.eman@sheffield.ac.uk

Acknowledgement
The author would like to thank the Association of Commonwealth Universities.
References


Psychology people in profile:

Professor Neil Rackham

Kate Doran

Before the weather turned cold, Kate Doran caught up with Professor Neil Rackham over Skype. Professor Rackham originally trained in experimental psychology at the University of Sheffield. After postgraduate research in social psychology, he developed an extremely successful career in sales and marketing. He is now based in the US. His book ‘SPIN Selling’ (1998) is McGraw Hill’s all-time best-selling business book.

Kate first met Professor Rackham at a research seminar at Sheffield University (Rackham, 2014). So inspirational did she find his presentation on the outcomes of his own applied research that she approached him for an interview as part of the ‘Psychology People in Profile’ series to find out more about the motivation and processes that led to these outcomes. Professor Rackham generously took time out of his busy schedule to speak to Kate for PsyPAG Quarterly.

Thank you very much for your time today, Professor Rackham. To begin, can you tell me about your job?

I have three different jobs: I have four visiting professorships (see Box 1) where I mostly work on sales and marketing issues; I’m on the speaker circuit (see Box 2) and I’m a little tiny global brand that has to travel the world because if I’m not in China this year they assume I’m dead! And the third thing that I do is I write. I write the occasional book – although I’m cynical about books today because it takes so long to get printed. In a fast-moving field like the one I’m in, they’re already out-of-date by the time they get published.

How did you get into this work?

After my undergraduate degree, I was awarded a three-year research fellowship, working under Professor Peter Warr at the MRC Unit in Sheffield University. I started to look for ways of measuring the interaction between people in some quantitative form. The obvious way of doing it was to count the frequencies with which certain behaviours were used and to associate them with the outcome of the interaction in some way. At the time, there weren’t many instruments available for doing this (there still aren’t). The famous one is Bales’ Interaction Process

Box 1 – My four professorships

1. Executive Professor of Professional Selling @ Cincinnati University:
   Here my job is to build an exciting curriculum.

2. Visiting Professor @ Portsmouth University:
   For more than 10 years, I have encouraged and supported the development of the only Master’s degree in Sales Management outside the US.

3. Visiting Professor @ Cranfield University:
   Here my role is focused on executive education and encouraging new research using sophisticated techniques to examine complex sales.

4. Visiting Professor @ Sheffield University:
   Here I’m bringing sales and marketing thinking into the Management School.
Analysis (1950), still in use today, but it’s a hopeless instrument to use if you have several people trying to compare results because of its dreadful inter-rater reliability. It has categories which are very subjective, things like ‘negative socio-emotional behaviour’: lots of judgemental things. So I set about looking for instruments that didn’t have a value loading. In those days you had much more freedom than you do now to pursue the things that interested you. The research was supported by the then Ministry of Labour and all they wanted at the end of three years was some evidence that we produced useful stuff. We produced a book, Evaluation of Management Training (Warr, Bird & Rackham, 1970). After my fellowship, I had some very tempting research offers from Xerox and IBM, who provided very big budgets. So I then started to study the interactions between sales people and their customers very seriously.

Tell me more about this project
We started out with a hypothesis that the sales methods which may work for the American customer may not work so well for customers in Europe. We observed effective selling in Europe to see what worked. Companies like Xerox, IBM, Olivetti – a whole bunch of them – said they would be very interested in seeing our results. More and more people chipped into the research budget, and the design became more complex and sophisticated. In the end we watched 35,000 sales calls in 23 countries in 11 languages. It took us 12 years. It was by far the biggest study of selling that had ever taken place and, because it’s getting harder to obtain funds nowadays, it’s probably the biggest that ever will take place (see Box 3).

How did the project develop?
As we began studying sales, we came up with a provisional model and then we encouraged our sponsors to give us an active branch of salespeople. We tried training half of them using the model to see if there was any improvement. There was enough improvement for us to feel that there was something in the model, and so did the sponsor. That enabled us to generate another level of research funds. After that, we were given a failed sales branch in Xerox. They had 34 sales people and seven sales managers. Head office agreed not to change people for six months. Within six months, the branch moved from seventeenth (worst) performing branch to third. And then, in the six months following, they became the top-performing branch. It was very easy to get research funds after that. Now, I’m not in any way claiming that what came out of our research was responsible for these huge changes, but nevertheless it’s things like that that create funding.

Box 2 – A tale from the speaker circuit…
‘I was in Moscow where three of my books were published on the same day in Russian translation. The publishers held a big press conference which, because they were inexperienced in these kind of things, involved them giving out the vodka before the speeches. When we got to the speeches, I stood up and gave the polite spiel and asked if there were any questions. In the front row, a man with a huge beard (a classic Bolshevik type) stood up and shouted something which I didn’t understand. My interpreter said in my ear, ‘He says, “Selling is not in the soul of Russia. Selling is an evil imported to subvert pure thinking because it is manipulation, it is coercion and it is evil. What is your opinion?”’

In a moment of inspiration I said, ‘I don’t believe that it’s not in the Russian soul. After all, if I were putting together the best sales team in the world, I would have Chekov to make the presentation, Tolstoy to write the strategy and Dostoevsky to handle the difficult customers.’ This got itself put all around the Moscow press. And now, when I go to Russia, I attract big audiences!’
How did you grow your research team?
To begin, I hired two psychologists, one graduating out of London, one from Oxford. As we moved on we realised we wouldn’t be able to extend our work with just three people so we approached a number of companies, and said ‘Why don’t you provide us with researchers? We’ll train them in research techniques and have access to the data they collect, but you are left with people who can do further internal work because they understand the methodology.’ Capability building in exchange for research resources worked very well, especially in the European context of multiple languages.

What did you do next?
We studied all sorts of elements of sales management and sales strategy and we began to look at some complex issues of buyer behaviour, which meant that in the end we had to look at sales and marketing and not just sales. That brought us into yet more new fields. You can take two different approaches to research: (i) going into more and more depth in an individual area; or (ii) using research you’ve done in one area to begin to branch out and think about its application in other areas. The latter was the approach we took. The result of this was that we started with a laser-like focus on individual sales calls and ended up looking at things like sales organisations, sales and marketing integration, and a set of much wider strategic issues.

Where are your current research interests?
The really intriguing thing at the moment is trying to understand how you respond to a rapidly changing and uncertain world. You would think that sales is an area that would change very quickly because it’s at the cutting edge. But actually sales is very conservative, very slow to change. The internet has changed buying and there are big shifts in sales and marketing which companies are trying to come to grips with. It’s a very difficult set of issues and I find it deeply interesting.

Is there much scope for applied social psychologists in this area?
Very much. We live in a competitive world where we survive by creating value. And there is more value to be created between organisations than inside organisations. It’s at the interface between companies that the potential for really important new value creation lies. To make significant impact, you have to understand the issues at the boundaries. I think that social psychology is about that. At the moment it’s only the economists who try to claim that ground and, between you and me, I think they’ve done a lousy job. I think social psychologists could do much better.

What advice do you have for our readers?
[Pause] I’m an example of someone who’s done very well by doing things I found interesting. I decided not to go the conventional research route, yet I’ve always done research. I think in the future, if research is going to survive, it has to go beyond the aesthetics of pleasing journal editors. We have to ask fundamental questions about the relevance and utility of what we’re doing; then research can regain its driving position as being enormously important. As a postgraduate, don’t just think of a research career as within a university. There’s a lot of research to be done outside universities. But always have that criterion of the relevance of what you do driving your career and your direction.

Kate Doran
PhD Student, Centre for Psychological Services Research, The University of Sheffield; k.doran@sheffield.ac.uk

References


Box 3 – The discovery of SPIN Selling (Rackham, 1998)

Until we came on the scene, it was assumed that open questions were somehow superior to closed questions. Billions of dollars had been spent training salespeople to ask more open questions. It turned out that we couldn’t show a link between these question types and the success of a sales call! So we looked at how successful sales people were asking questions and we found that they tended to use the following pattern of questions:

1. **[S]ituation questions** – Fact-gathering questions, helping a seller understand the customer’s context. Very effective people didn’t ask too many of these questions, just enough to identify an area where the customer had a problem.

2. **[P]roblem questions** – These gave the sales people the raw material to enable them to do something for the customer. They were positively correlated with success and inexperienced people tended to be reluctant to ask them.

3. **[I]mplication questions** – These were the breakthrough in this model. Let us suppose I’m selling a machine that is much quicker than your present machine. I’d ask, ‘Are you satisfied with the speed of your present machine?’ That’s a problem question to which you may say, ‘Well, it’s a bit slow.’ In response to this, most salespeople would say, ‘Let me tell you about how our machine is the fastest on the market.’ That’s not what top salespeople do. They ask another type of question. When the customer said, ‘Yes, speed’s a bit of problem.’ Top salespeople asked questions like, ‘Does that mean this is creating a bottleneck for other areas? Is that increasing your costs?’ Successful salespeople ask four times as many implication questions in successful calls than in unsuccessful calls.

4. **[N]eed-payoff questions** – These are about value. But the acronym ‘SPIV’ would be inappropriate, so we needed to give these value questions another name! Questions like ‘How would it help you if you were able to do this?’ got customers to talk about the value of particular attributes to them.

This was the pattern of successful questioning used by the top 10 per cent of salespeople. Where people were trained to do it, there was a significant increase in their sales in the following six months. Initially, we assumed the SPIN model was specific to Europe. Subsequent research showed that it worked equally well in the US. A 2012 replication study replicated these findings.
I was fortunate enough to be recently awarded with a study visit bursary from the MacRobertson Fund; a scholarship between my own university (the University of Strathclyde) and the University of Glasgow. I spent two months in southern Sweden from September to November 2014, based in the psychology department at Linköping University, which was voted the best in Sweden last year by Higher Education Statistics Sweden. The importance of a visit to this particular institution was the opportunity for a dual-purpose visit, as the two main elements of my work are problem-based learning research (PBL; i.e. group work) and discursive research, both of which are conducted and researched at Linköping. In addition to this, Linköping engages in PBL in psychology, which is comparatively rare in the UK. The visit therefore gave me an excellent opportunity to see how psychology is being taught from this perspective, and how I can learn from this and apply it to my PhD. The purpose of the scholarship was to experience academic life in an international department, and the aim of this brief report is to reflect on the lessons I learned from two months of academic me-time.

Before I left for Sweden, I had a two-page list of self-set deadlines to achieve by the time I got home. ‘The peace and quiet of an office to myself, the lack of distractions from having no social life; I will probably get my whole PhD written!’ I thought. I was wrong.

Yes, I got a lot of work done, but I did not tick everything off the list, and because of this I felt quite disappointed with myself. Whilst I was away, my main focus was to compile a data corpus for the analyses of my thesis. However, because my data consists of video footage, it was difficult to stay focused for eight hours a day, five days a week. In theory, I had eight weeks of (mostly) uninterrupted time – ideal for creating a corpus – but when it came down to it, it was near impossible. Nevertheless, during the time I had, I also wrote a paper, started a second, completed various reports, began some analysis, composed two seminar presentations and still managed around a third of the corpus.

Lesson 1: Be realistic about what you can do. Sure, I could have refused a visit from my sister or mum to give me more study time, but socialising and experiencing life outside of university in Sweden was an important part of the visit too. There is a ‘meme’ currently doing the rounds on the internet which says, ‘that’s me all caught up!’... said no academic ever’, and I think it is important not to let yourself get overwhelmed by the amount of work a PhD involves – take one day at a time and tomorrow you will be further ahead than you are today.

Lesson 2: Appreciate what you’ve got at home. Although the Swedish undergraduate psychology programme is enviable (five years long, hands-on experience with a clinical population, a Masters degree at the end), the PhD programme, to me, is not so enticing. Whilst in the UK most full-time PhDs are three years long with an optional extra year for writing up, PhDs in Sweden are between four and five years long, with the expectation that you will teach as part of it. In some places, you can do even more
teaching and the extra time taken up by this is added on to the time left for your PhD, meaning you graduate with a doctorate and at least a year’s teaching experience. However, PhD students in Sweden are expected to publish at least two papers within this time, and cannot officially finish until they do so. In addition, their vivas are open to the public, so that anyone (colleagues, family, strangers) can attend and watch. You have an ‘opposition’ who has read your thesis and has prepared a presentation showcasing the strengths, but also the limitations of your research. Thereafter, there is no opportunity to make amendments to your thesis as it is published and distributed on the day. For this reason alone, I am very appreciative of the format at home, as I would not relish defending my last three years of work in front of a large audience. My honorary supervisor whilst in Sweden even proposed to come over to Glasgow to watch my viva so I had great delight in telling her that ‘unfortunately’ it was a closed event! On a more personal level, being away from home and living alone for two months made me appreciate for my friends, family and colleagues at home. Although I interacted with the people in my department in Linköping, the lack of significant interpersonal relationships – for instance, in the evenings – made me miss what I have at home, and so I am grateful to be reminded by omission of the fantastic support network I have.

The visit afforded me the opportunity to interact with and gain crucial feedback from colleagues who understand what I’m doing and the wider impact of my work, allowing me to feel re-enthused about my project. This was timely given that the end of my PhD is in sight, but I have a huge amount to do in the mean time.

Lesson 3: Be opportunistic. Grab experiences with both hands. For instance, whilst I was away, I held a ‘working seminar’ in which I produced a piece of writing about an aspect of my work that colleagues could critique to allow me to re-evaluate what I was doing and why. Although this was incredibly daunting, it proved very helpful in that it gave me new ideas to take home, and garnered valuable feedback from those working in my field. Those in attendance at the seminar even expressed an interest to stay somewhat involved in my PhD, offering to provide feedback on my research at a later stage, which is the kind of support one can only dream of! I also spent some sessions observing groups of students as they worked (which mirrors my data collection at home), and although they spoke in Swedish, this was actually very helpful as I could focus on the non-verbal interaction that was occurring, which is something I am currently looking at in my own data. It would have been easy to avoid these types of situations and keep myself locked away in my office, but it was important for the staff and students to understand what this Scottish girl was doing in their department, and for me to take as many opportunities as I could to interact with others, and get to know life in a Swedish university.

Lesson 4: The final lesson. Try to emulate some of the Swedish experience back at home. For instance, possibly because my PhD project is within the area of social psychology, one of the nuances I was particularly intrigued by was the Swedes’ attitude to their social well-being. For example, there is the tradition of a 9.30am coffee break. Someone in the corridor will shout ‘fika’ (coffee break), and whoever is free – post grads, lecturers, professors, HoDs – will meet at the communal area for a coffee and a chat. It is not the ‘done thing’ to drink coffee by yourself in your office as this is seen as quite unsociable. There is also a tradition in Sweden of holding ‘after work’ get-togethers, where colleagues will go out for dinner and drinks. Many bars and restaurants offer ‘happy hour’ prices to entice customers in, and I attended a couple of these, which was great for getting to know the department. Research has shown that socialising with work colleagues can hold
health benefits (Veenstra, 2000) and is important for encouraging a group identity (Pettinger, 2005), and although the PhD students in my department at home don’t need any more encouragement to socialise, before the end of my PhD, I aim to encourage more socialising between staff and postgraduate students.

In conclusion, I had a productive and enjoyable stay in Sweden, and I would like to thank PsyPAG for the bursary that was afforded to me. If anyone would like to hear any more, see any of the hundreds of photos I took, or has any questions regarding their own study visit, please feel free to get in touch!

**Gillian Hendry**  
University of Strathclyde  
gillian.hendry@strath.ac.uk

**References**


LOOKING TOWARDS the pedagogical literature there is an array of reflective accounts from experienced academics who teach in the higher education sector (e.g. Breen, McCluskey, Meehan, O’Donovan & O’Shea, 2014; Hughes, 2010; Morton, 2009). However, a significant gap emerges when trying to pinpoint reflective accounts from graduate teaching assistants (GTA), especially from a UK perspective (Nyguist & Wulff, 1996); with one notable exception (see Zhou, 2014). This gap in the literature merits an acknowledgement (Park & Ramos, 2002), as many GTAs enter teaching with insufficient experience and training (Kaye & Brewer, 2013; Lantz, Smith & Branney, 2008; Luft, Kurzdziel, Roehrig & Turner, 2004). Furthermore, the widespread and long-standing commitment regarding the practical effectiveness of critical reflection in the enhancement of teaching (Larrivee, 2000; Morrow, 2009) is rarely initiated within science-based disciplines, such as psychology (Morton, 2009; Morrow, 2009; Zhou, 2014). Addressing both of these issues, this article provides a critically reflective account of my experiences as a neophyte GTA, teaching statistics in the Department of Psychology. In line with Zhou (2014), it aims to promote the utility of critical reflection as a tool for professional development and encourage early-career teachers and academics to employ this form of writing to enhance their own practice.

My own psychological journey
Alongside my PhD candidacy, and as a condition of my funding agreement, I have been given the opportunity to engage in departmental teaching duties (see National Postgraduate Committee, 2001). To assist in the development of my teaching skills, I enrolled onto the Post Graduate Certificate in Teaching in Higher Education (PGCTHE). This formal qualification is a key component for anyone aiming to pursue a career in professional education teaching in the UK and operates via the pivotal assumption that critical reflection is a key agent in professional development and quality assurance (Morton, 2009). From day one, I was encouraged to reflect upon my teaching practice, analysing how my values, beliefs and assumptions may impact on my teaching, and resultanty, my students’ learning.

Prior to my first teaching session, I reflected on my personal teaching philosophy, in which I had identified an aspiration to be valued through being approachable and friendly, yet effective in managing student behaviour. Based on this, I adopted a largely relaxed and informal manner in my practice, but soon observed some negative student behaviour (e.g. playing on phones and talking), which I found difficult to resolve. Given my lack of teaching experience, I attributed the reason for this behaviour to myself and became concerned that there was an issue relating to my age. I believed that the younger students were too similar to me and would not respect me.

My own psychological journey
Alongside my PhD candidacy, and as a condition of my funding agreement, I have been given the opportunity to engage in departmental teaching duties (see National Postgraduate Committee, 2001). To assist in the development of my teaching skills, I enrolled onto the Post Graduate Certificate in Teaching in Higher Education (PGCTHE). This formal qualification is a key component for anyone aiming to pursue a career in professional education teaching in the UK and operates via the pivotal assumption that critical reflection is a key agent in professional development and quality assurance (Morton, 2009). From day one, I was encouraged to reflect upon my teaching practice, analysing how my values, beliefs and assumptions may impact on my teaching, and resultanty, my students’ learning.

Prior to my first teaching session, I reflected on my personal teaching philosophy, in which I had identified an aspiration to be valued through being approachable and friendly, yet effective in managing student behaviour. Based on this, I adopted a largely relaxed and informal manner in my practice, but soon observed some negative student behaviour (e.g. playing on phones and talking), which I found difficult to resolve. Given my lack of teaching experience, I attributed the reason for this behaviour to myself and became concerned that there was an issue relating to my age. I believed that the younger students were too similar to me and would not respect me.
Conversely, I felt that the older student cohort would question my integrity as a younger academic. I found these concerns to be highly detrimental to my confidence, which in turn, I suspect translated into my practice. At this point, I considered the issues covered on the PGCTHE course, in which I had learnt that internalising one’s own reflections with little acknowledgement of challenging these can fail to confront existing ways of thinking (Fendler, 2003) and inhibit professional development (Hoban & Hastings, 2006). In order for my reflections to be meaningful, I therefore had to find a method that enabled me to utilise alternative perspectives on my practice (Loughran, 2002).

As students are the intended beneficiaries of teaching, they are in a unique position to assist teachers in the evaluation process (Fink, 1999). Accordingly, I looked towards my students to evaluate my teaching. In line with the Centre for Teaching and Learning (CTL, 1997), I explained to them that I was a ‘teacher in training’ and asked students to write one positive aspect regarding my teaching style, and one area for improvement. I then asked students to throw their feedback into a ‘bin’, which I placed at the front of the room. Upon reading student responses I noticed some prominent themes emerging that appeared to focus around setting expectations:

Student A: ‘To improve, I feel you need a little more class control. Such as starting the year about what you want (e.g. no phones).’

Student B: ‘I think you control a large class extremely well. You are friendly and approachable and explain things very well, with lots of examples. I think you could improve by setting ground rules so we know what to expect’.

In this way, my students functioned as ‘critical friends’ (Anderson, Knowles & Gilbourne, 2004), pinpointing distortions in thinking and areas of development in my teaching (Salsali, 2005; Olatoye & Afuwape, 2004; Olatoye & Aanu, 2011). By employing this student evaluation and feedback strategy, I was able to recognise that my age-related self-stigmatisation was simply a product of my personal insecurities, and was not reflected in my teaching. By fixating on my personal characteristics I was ignorant to challenging these beliefs, and hence, restricted the potential development of my practice. This feedback thus allowed me to acknowledge that I had met my aspirations, outlined in my teaching philosophy, and had fostered successful teacher-student relationships (TSR), which have been found to be a key component of student learning (Bainbridge-Frymier & Houser, 2000; Cornelius-White, 2007). In addition, this activity proved particularly beneficial in identifying areas for improvement in my teaching, such as setting student expectations.

Evidently, there are many advantages of employing student feedback to evaluate and enhance teaching practice, and I therefore encourage early career teachers to listen to their students’ voices to improve their teaching in the same way. My recommendations for the gathering student feedback are: (i) allow students to anonymously write their evaluations of your teaching and place them in a ‘bin’ at the front of the class, or (ii) utilise an anonymous feedback system (e.g. Poll Everywhere), which acts as an interactive and engaging in-class activity. Here, I also feel that it is important that students understand why you are gathering feedback, as I have found that many students appreciate that you are taking action to enrich their educational experience.

Recognising the needs of my student cohort
Other experiences of teaching have led me to reflect on the diverse needs of the student body in promoting effective teaching and learning. In particular, two experiences are key to these reflections:

(i) During a laboratory class, one of my students experienced a critical incident, in which he/she had an epileptic fit. As a qualified Life Guard, I am trained in the administration of first aid. Yet, confronted with this
incident in a different setting, I panicked a little. I had to ‘think on my feet’, ensuring that the student was safe whilst also removing other students from a potentially distressing situation. I instructed the other students to take a short break and then followed the correct emergency procedures. On reflection, although I dealt with this incident in a relatively effective manner, I was concerned with the level of training that other staff members had received. I followed this up by expressing my concerns at a subsequent departmental staff meeting, in which further action was taken. Critical reflection, from this perspective, has therefore increased my awareness of diversity and equity, and the additional provision that can be implemented to promote an inclusive learning environment. Yet perhaps the most significant consequence of this experience is the new approach to how our whole department now gathers and manages information related to students with additional needs.

(ii) A second experience that enabled me to acknowledge student diversity as critical to effective teaching and learning relates to an issue raised concerning the topic of a session. Many subject matters in psychology resonate with students’ lives, and although this can generate student interest and motivation, there are certain topics that students may find personal, thus eliciting an emotional response. For example, during one session, students were required to complete a questionnaire regarding their adult relationships and attachment styles. The results of which were to be collated and analysed as part of students’ formative assessment. I sensed that the session had gone well, with every student completing the questionnaire. Afterwards, however, I was made aware that some students had raised concerns that this particular topic may be sensitive for those who had not experienced an intimate relationship or may have experienced emotional upset in relation to a past relationship. From the pedagogical literature, I understood the importance of recognising the diversity of students’ opinions and backgrounds (see Shaw, 2009, for a review). Despite this, I had not been made aware of this issue during my session, and thus had to adopt an a posteriori approach, subsequently exploring various strategies for resolving this issue.

In the following session, I explained to students that I agreed with the points that had been made and that no one would be identifiable by their questionnaire responses. I further clarified that students could withdraw their data if they felt that they did not want it included. My students were pleased that I had acknowledged their views and had explored multiple strategies to resolve this issue. They agreed that they were happy with the data to be analysed, and I explained to them that they could critique the questionnaire within their assignments. Furthermore, through the process of reflection, I was also able to recognise additional strategies that I could implement to diffuse this situation in the future. First, before commencing with the session, I could explain to students that some of the topics covered may be sensitive and personal, giving a brief summary of what the session will include. Second, I could plan the session to include group discussions about the course topic, thus enabling me to gauge students’ opinions and promote critical analysis. Third, as well as offering pastoral support, I could present students with a resource guide, directing them to institutional support and national services (Durfee & Rosenberg, 2009). From this perspective, as well as enabling me to acknowledge the views of my current student cohort, critical reflection also acted as an invaluable tool, in the long term, to further develop how I deliver the curriculum to prospective students.

Reflecting on reflection

This article has provided a critically reflective account of the experiences that I have encountered during my first year of teaching. Here, I have documented my personal doubts and insecurities surrounding teaching with limited prior experience, which have been eliminated through utilising student feedback. In addition, I have outlined two experi-
ences that, through the process of reflection, have enabled me to acknowledge the diverse nature of my student cohort and the strategies that I can implement to augment learning. This is my personal reflection, and therefore may not mirror the experiences encountered by other early career teachers (see Zhou, 2014, for comparison). Nonetheless, I hope that you can identify how critical reflection can greatly enhance the quality of teaching, and further contribute to both one’s personal and professional development.

There is thus a wider message here that I would like to convey: As psychologists, we rarely initiate reflective thinking in our practice. To many, critical reflection is viewed as a foreign activity, which does not conform to a traditional scientific paradigm (Morton, 2009). Yet, I argue that this way of thinking may inhibit the opportunity to examine introspectively unidentified judgements, interpretations and assumptions, which if uncovered, may facilitate teaching. Despite my preliminary reservations, I now subscribe to many educational scholars’ views that critical reflection provides an invaluable tool to review the experiences we encounter and engage in a conscious process to learn from them (Ghaye & Ghaye, 1998; Jasper, 2003; Morton, 2009; Schön, 1983). I write this article, today, having been nominated for a student-led teaching award. Yet without the process of reflection, I firmly believe that I would not have found myself in such a rewarding position. Reflecting on my teaching experiences have offered me ‘new way of knowing’ (Sparkes, 1998), and an avenue to explore and overcome the issues that I have faced as a neophyte teacher (Freese, 2006). Irrespective of whether this form of writing conforms to the traditional scientific paradigms inherent in the discipline of psychology, I therefore encourage teachers to employ the process of critical reflection to evaluate and enhance their teaching practice.

Charlotte R. Pennington
PhD Candidate & Graduate Teaching Assistant, Department of Psychology, Edge Hill University; penninc@edgehill.ac.uk

References


Why do we need systematic reviews?

Before we begin to design a new research study, it is important that we have a clear idea of what already exists in the literature so that we can improve on previous research designs and identify niches to explore further. Studies should be interpreted and understood in the context of other studies that have tested similar hypotheses and similar populations (Petticrew & Roberts, 2006).

Generally, reviews can offer an overview of existing evidence but it should be recognised that they can also be biased. Traditional reviews, written in a ‘journalistic’ style, are particularly at risk of this (Greenhalgh, 2010). These narrative review types tend to be subjective, in that they only reflect the opinions of the reviewer; hence they are unlikely to be reproducible (Centre for Reviews and Dissemination (CRD), 2009). On the contrary, systematic reviews are ‘conducted to explicit, transparent and reproducible method’ to minimise bias (Greenhalgh, 2010, p.113).

As a PhD student, you might be required to conduct a systematic review as one of the first steps of your research. Alternatively, your PhD may be similar to mine in that a systematic review is the main component of your doctoral research. Conducting a systematic review can be a large and complex task, as there are numerous decisions that the reviewer(s) needs to make. This can be particularly daunting if you have no or limited experience of systematic reviewing. I am currently halfway through my review and there are certainly things which I wish I knew about before starting. The aim of this article is to outline the stages of carrying out a systematic review and share some tips which may be useful to fellow postgraduate systematic reviewers, based on my personal experiences. Given that I am only halfway through my review, the present article will focus on the development of a systematic review protocol.

Why is it important?

One of the first tasks I undertook as part of my PhD was to write a systematic review protocol. Having a detailed protocol before starting the systematic review process is important for several reasons: First, a key advantage of systematic reviews is that it is conducted through transparent and reproducible methods. Therefore, it is important to have pre-specified inclusion/exclusion criteria and methods of identifying, appraising, analysing and synthesising data from the outset. This will create a structured framework for the review. Second, as a PhD researcher, you are likely to be the one who primarily works on the review. However, particularly for larger reviews (such as mine which includes approximately 250 studies), you might have other researchers working on the review. A protocol will ensure that everyone on the research team is clear on their role in the review and the tasks they need to undertake.

Inclusion/exclusion criteria

I started my protocol with a literature review to help develop a critical understanding of the existing literature. This will help you to
determine whether a systematic review is warranted and why it is needed, and aid the development of clear research questions/aims. This could also be achieved through more systematic means by conducting a ‘scoping review’ which uses explicit search strategy (discussed later on) to identify how much work has been done in a particular area. The next step is to specify the type of studies that your review will include and exclude. Inclusion/exclusion criteria will depend on what your review is on. In my case, I have set criteria relating to the design of the study, type of intervention, type of participants, and type of outcome measures. I found it helpful to look at similar previous systematic reviews to see what inclusion/exclusion criteria they had adopted.

**Literature search**

Once your inclusion/exclusion criteria have been decided, the next step is to plan how you are going to find these studies. The Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) framework suggests that identifying studies for review consists of four stages: identification, screening, eligibility and inclusion (Moher et al., The PRISMA Group, 2010). In terms of the identification stage, studies can be identified through several avenues: expert consultation, hand-searching of relevant journals, backward- and forward-citation searching of the most relevant review papers, and grey literature and electronic database searching. You may decide to use all or only some of these sources but it is important to bear in mind that you have limited time to complete the review as part of a PhD, so feasibility needs to be considered.

Electronic database searching is probably the most common source for identifying relevant studies. To ensure that you capture as many relevant studies as you can, a detailed search strategy should be used. Appropriate search terms can be identified from previous similar reviews. For those conducting reviews that are health-related, ‘PICOS’ (Population, Intervention, Comparator, Outcomes, Study) might help you to turn your research question into a search strategy. If your university library has an information scientist, you might also want to consult them for advice. It should be noted that the search strategy needs to be adapted for different databases as the use of wildcard symbols and truncations will vary across databases.

Given that there are numerous databases available (e.g. MEDLINE and PsycINFO), it can be hard to decide how many and which ones to search. To tackle this, I searched different databases to see which were able to capture studies that had been included in previous similar reviews. This gave me an idea of their potential to capture relevant studies. Once again, when making these decisions, it is important to consider feasibility. The more databases that you search, the more citations your search will generate, and the longer the screening process will take.

Citations generated from searches should be exported into reference management software to facilitate management. Popular choices I have come across include Reference Manager and EndNote. I would also suggest exporting citations into Microsoft Excel so you have a spreadsheet to record which papers have been retained after title, abstract and full-text screening. Reasons for exclusion at each stage of the selection process can be documented in this spreadsheet. This information will need to be reported in the write-up of your systematic review. The number of papers obtained from your literature search and the number of studies you include into your review will differ as one study may have been published in several papers; so the spreadsheet will also be useful for keeping track of these details.

**Screening**

The next stages outlined by PRISMA are screening, eligibility and inclusion. After duplicate citations have been removed, the screening process will consist of two stages: For initial screening, the titles and abstracts of the studies will be screened against the
pre-specified inclusion/exclusion criteria. In the second part of the screening process, full-texts of the studies included from the initial screening stage will be screened. Some universities may not hold subscriptions required to access the journals needed to review. If this is the case, full-texts can be requested through inter-library loans. This can be a lengthy process so I would advise that you request these at the earliest opportunity, such as at the title and abstract screening stage. To ensure the reliability of literature selection, wherever possible, a proportion of the titles and abstracts, and full-texts, should be screened by a second independent researcher. As a ‘rule of thumb’, this might be 20–30 per cent (Schlosser, 2007), but should be decided amongst your research team. Differences should be resolved through discussion, and if agreement cannot be reached, a third researcher should be consulted. Statistical measures of agreement, such as kappa, should also be calculated as these can describe the degree to which assessments made by different authors are the same (Higgins & Green, 2011).

**Data extraction and quality assessment**

It is important to be clear on what information you want to extract from the studies you have found. This should be considered in relation to the aims of your review and planned analyses. Relevant information may relate to participants, intervention, outcome measures, and results/analysis. Besides this, you might also want to collect data related to methodological quality. Critically appraising included studies in a systematic review is important because not all studies are methodologically sound. For example, studies with lower samples tend to produce exaggerated estimates. Hence, when synthesising the results of the study, studies of higher methodological quality should be given more weight. There are different critical appraisal scales/checklists available for different research designs, so it is important to choose one that is relevant for the studies included in your review. For instance, if your review only includes randomised controlled trials, one option would be the Cochrane risk of bias assessment tool (Higgins & Green, 2011).

A data extraction form that captures all the relevant information should be developed and piloted on a handful of studies to see how well it fits your review. This is likely to be an iterative process in which you have to keep amending and testing until it is considered ready for finalisation.

**Plan of meta-analysis**

A systematic review does not have to include a quantitative synthesis but, should your studies permit you to do so, you could conduct a meta-analysis – a ‘statistical technique used to combine the results of two or more studies and obtain a combined estimate of effect’ (CRD, 2009, p.268). As data is pooled across studies, power is increased, so there is greater accuracy and precision of estimates. A meta-analysis may not be possible if the included studies are too heterogeneous. This means there is too much variability or differences between studies to warrant pooling these studies together. These differences could be in terms of statistical, methodological or clinical heterogeneity (CRD, 2009). It would therefore make little sense to compare these different studies, as it would essentially be comparing apples to oranges. If you do conduct a meta-analysis, you might also want to conduct sensitivity analyses to see if results differ when you include/exclude certain studies. For example, in my review, I will be exploring whether my results differ when only objective measures of physical activity behaviour are included. If your review is qualitative, you would conduct a meta-synthesis rather than a meta-analysis.

**Final thoughts**

Overall, conducting a systematic review is not an easy task but could be made easier by developing a thorough protocol in which each stage of the review process is planned.
in detail before the reviewing commences. The protocol is likely to undergo many rounds of amendments, and although it should be avoided wherever possible, it may still need modifying even when the review has started. Systematic reviewing is simply not straightforward. For instance, one may encounter studies which do not fit any of the pre-specified criteria, so the criteria will need to be amended.

One last piece of advice I would give to those considering doing a systematic review would be to undertake some systematic review training. I completed the Introduction to Systematic Reviews and Critical Appraisal course run by the Centre for Reviews and Dissemination at the University of York, which I found to be very helpful. Other courses I had come across include the ScHARR Systematic Reviews Course: Practical Skills for Undertaking Reviews, at the University of Sheffield. With the range of courses available, I am certain that one can find a course that suited to the needs of their particular review.

To conclude, despite being a complex task, I am confident that anyone can achieve an in-depth insight and understanding of their subject area through conducting a systematic review, and hopefully advance knowledge in their area of research.

Mei Yee Tang
PhD Student, Manchester Centre for Health Psychology, University of Manchester
meiyee.tang@manchester.ac.uk

Acknowledgements
Thank you to Professor David French for his comments on an earlier draft of this article.

References
Hints and tips:

Tips for conducting hypnosis research

Hazel Anderson

HYPNOSIS is a fascinating area of research, as not only can hypnosis itself be investigated (intrinsic research) but it can also be used as a tool (instrumental hypnosis) to research other areas (Oakley & Halligan, 2009). There are currently so many conflicting hypnosis theories that it isn’t possible to give a clear definition of hypnosis itself, rather it is described in terms of the process conducted (Wagstaff, 2014). Hypnosis starts with an induction, where the participant is encouraged to focus their attention and relax, ready for the suggestions. Suggestions, which are proposed instructions for the participant to experience behaviours (e.g. feeling like their arm is so heavy that they can’t lift it up) or cognitions (e.g. hearing music which isn’t actually being played) are then made. Finally the person is brought back out of hypnosis.

During my PhD I organised the screening of participants for hypnotic susceptibility. For the three years I did this; we screened roughly 200 people per year and recorded their susceptibility on the University of Sussex hypnosis database. This is used to recruit participants for hypnosis research. My particular area of investigation is hypnotic synaesthesia. Synaesthesia is where a percept or concept in one modality (such as a grapheme) induces a concurrent experience in another modality (such as a colour) (Grossenbacher & Lovelace, 2001). As part of my research, I gave highly susceptible participants suggestions to have synaesthesia like experiences (e.g. to see colours when looking at numbers) and tested whether this causes them to behave like natural synaesthetes (Anderson, Seth, Dienes & Ward, 2014). Here I will be sharing some tips from my experience of using hypnosis.

Be the guinea pig first
Before conducting any research, it is best to be a participant yourself, and preferably in a hypnosis screening session so that you can experience a range of suggestions. This allows you to experience firsthand the process that participants go through. Responding to suggestions without a sense of control over your actions can be strange, and I found that by partaking myself first, I was able to relate to the participants questions or comments both before and after hypnosis to put them at ease. After being a participant, try to observe someone else using hypnosis so that you are aware of how participants react to a hypnosis session. You will then be a lot more comfortable with what it feels like, how to interact with participants and how to conduct hypnosis sessions.

What to tell participants... or not
If using a control and hypnosis condition in a repeated measures design, holdback needs to be considered. This is where the participant does not perform to their full capabilities in the control block and unconsciously ‘holds back’ (Orne, 1962; Spanos, 1986). The order of conditions, what perceptions participants have of the experimenters’ aims, and whether participants are informed that hypnosis shall be used when recruited can therefore affect results. I once conducted a study where there was a (counterbalanced) baseline and experimental block, but participants were not informed of hypnosis use until they were about to complete it. This required an extra consent form, but did allow holdback to be controlled for.
Rapport
How the experimenter interacts with their participants can influence the degree to which participants experience suggestions (Lynn & Rhue, 1991). Although when conducting research in general it is important to be considerate to participants, this is particularly so for hypnosis research. If the rapport between you and the participant is poor, then they are likely to respond to fewer suggestions. Some participants are also rather nervous when being hypnotised for the first time. I found that they think you are going to take control of their mind or make them do silly things, and you therefore need to be able to put them at ease. My advice would be talk to them for a few minutes before starting the study, explain that nothing embarrassing will be suggested to them and be really friendly and approachable so that they feel able to ask any questions they have before the hypnosis session is started.

Hypnotic susceptibility screening
Hypnosis has many uses in research, however one component which must be addressed regardless of the study aims is hypnotic suggestibility (also called susceptibility). Susceptibility to hypnosis conforms to the central limit theorem (Bolthausen, 1982; Rosenblatt, 1956), with susceptibility scores to standard hypnosis screening procedures following a roughly normal distribution (Bowers, 1998). It therefore should be noted that those who are very responsive (high) or very unresponsive (low) to hypnosis are rare, and most people fall in the middle category (medium), being responsive to some suggestions.

Most researchers screen their subjects for hypnotic susceptibility so that participants of particular susceptibilities can be recruited. Therefore, if you required 10 highly susceptible participants for your study, and you accept a generous top 10 per cent of those screened as highly susceptible, then assuming you have a 100 per cent response rate when recruiting your participants (which is highly unlikely), you would still need to have screened at least 100 people! This makes hypnosis screening a laborious and time consuming, yet essential aspect of much hypnosis research. The best solution is to work with a supervisor who has an established register of participants already screened for hypnotic susceptibility. Getting high and low participants can still be a really slow process, but at least there are people to contact. If you do have to screen your own participant pool, use a group screening procedure and this will save you time.

During long hypnosis sessions, such as group screening sessions, you have a group of people sitting for a long time. Don’t be surprised if someone falls asleep; it is rare but does happen. I just take it as a compliment that my voice was nice and relaxing.

Decide how to deal with problems in advance
Practice your suggestions in advance, so that you are comfortable with the suggestion and can correct any mistakes you make without confusing the participant. Still, people do not always react to suggestions in ways that you may expect. How or whether the participant experiences the suggestion can vary from person to person, so it is best to have an idea of how to deal with this in advance. For example, during group screening sessions I have found that some people just don’t move at all. If you want to give a suggestion for their arm to be heavy so that it moves down, they have to first hold their arm in the air. Some people don’t do the suggestion preparation moves, which means they can’t be tested. I tend to repeat the preparation (so here it would be to lift their arm and hold it out in front of them) if they didn’t do it when first asked. You need to have an idea of how many times you will repeat it, or if you will repeat it at all. Another case I experienced was where I suggested that the digit ‘2’ was green, and ‘5’ was red. My participant swapped the colours round so that ‘2’ was red and ‘5’ was green, as ‘5’ suited the colour green better than red. You have to be flexible whilst not compro-
mising your research, and make sure that all the experimenters involved agree beforehand so there are no inconsistencies.

**Leave time for questions**

People are interested in hypnosis, they want to know how susceptible they are, what is normal, how others react, and what is hypnosis is? This means that at the end of testing you need to leave time to chat. It is good to be as helpful as possible, as with a small participant pool for hypnosis research you may be recruiting them again in the future.

**References**


**Enjoy the research**

Participants usually enjoy being hypnotised, and hypnotising them can be fun as well. If you are approachable and leave time for questions, they sometimes reveal some really interesting experiences they had, and knowing that you were part of that is really rewarding.

**Hazel Anderson**

Associate Tutor and Doctoral Student, University of Sussex; h.anderson@sussex.ac.uk


HAVING FINALLY obtained my PhD this year I am able to reflect on many aspects of the experience. As my work was based in the broad area of positive psychology, the study of positive subjective experiences, I have been looking back to see if I can identify where positive psychology fits into the process of doing a PhD. In particular, when considering the years spent reading, collecting and analysing data and writing up, the main issue that springs to mind is motivation. Often, simply getting started on a particular piece of work can become a feat in itself. Once started maintaining momentum and interest becomes key. There is also the magic that happens, once one is absorbed in a task, where what you are doing becomes the ‘centre of your world’. Positive psychology provides theories which attempt to explain what underlies these processes and experiences. In this piece I shall briefly introduce positive psychology and then focus on two theories that shed light on a fraction of what we experience when undertaking a PhD.

Positive psychology focuses on the psychology of well-being, happiness and optimal human functioning (Seligman & Csikszentmihalyi, 2000). To a certain extent, positive psychology can be considered a relatively new area, as it came into prominence after a special issue of American Psychologist in 2000. The introduction of that special issue highlighted the need for this area of research. In one respect there was the sociopolitical context. The global economy was thriving and, broadly speaking, the incomes of governments and individuals had been rising steadily for many years (Diener, Tay & Oishi, 2013; Seligman & Csikszentmihalyi, 2000). However, whether or not this global affluence brought with it an increased happiness seemed a significant question worth investigating (Seligman & Csikszentmihalyi, 2000). An important note here is that this was before the America’s sub-prime mortgage crisis and its world-wide impact. Seligman and Csikszentmihalyi (2000) also drew attention to what they considered to be the focus of psychological research over the previous 50 years – illness and suffering. While acknowledging that this empirical attention had yielded many successes, they asked whether it was now time to examine the more positive aspects of life. In suggesting potential ‘positive’ areas to be examined Seligman and Csikszentmihalyi (2000) invoked the humanistic psychology of Abraham Maslow and Carl Rogers, a previous attempt at addressing a perceived bias of psychological research towards the medical model and clinical prevention. Thus, it can be argued that attempting to understand human nature and the human condition in a positive light may not be entirely new. However, Seligman and Csikszentmihalyi’s rebranding set in motion the last 14 years of research that yielded findings regarding personal and collective well-being, increasingly specific definitions of happiness, satisfaction and meaning, and explorations of genetics and neuroscience that underlie our positive experiences. Two aspects of positive psychology that seemed to me the most relevant to the experience of studying for one’s PhD are self-determination theory (Ryan & Deci, 2000) and flow (Naka-
mura & Csikszentmihalyi, 2005) as they explain the processes underlying motivation and engagement in particular tasks and relate those processes to positive experiences.

Self-determination theory (Ryan & Deci, 2000) is actually a macro-theory as it is a collection of mini theories. The mini-theories address human motivation, the satisfaction of psychological needs, and their relationship with well-being. As mentioned earlier, positive psychology can be considered to have humanistic psychology at its roots and this is quite clear in the case of self-determination theory, which is based on a particular aspect of humanistic psychology that asserts that people have a natural tendency towards positive psychological growth (Ryan, 1995). The main tenet of SDT is that three factors are essential for one’s psychological growth and overall well-being: autonomy (the need to be an agent of one’s own life), competence (the need to feel confident in one’s skills), and relatedness (the need to have close and secure human connections). You may be able to consider right now the extent to which your PhD provides or satisfies each of these needs. One of the mini-theories of self-determination theory, basic psychological needs theory, posits that the better these three needs are met the more self-motivated, vital and satisfied you should feel (Ryan, Huta & Deci, 2008). Interestingly, a recent study has found that high levels of momentary competence were associated with decreased momentary happiness (Howell, Chenot, Hill & Howell, 2011). It was suggested that while competence inducing work activities may be stressful and not enjoyable at the time, they are likely to produce increased well-being on reflection (Howell et al., 2011). In other words, tasks that come at an emotional cost, that may be taxing and stressful at the time, can allow us to feel confident in our abilities resulting in an increase in well-being later on. This finding certainly fits with both my own experience and with anecdotal evidence from colleagues. It also suggests that we can feel more than simply relief after completing a tough and challenging piece of work. This idea may even sum up the entire PhD process for many people.

With regards to motivation, a couple of self-determination theory mini theories come into play, namely organismic integration theory and cognitive evaluation theory. The idea that forms the basis of both these theories is intrinsic motivation; that is, when one is intrinsically motivated, one is doing something for its own sake, that something is in essence interesting or enjoyable (Ryan & Deci, 2000; Ryan, 1995). In other words, an activity or task that is entirely intrinsically motivated can be considered the gold-standard of motivation. A common piece of advice for anyone considering doing a PhD is that it ought to be about something you are strongly interested in, as your interest and enthusiasm need to be maintained for a number of years. Much of what we do in life, however, does not necessarily live up to this standard. Indeed, while one may set out feeling that one is doing a PhD for his or her own sake, there may be activities and tasks within the process that do not feel intrinsically motivated.

Tasks that are not intrinsically motivating can vary on a scale in terms of how extrinsically motivated or regulated they are (Ryan & Deci, 2000). On this scale, extrinsic motivation is the furthest away from intrinsic motivation; that is, we feel driven by external forces, we have to do it, and as such we are usually motivated by obtaining a reward or avoiding punishment. Organismic integration theory suggests that extrinsic motives can become internalised and then differ in the extent to which they provide autonomy. Introjected regulation, the next step on the scale, involves self-control. The rewards and punishments in this case come from within, to avoid feelings such as guilt, anxiety or pressure. In other words, the external pressures are internalised. Next on the scale towards intrinsic motivation comes identified regulation. This type of motivation depends on the idea that even though we may not find a task inherently interesting or enjoyable we understand its importance in
the grand scheme of things. Perhaps an activity or task is a step towards something more meaningful? In this case the level of internal motivation relies on personal importance, or the value of the task. The next step is integrated regulation, which requires that an activity has been integrated with oneself, one’s values and needs. Of the sub-types of extrinsic motivation, integrated regulation is considered the most similar to intrinsic motivation. To be clear though, as the activity in this case may still be being done for external outcomes (in others words reasons other than its inherent interest and enjoyment), it is still considered extrinsically motivated. While reflecting on your own PhD process it is possible that you could identify all these different types of motivation, depending on the tasks at hand. Importantly, the more internal one’s motivation, and therefore the greater autonomy experienced, the greater one’s persistence at the task, the greater their chance of success and the greater the associated well-being (Ryan & Deci, 2000).

While some tasks and activities will vary, to the extent they are extrinsically and intrinsically motivated, a potential issue is that intrinsic motivation, once experienced and utilised, can be precarious. This issue is encompassed by cognitive evaluation theory, which posits that one’s initial intrinsic motivation can become tempered by the effect of rewards and feedback, and by the extent to which the activity satisfies the needs of autonomy and competence (Ryan et al., 2008). For example, positive feedback offered in a controlling or pressured way (e.g. ‘you should keep up the good work’ rather than ‘keep up the good work’) can reduce intrinsic motivation by reducing the level of autonomy experienced. Similarly, deadlines and pressure can reduce a person’s feelings of competence, which will then undermine one’s intrinsic motivation (see Deci, Koestner and Ryan (1999) for a review). It is important to be aware then that even the gold standard of motivation can wax and wane.

Tasks that are intrinsically rewarding may also provide us with a feeling of engagement and absorption that in positive psychology is referred to as flow (Csikszentmihalyi, 1990). Specifically, flow is an experiential state in which one is completely absorbed in the task at hand. As such, to be in a state of flow requires intense and focused concentration, which usually results from a balance of challenge and skill, in that the task is not too difficult or too easy for one’s capabilities, along with clear goals and immediate feedback about one’s progress (Nakamura & Csikszentmihalyi, 2005). Flow was first discovered via a study of creative processes and has since been identified as being experienced not only by artists and musicians but also by athletes, chess players and surgeons, amongst others. Flow can be considered the subjective experience of intrinsic motivation (Nakamura & Csikszentmihalyi, 2005).

The experience of flow may involve the merging of action and awareness, in that the activity becomes automatic and one is effortlessly involved; effort is not required to maintain concentration or focus. As a result of this, one may lose awareness of one’s self and also lose the sense of control; for example, concerns about failure may be forgotten. The experience of flow often involves the transformation of time. For example, time may fly while you are absorbed in reading or writing; you may suddenly realise it has gone dark outside. Equally, time may slow down under other flow circumstances; for example, responding to questions after a presentation or during your viva. Studies have found that experiencing flow is associated with a variety of positive outcomes such as increased commitment and success in work, self-esteem and life satisfaction (Asakawa, 2010). Further, although one may not be aware of one’s feelings during flow, research suggests that positive feelings increase after experiencing a flow state (Asakawa, 2010; Csikszentmihalyi, 1990; Rogatko, 2007). Thus, those occasions when one’s PhD work is challenging but also engaging and absorbing reflect the fact that our work is intrinsically rewarding, and potentially increase our overall well-being.
In conclusion, positive psychological research has provided a plan for the optimal PhD experience. One should aim to meet one’s basic psychological needs of autonomy, competence and relatedness as much as possible. In other words, feeling that one is in control of some choices; feeling that one is skillfully mastering challenges and maintaining close interpersonal relationships. While one cannot expect to maintain high intrinsic motivation at all times, it may be useful to be aware that internal or internalised motivation should help with persistence and success on tasks that are less autonomous. Finally, absorbing and engaging tasks are beneficial for our well-being and ultimately reflect the fact that such activities, and therefore our work, is rewarding in itself. Having found a topic that should keep us challenged and interested, and having chosen to embark on the not considerable undertaking of a PhD, there are opportunities for an optimal and rewarding experience.

Dr Charlie Lea
Liverpool John Moores University
c.r.lea@ljmu.ac.uk

References
HOW OFTEN have you come across an article that is relevant to your work, only to find that it is behind a paywall? You may eventually have gained access through your university’s journal subscriptions, but what about those who have no university affiliation? The issue of free, immediate, unlimited access to research is currently a hot topic across all sciences. But what exactly is meant by ‘open access’, what are the benefits, and how can you make sure your work is open access? This article will examine the issues and myths surrounding open access.

Open access refers to the publishing of research and scientific data online at no cost to the reader. As researchers, we want our work to be accessed by the maximum number of people, not only for improving our citations, but also to spread knowledge about our exciting areas of research. Academics in low income countries may not have university journal subscriptions, leaving them unable to keep up with the latest work in their area. Doctors, teachers and policy makers may also want access to the latest research to inform decisions about practice (The Right to Research Coalition, 2014a). Further, patients might want to look at possible adverse effects from different treatments as reported in journal articles. More generally, members of the public may simply have an interest in research findings. Given that much of our research is funded by the tax payer, we have a duty to make our outputs accessible to everyone.

Surprisingly then, open access is still debated, and many researchers are still choosing not to publish through this route (Rhodes, 2014). This is partly a result of widespread misunderstandings about open access (Suber, 2013). One myth is that submissions do not go through such rigorous peer review. This is certainly not a feature of open access publishing. In fact a number of journals publish peer reviews alongside accepted articles, so that you can see the reviewer comments. Reading through these (for example, at the open access journal PeerJ (www.peerj.com)), will show that the peer review standard is equivalent to traditional journals. It is also commonly believed that open access publishing is expensive, but it can be cheap and in many cases it is free to submit to an open access journal. The Directory of Open Access Journals (2014) has a search engine that allows you to look for free journals. A further concern about open access is that papers do not reach high impact compared to traditional journals. If you measure impact by wide readership, then it is clearly the case that your paper can go further when it is freely accessible online across the globe. Indeed, research has shown that open access articles received more citations than closed access articles within the same journal (Eysenbach, 2006). Academics are becoming increasingly critical of journal impact factors (Curry, 2012), and with the rise of public engagement, research impact is starting to be measured in more real terms than a journal’s impact factor. The Research Councils UK (2014) Pathways to Impact go beyond academic impact alone, and encourage researchers to have economic and societal impacts.

So how should you go about making your work open access? As a postgraduate student, the first thing you can do is discuss options with your supervisor. When you are working on a paper, make it clear that you’d like to go...
open access. As with all paper submissions, look for related work and see where it has been published. Some journals are not fully open access but allow you to pay to make your own article open. The Research Councils UK and the Wellcome Trust have pots of money available for open access fees. Again, speak with your supervisor, and ask your librarian, who should know the procedure for accessing this money. Your university should also have an online repository for uploading your article after it has been accepted for publication. This can often just be a pre-print version, but it means that others can access your work straight away.

In terms of open data, many journals will allow you to include your raw data in a supplementary section, or you could upload it to a separate online repository and refer to it. There is an increasing push to make raw research data open access (Alsheikh–Ali, 2011) as it increases the transparency of your work and allows the data to be used by other researchers. How often have you read a paper and been dubious about the results? Or perhaps you’ve wondered what the raw data looks like? By providing this data, you are allowing others to look at it and confirm that your conclusions fit the data. Given recent fraud in our field, this is one way of building trust, and it allows others to play with your data. Rather than worrying about others seeing our raw data, we should be flattered that it is deemed interesting enough to be explored! Storing data online is also a nice way of preserving it, following the hours (if not months or years!) that went into collection and input. The Dryad Digital Repository (2013) is one example of a website that allows you to upload your data.

As early career researchers, we may find ourselves faced with difficult decisions when it comes to open access. Erin McKiernan is an early career researcher who has pledged to be open (McKiernan, 2014). McKiernan will not edit or review papers for closed access journals, nor will she publish in closed access journals. McKiernan has therefore pledged to take her name off of a paper if her co-authors refuse to publish open access. These are decisions that need made individually, and they are likely to be difficult at times. If you are lucky enough to discover something groundbreaking in your research, you may be forced to choose between submitting to a career-making high impact journal such as Nature or Science, and submitting to an open access journal that may be overlooked by future employers. Awareness of these issues is increasing, evidenced by the second open access conference, which was held in October last year (OpenCon 2014, 2014). At the moment there are no right or wrong answers to these scenarios, but it is hoped that with time all journals will be freely accessible across the globe, and we won’t have to make these decisions. Visit Right to Research (www.righttoresearch.org) to find out more about the steps you can take to support open access.

Annie Brookman
MSc Student, Birkbeck, University of London; UCL Institute of Education; abrook07@mail.bbk.ac.uk
Twitter: @nniebrookman

References
ATTENDING international conferences is becoming increasingly common for PhD researchers. This trend, combined with seemingly ever-decreasing budgets for PhD students, means that choosing the most beneficial conference(s) to attend could not be more important.

I was recently fortunate enough to be accepted to talk at the International Society for Research on Aggression (ISRA) Conference in Atlanta, Georgia, in the US, and even more fortunate to obtain enough funding from different sources to actually attend! The conference was small (approximately 100 delegates), specialised and interdisciplinary – which was perfect for a conference newbie. Having had this amazing experience, I’d like to share why I think smaller conferences can be rewarding and provide some tips for successfully choosing and attending an international conference.

What should you consider when choosing a conference?

1. Budget

Unfortunately, whichever way you look at it, budget is always going to be the number one consideration when choosing a conference. Since the biggest impact on budget is likely to involve travel costs and accommodation I had considered calling it ‘location’, as this seemed slightly less negative, but either way the main question is: ‘Can you afford to go?’

If you are reading this and thinking an international conference isn’t an option for budgetary reasons, don’t be put off, just be realistic – funding does exist.

Given that budget restraints are so important I wanted to give a bit of information about what is available and hopefully leave you thinking that an international conference may be possible.

To start with, look around! There are lots of different sources for funding. The first obvious place to look is at the conference itself. Many conferences now (particularly PhD friendly ones) offer their own bursary awards for travel and/or registration for conferences. Definitely apply for these! Even if they are not well advertised, never feel guilty about asking the organisers if they exist. I know of people who have e-mailed directly and received discounts and/or grants which were not obviously available online. Secondly, there is the department or school you are based in. Most departments do have extra pots of money to help out PhD students. Find out who in your department is in charge of this and start sucking up! If these both fail, you still have other options. For the ISRA Conference, I was unsuccessful in receiving the conference’s own ‘young investigator’ funding, but I was lucky enough to obtain funding from both the Grindle Grant and PsyPAG, which almost covered my very expensive flights to the US. There are other schemes that I didn’t apply for which may be useful to others, including Guarantors of the Brain, The Genetic Society and Biosocial Society to name just a few. If these aren’t in your area, why not try looking for a society that is relevant to you and see if they offer conference funding! Different funding schemes have different application processes and different criteria. They are all worth
looking at, but remember to do this well in advance as most funding is processed at particular times throughout the year, so you want to make sure you don’t miss the deadline for applications.

While getting money is important, don’t forget you can also look into saving money too. The ISRA conference was based at a very nice, expensive hotel in Atlanta. Although this was the only recommended accommodation for the conference – and was pushed a lot by the organisers – at $160 a night (discounted rate!), it was well outside my PhD budget. Instead, a fellow PhDer and I booked into Georgia State University Residence. Obviously this was nowhere near as luxurious, but at just $33-a-night made the difference between being able to afford to attend and not. This did mean we didn’t get to network around the hotel bar in the evening, but we still went out for dinner with delegates and spent the rest of the day networking, so in some ways it was a nice break from it. It also provided us with other experiences – we went to a singing competition one night, organised by the students at the halls and we got a mini-taster of student life in the US after being invited to a party on one of the floors.

2. Topic
The topic and theme of a conference is very important. For some who fit neatly within research categories this may not be a problem, but certainly for me this was a big consideration. My research is interested in the links between antisocial behaviour and emotional processing. In particular, I have been examining empathy deficits in adolescents with attention deficit hyperactivity disorder and conduct disorder, and looking at interventions that could improve these skills. My research, as I’m sure is the case for many others, therefore spans a number of topics including emotions, antisocial behaviour, clinical disorders and behaviour neuroendocrinology. Consequently, I was stuck trying to work out which area would be best to present to. This is where asking supervisors and colleagues for advice is key. I spent a lot of time researching good conferences to present my research at and found a conference on emotions with a specific symposium on adolescent psychopathology. I thought: ‘Great, this covers two of my main topic areas’. I was accepted and attended the emotions conference and the experience was good. But having now been to the ISRA conference, I know that if I could have only gone to one then the ISRA was definitely more relevant for me. At the emotions conference there were a lot of talks that were not at all relevant to my research and although there was a specific symposium on psychopathology it didn’t bring in a huge audience of relevant academics and I got the impression the only people interested in this specific topic were those presenting in it! Not only does this lead to a less fulfilling experience, but there was also little opportunity to network. Although my research involves emotional processing, my main interest is antisocial behaviour. This is the field I eventually would like to work in, and therefore I should be attending conferences and meeting academics in this area. With this in mind, I would urge all prospective attendees to really think about what aspects of their research they are most interested in and want to pursue in the future. This means you can get the most out of the networking opportunities.

3. Size
As I mentioned earlier, I think the size of a conference is an important consideration that often gets ignored. I should add a caveat here that I haven’t been to a ‘large’ conference yet, so my insight on the benefits of these is purely taken from talking to colleagues and friends who have. Talking to a friend who went to very large conference of 10,000 delegates, they said it was very beneficial because with 30 parallel sessions, there was always something relevant on. Similarly, because there are so many different sessions there is also great diversity for you to go and explore something different. Obviously
a smaller conference will have less symposiums and consequently less choice; however, because smaller conferences are generally more specialised, it is still likely you would find something relevant for all the sessions, but perhaps the diversity would be less. Other colleagues pointed out that with such a large choice you find yourself having to make tough decisions on what to attend and occasionally miss relevant sessions due to time clashes.

Another benefit of larger conferences is that big conferences bring in big names. Consequently, a larger conference will make it much more likely that you will be able to hear the big names in your field speak, however this may be where the benefit ends. Although you might see a lot of the big people talk, actually being able to have some quality time networking with them may be much harder at a larger conference. With so many facilities and rooms at larger conferences, it can be hard to even pin down the location of the people on your list. Even if you do manage to do this, it is likely that many other people will be competing for some networking time as well, making actually having a conversation with the big names much harder. With many conferences now making talks available online, in the not so distant future the main benefit of attending a conference will be networking; therefore going to a larger one where this is more difficult may limit you.

Smaller conferences, on the other hand, still attract big names – although it may be worth looking at previous speakers or delegates to confirm this – and provide a great atmosphere for interactions. I think this is the main benefit of small conferences. During conference breakfasts, coffee breaks, lunches and dinners you are all in a small room, so finding the delegate you want to speak to is much easier. Along the same lines, larger conferences tend to attract whole lab groups, whereas at smaller ones you are more likely to find individual researchers or smaller groups. Again, this lends itself better to networking as being an individual delegate forces you to network more as opposed to spending all your time with your own lab.

4. Interdisciplinary
An additional consideration when choosing a conference is whether it is interdisciplinary. Delegates at ISRA ranged from practising psychiatrists and psychologists working in prisons to criminologists, sociologists, psychologists, neuropsychologists and biologists. This broad range of academics and job titles is brilliant for a PhD student and not only enabled me to see a wide variety of research methods during the talks but also allowed me to speak to individuals working in very different fields and to get a good feel for where I could possibly see myself working in the future. If you know already what you want to do then this may not be as important. But if, like many PhD students, you are still unsure, attending an interdisciplinary conference is great for finding out ‘what’s that about?’ and potentially meeting future employers!

5. PhD friendly
A final thing worth considering is whether a conference caters for PhD students. The ISRA conference ran a special programme for young investigators aimed at helping them write grants, network with researchers and generally get the most out of the conference. Although I was not fortunate enough to get on this, this aspect meant that the conference clearly cared about young investigators and would be making an effort to integrate them, which they did! On the other hand, conferences who, for example, do not offer student rates, may not be so accommodating for young investigators, and as such you may feel out of place and not get as good a conference experience.

Thus, even on a PhD budget international conferences are doable and you can get so much out of them. In a world where size seems to matter so much, numbers and quantities of things appear to be important. When a colleague in a pub says they presented at a conference of 3000 delegates
to an audience of 50–60 and I chime in with
I presented at a conference of 150 to 20 dele-
gates, it doesn’t seem comparable. However,
when I’ve spoken to those 20 delegates and
know their research and how it relates to
mine, and know that at least one of them is a
big name in my field, you can begin to see
why smaller conferences do have advantages!

So remember, bigger isn’t always better;
it is the quality of your conference experi-
ence and not the number of delegates that
really matters.

Kelly Hubble
Cardiff University
HubbleK@Cardiff.ac.uk
Overview: At the planning stage, there were a number of important things to consider: location and venue, content, speakers, advertising, registration, and most importantly would anyone actually sign up for it? Feedback from previous workshops highlighted the need to ensure that, above all, the workshop was relevant and interesting to each of the delegates; not an easy task when they would each come from different subject areas and be at different stages in their chosen study. Using the title ‘Negotiating the PhD journey’ I selected a range of speakers who I thought could offer helpful guidance to postgraduate students from different perspectives. Emma Vardy from Coventry University, who was recently awarded her PhD and could recall the struggles and successes, spoke about the ‘Student’s Perspective’. This was followed by Clare Wood, Professor of Psychology in...
Education at Coventry University, who has supervised a large number of PhD students, and could offer advice from the ‘PhD supervisor’s perspective’. We then had an interactive session where delegates had the opportunity to discuss in small groups their own individual ‘stumbling blocks’ to successful PhD research, in the hope that it would be useful to share experiences and supportive advice with others negotiating the same journey. As it proved difficult to break up the interesting debates amongst the delegates, this session merged into the scheduled tea and coffee break, with a chance to mingle with the other delegates and speakers. In the second half of the workshop, to add balance to the ‘PhD journey’ theme, I felt it was important to look ahead and consider the benefits of PhD study for future employment. Dave Putwain, Professor in Education at Edge Hill University and Chair of the Psychology of Education Section, spoke about what comes ‘After the PhD’, offering useful tips for things to consider along the way. Questions and answers were saved throughout the afternoon for discussion with the panel of speakers in the final session of the afternoon. There were some lively debates and lots of useful advice that I am certain will have left the delegates better placed to consider their own path as they continue along what can sometimes be a long, lonely and difficult journey.

I would like to send my grateful thanks to all of the speakers and delegates who engaged enthusiastically and made this workshop a success, and also those who provided invaluable feedback to assist the planning of future events.

On being a participant – Robert Buck
As a second year PhD student I was delighted when I was offered the opportunity to attend this workshop. Not only did it sound like an event that would be useful in its own right, it also made me feel very much included at the conference despite my lack of research experience. The content of the workshop was relevant to those who attended and the atmosphere was purposeful and collaborative. The theme of ‘Negotiating the PhD journey’ ensured that there was something on offer for those at different stages in their postgraduate research careers.

The first session on the ‘Student’s perspective’ was extremely useful. Emma Vardy presented well and offered her insights into achieving a successful PhD, alongside some of the challenges that one may face along the way. It was refreshing to hear someone that could be considered a peer talking so honestly, and certainly around my table, there was much that she said that mirrored our experiences. Professor Clare Wood delivered a very interesting and engaging talk on the ‘PhD supervisor’s perspective’. This was useful, as it is easy to forget that our supervisors are people as well, with the same worries, pressures and insecurities as their students. Following this session there was a discussion amongst the delegates regarding the nature of supervision and it became clear that our experiences varied widely. Some realised that it is designed to be a more equitable process than they had experienced and felt empowered to take greater control of their PhD in the future. The interactive session, where we discussed our own issues and personal challenges, was invaluable. What became clear was that many of our concerns are not unique and are simply part of studying for a PhD. This helped to allay our fears and give us a level of perspective that went beyond our own experiences. This session also provided the opportunity to look at problems from a different angle, and offered some students who were really struggling a fresh approach to help overcome their problems. The final session on ‘After the PhD’ by Professor Dave Putwain was an excellent idea. I’m sure I’m not alone in putting off thinking about the next step into the daunting world of an academic career, and this presentation made me really consider where I want to go with my PhD.
Additionally, it gave me ideas of what I need to be doing now in order to put myself in a position to embark on this career in the autumn of 2016.

Overall, the workshop was an interesting and invaluable experience. I found it thought provoking and informative, and the delegates were all incredibly positive afterwards. I would like to thank the organisers and speakers for their hard work and enthusiasm in putting together an excellent event.

Jillian Adie
University of Strathclyde
jillian.adie@strath.ac.uk

Robert Buck
University of Manchester
robert.buck@postgrad.manchester.ac.uk
PsyPAG Quarterly submissions guidelines

The PsyPAG Quarterly is a developing publication, which is distributed free of charge to all psychology postgraduates in the UK. It therefore receives wide readership. The PsyPAG Quarterly accepts articles on all areas of psychology.

Types of articles accepted:
Featured Articles and Discussion Papers: Articles can cover a wide range of topics. Articles may describe a piece of original research; provide an overview of a theory, area or issue. Research in Brief: A short report of original research, often preliminary findings. Big Interviews: An interview with anyone connected with psychology, usually written in a question-and-answer format. Conference Reviews: Provide an overview of a conference, outlining the main themes of the conference. Departmental Reviews: An overview of a department as well as research interests of the postgraduates. Book and Software Reviews: A review of books or software relevant to psychologists. Hints and Tips: Hints and tips that will be useful to postgraduates. For example, how to apply for funding. Postgraduate Research in Brief: This is a reference list of research that has recently been published by postgraduates within a particular area or department.

Word limits:
The publication has a broad word limit of 500 to 2500 words excluding references. The maximum word limit is flexible for in-depth discussion papers, longer interviews or hints and tips. The word count will differ depending on the type of article; for example, conference and book reviews should be shorter than featured articles.

Formatting:
Please submit all articles in Microsoft Word format. The content, including tables, figures, and references, should all comply with the most recent APA guidelines. You should also include your contact details at the end of each article in the format of:

Correspondence:
Name
University of X.
E-mail:

Submission:
To submit an article, please send as an e-mail attachment to quarterly@psypag.co.uk.

If you have any further questions, please contact the editors at quarterly@psypag.co.uk, or send in your question via twitter: @PsyPAGQuarterly.
Dates for your Diary

6–8 May 2015
BPS Annual Conference
ACC Liverpool
www.bps.org.uk/events/conferences/annual-conference-2015

1–3 July 2015
Division of Forensic Psychology Annual Conference
Manchester Metropolitan University
www.bps.org.uk/events/conferences/division-forensic-psychology-annual-conference-2015

10–11 July 2015
Division of Counselling Psychology Annual Conference
Majestic Hotel, Harrogate
www.bps.org.uk/events/conferences/division-counselling-psychology-annual-conference-2015

22–24 July 2015
PsyPAG 30th Annual Conference
University of Glasgow
www.psypag.co.uk/conference

9–11 September 2015
Developmental Section & Social Section Annual Conference
Palace Hotel, Manchester

16–18 September 2015
Division of Health Psychology Annual Conference
Radisson Blue Portman Hotel, London
www.bps.org.uk/events/conferences/division-health-psychology-annual-conference-2015

23–24 October 2015
Psychology of Education Section and British Journal of Educational Psychology Conference
Jury's Inn Conference Centre, Liverpool
www.bps.org.uk/events/role-competence-beliefs-teaching-and-learning

A list of all BPS conferences and events can be found on the Society’s website:
www.bps.org.uk/events
# PsyPAG Committee 2014/2015

<table>
<thead>
<tr>
<th>Position</th>
<th>Currently held by</th>
<th>Due for re-election</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Core Committee Members</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Chair</td>
<td>Laura Neale <a href="mailto:chair@psypag.co.uk">chair@psypag.co.uk</a></td>
<td>2015</td>
</tr>
<tr>
<td>Treasurer</td>
<td>Martin Toye <a href="mailto:treasurer@psypag.co.uk">treasurer@psypag.co.uk</a></td>
<td>2017</td>
</tr>
<tr>
<td>(For claim forms: <a href="mailto:payments@psypag.co.uk">payments@psypag.co.uk</a>)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Vice Chair</td>
<td>Bernadette Robertson <a href="mailto:vicechair@psypag.co.uk">vicechair@psypag.co.uk</a></td>
<td>2016</td>
</tr>
<tr>
<td>Webmaster</td>
<td>Hamish Cox <a href="mailto:webmaster@psypag.co.uk">webmaster@psypag.co.uk</a></td>
<td>2015</td>
</tr>
<tr>
<td>Information Officer</td>
<td>Daniel Jolley <a href="mailto:info@psypag.co.uk">info@psypag.co.uk</a></td>
<td>2015</td>
</tr>
<tr>
<td><strong>Quarterly Editors</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td><a href="mailto:quarterly@psypag.co.uk">quarterly@psypag.co.uk</a></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Suzanne Ross</td>
<td><a href="mailto:ps302sr@gold.ac.uk">ps302sr@gold.ac.uk</a></td>
<td>2016</td>
</tr>
<tr>
<td>Claire Wilson</td>
<td><a href="mailto:claire.wilson.2013@uni.strath.ac.uk">claire.wilson.2013@uni.strath.ac.uk</a></td>
<td>2016</td>
</tr>
<tr>
<td>Emma Norris</td>
<td><a href="mailto:e.norris.11@ucl.ac.uk">e.norris.11@ucl.ac.uk</a></td>
<td>2015</td>
</tr>
<tr>
<td>Charlotte Pennington</td>
<td><a href="mailto:Penninc@edgehill.ac.uk">Penninc@edgehill.ac.uk</a></td>
<td>2016</td>
</tr>
<tr>
<td><strong>Division Representatives</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Division of Clinical Psychology</td>
<td>Moitree Banerjee <a href="mailto:moitree.banerjee@sussex.ac.uk">moitree.banerjee@sussex.ac.uk</a></td>
<td>2015</td>
</tr>
<tr>
<td>Division of Counselling Psychology</td>
<td>Irena Zabinski <a href="mailto:u1023198@uel.ac.uk">u1023198@uel.ac.uk</a></td>
<td>2016</td>
</tr>
<tr>
<td>Division of Educational and Child Psychology</td>
<td>Zayba Ghazali <a href="mailto:zghazali@ioe.ac.uk">zghazali@ioe.ac.uk</a></td>
<td>2015</td>
</tr>
<tr>
<td>Division for Academics, Researchers and Teachers in Psychology</td>
<td>Charlotte Taylor <a href="mailto:c.e.taylor@worc.ac.uk">c.e.taylor@worc.ac.uk</a></td>
<td>2015</td>
</tr>
<tr>
<td>Division of Forensic Psychology</td>
<td>Craig Harper <a href="mailto:charper@lincoln.ac.uk">charper@lincoln.ac.uk</a></td>
<td>2017</td>
</tr>
<tr>
<td>Division of Health Psychology</td>
<td>Michelle Constable <a href="mailto:michelle.constable@hertfordshire.gov.uk">michelle.constable@hertfordshire.gov.uk</a></td>
<td>2016</td>
</tr>
<tr>
<td>Position</td>
<td>Currently held by</td>
<td>Due for re-election</td>
</tr>
<tr>
<td>----------------------------------------------</td>
<td>---------------------------------------</td>
<td>---------------------</td>
</tr>
<tr>
<td><strong>Division Representatives</strong> (Contd.)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Division of Neuropsychology</td>
<td>Naomi Aoife Bowers</td>
<td>2015</td>
</tr>
<tr>
<td></td>
<td><a href="mailto:Naomi.bowers@strath.ac.uk">Naomi.bowers@strath.ac.uk</a></td>
<td></td>
</tr>
<tr>
<td>Division of Occupational Psychology</td>
<td>Charlotte Winter</td>
<td>2015</td>
</tr>
<tr>
<td></td>
<td><a href="mailto:winc1_10@uni.worc.ac.uk">winc1_10@uni.worc.ac.uk</a></td>
<td></td>
</tr>
<tr>
<td>Division of Sport and Exercise Psychology</td>
<td>Sean Figgins</td>
<td>2016</td>
</tr>
<tr>
<td></td>
<td><a href="mailto:s.figgins@chi.ac.uk">s.figgins@chi.ac.uk</a></td>
<td></td>
</tr>
<tr>
<td><strong>Section Representatives</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cognitive Psychology Section</td>
<td>Harriet Smith</td>
<td>2016</td>
</tr>
<tr>
<td></td>
<td><a href="mailto:harriet.smith2011@my.ntu.ac.uk">harriet.smith2011@my.ntu.ac.uk</a></td>
<td></td>
</tr>
<tr>
<td>Consciousness and Experiential Psychology Section</td>
<td>Kate Williams</td>
<td>2016</td>
</tr>
<tr>
<td></td>
<td><a href="mailto:kate.williams-4@manchester.ac.uk">kate.williams-4@manchester.ac.uk</a></td>
<td></td>
</tr>
<tr>
<td>Developmental Psychology Section</td>
<td>Martin Toye</td>
<td>2016</td>
</tr>
<tr>
<td></td>
<td><a href="mailto:martin.toye@strath.ac.uk">martin.toye@strath.ac.uk</a></td>
<td></td>
</tr>
<tr>
<td>History and Philosophy of Psychology Section</td>
<td>Marta Wanat</td>
<td>2015</td>
</tr>
<tr>
<td></td>
<td><a href="mailto:Marta.wanat-2011@brookes.ac.uk">Marta.wanat-2011@brookes.ac.uk</a></td>
<td></td>
</tr>
<tr>
<td>Psychology of Sexualities Section</td>
<td>Jimmy Couzens</td>
<td>2016</td>
</tr>
<tr>
<td></td>
<td><a href="mailto:couj1_11@uni.worc.ac.uk">couj1_11@uni.worc.ac.uk</a></td>
<td></td>
</tr>
<tr>
<td>Mathematical, Statistical and Computing Section</td>
<td>Lisa Lumley-Imerson</td>
<td>2015</td>
</tr>
<tr>
<td></td>
<td>Lisa.Lumley-Imerson</td>
<td></td>
</tr>
<tr>
<td></td>
<td>@research.sunderland.ac.uk</td>
<td></td>
</tr>
<tr>
<td>Psychobiology Section</td>
<td>Rowan Brooks</td>
<td>2016</td>
</tr>
<tr>
<td></td>
<td><a href="mailto:rjbrooks1987@outlook.com">rjbrooks1987@outlook.com</a></td>
<td></td>
</tr>
<tr>
<td>Psychology of Education Section</td>
<td>Claire Wilson</td>
<td>2017</td>
</tr>
<tr>
<td></td>
<td><a href="mailto:claire.wilson.2013@uni.strath.ac.uk">claire.wilson.2013@uni.strath.ac.uk</a></td>
<td></td>
</tr>
<tr>
<td>Psychology of Women Section</td>
<td>Donna Peach</td>
<td>2015</td>
</tr>
<tr>
<td></td>
<td><a href="mailto:donna@donnapeach.co.uk">donna@donnapeach.co.uk</a></td>
<td></td>
</tr>
<tr>
<td>Psychotherapy</td>
<td>Abbie Darlington</td>
<td>2017</td>
</tr>
<tr>
<td></td>
<td><a href="mailto:psuf3d@bangor.ac.uk">psuf3d@bangor.ac.uk</a></td>
<td></td>
</tr>
<tr>
<td>Qualitative Methods Section</td>
<td>Marta Wanat</td>
<td>2015</td>
</tr>
<tr>
<td></td>
<td><a href="mailto:Marta.wanat-2011@brookes.ac.uk">Marta.wanat-2011@brookes.ac.uk</a></td>
<td></td>
</tr>
<tr>
<td>Social Psychology Section</td>
<td>Marianne Erskine-Shaw</td>
<td>2016</td>
</tr>
<tr>
<td></td>
<td>Marianne.erskineshaw</td>
<td></td>
</tr>
<tr>
<td></td>
<td>@googlemail.com</td>
<td></td>
</tr>
<tr>
<td>Transpersonal Psychology Section</td>
<td>Jacqueline Stone</td>
<td>2015</td>
</tr>
<tr>
<td></td>
<td>Jacqueline.Stone</td>
<td></td>
</tr>
<tr>
<td></td>
<td>@northampton.ac.uk</td>
<td></td>
</tr>
<tr>
<td>Coaching Psychology Section</td>
<td>Vacant</td>
<td></td>
</tr>
<tr>
<td>Position</td>
<td>Currently held by</td>
<td>Due for re-election</td>
</tr>
<tr>
<td>----------------------------------------------</td>
<td>-----------------------------------------</td>
<td>---------------------</td>
</tr>
<tr>
<td>Community Psychology Section</td>
<td>Sue Hazelton</td>
<td>2016</td>
</tr>
<tr>
<td></td>
<td><a href="mailto:sc.hazleton@gmail.com">sc.hazleton@gmail.com</a></td>
<td></td>
</tr>
<tr>
<td>Crisis, Disaster and Trauma Section</td>
<td>Stevie-Louise McGuiness</td>
<td>2016</td>
</tr>
<tr>
<td></td>
<td><a href="mailto:stevie_weave@hotmail.co.uk">stevie_weave@hotmail.co.uk</a></td>
<td></td>
</tr>
<tr>
<td><strong>Branch Representatives</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>North East of England Branch</td>
<td>Jessica Littlefair</td>
<td>2016</td>
</tr>
<tr>
<td></td>
<td><a href="mailto:j.s.littlefair@newcastle.ac.uk">j.s.littlefair@newcastle.ac.uk</a></td>
<td></td>
</tr>
<tr>
<td>North West of England Branch</td>
<td>Jin Zhou</td>
<td>2015</td>
</tr>
<tr>
<td></td>
<td><a href="mailto:jin.zhou@go.edgehill.ac.uk">jin.zhou@go.edgehill.ac.uk</a></td>
<td></td>
</tr>
<tr>
<td>Northern Ireland Branch</td>
<td>Susan Lagdon</td>
<td>2016</td>
</tr>
<tr>
<td></td>
<td><a href="mailto:Lagdon-S@email.ulster.ac.uk">Lagdon-S@email.ulster.ac.uk</a></td>
<td></td>
</tr>
<tr>
<td>Scottish Branch</td>
<td>Niamh Friel</td>
<td>2015</td>
</tr>
<tr>
<td></td>
<td><a href="mailto:n.friel.1@research.gla.ac.uk">n.friel.1@research.gla.ac.uk</a></td>
<td></td>
</tr>
<tr>
<td>South West of England Branch</td>
<td>Madeleine Tremblett</td>
<td>2016</td>
</tr>
<tr>
<td></td>
<td><a href="mailto:mt334@exeter.ac.uk">mt334@exeter.ac.uk</a></td>
<td></td>
</tr>
<tr>
<td>Welsh Branch</td>
<td>Gareth Richards</td>
<td>2016</td>
</tr>
<tr>
<td></td>
<td><a href="mailto:RichardsG6@cardiff.ac.uk">RichardsG6@cardiff.ac.uk</a></td>
<td></td>
</tr>
<tr>
<td>Wessex Branch</td>
<td>Rhiannon Barrington</td>
<td>2015</td>
</tr>
<tr>
<td></td>
<td><a href="mailto:rbarrington@bournemouth.ac.uk">rbarrington@bournemouth.ac.uk</a></td>
<td></td>
</tr>
<tr>
<td>West Midlands Branch</td>
<td><a href="mailto:sarah.hennelly-2011@brookes.ac.uk">sarah.hennelly-2011@brookes.ac.uk</a></td>
<td>2015</td>
</tr>
<tr>
<td>Sarah Hennelly</td>
<td></td>
<td></td>
</tr>
<tr>
<td>London and Home Counties Branch</td>
<td>Lynsey Mahmood</td>
<td>2015</td>
</tr>
<tr>
<td></td>
<td><a href="mailto:lm455@kent.ac.uk">lm455@kent.ac.uk</a></td>
<td></td>
</tr>
<tr>
<td><strong>Board Representatives</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ethics</td>
<td>Miriam Thiel</td>
<td>2015</td>
</tr>
<tr>
<td></td>
<td><a href="mailto:Miriam.Thiel.1@city.ac.uk">Miriam.Thiel.1@city.ac.uk</a></td>
<td></td>
</tr>
<tr>
<td>Research Board (Chair)</td>
<td>Laura Neale</td>
<td>2015</td>
</tr>
<tr>
<td></td>
<td><a href="mailto:laurafayeneale@gmail.com">laurafayeneale@gmail.com</a></td>
<td></td>
</tr>
<tr>
<td><strong>Other Committees</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Conference standing committee</td>
<td>Samaneh Sadeghi</td>
<td>2016</td>
</tr>
<tr>
<td></td>
<td><a href="mailto:pcp12ss@sheffield.ac.uk">pcp12ss@sheffield.ac.uk</a></td>
<td></td>
</tr>
</tbody>
</table>
Bursaries

Limited funding to support up to 20 postgraduate student members

The Research Board are contributing up to £149* towards the cost of attending our annual flagship event.

Successful applicants will receive entrance to all sessions, exhibition area, lunch & refreshments, plus entrance to the Networking Reception.

Application deadline:
17 March 2015

* Conditions apply, see our website for more information and to apply.

www.bps.org.uk/ac2015 

#bpsconf
Psypag is a national organisation for all psychology postgraduates based at UK Institutions. Funded by the Research Board of the British Psychological Society, PsyPAG is run on a voluntary basis by postgraduates for postgraduates. Its aims are to provide support for postgraduate students in the UK, to act as a vehicle for communication between postgraduates, and represent postgraduates within the British Psychological Society. It also fulfills the vital role of bringing together postgraduates from around the country.

- PsyPAG has no official membership scheme; anyone involved in postgraduate study in psychology at a UK Institution is automatically a member.
- PsyPAG runs an annual workshop and conference and also produces a quarterly publication, which is delivered free of charge to all postgraduate psychology departments in the UK.
- PsyPAG is run by an elected committee, which any postgraduate student can be voted on to. Elections are held at the PsyPAG Annual Conference each year.
- The committee includes representatives for each Sub-Division within the British Psychological Society, their role being to represent postgraduate interests and problems within that Division or the British Psychological Society generally. We also liaise with the Student Group of the British Psychological Society to raise awareness of postgraduate issues in the undergraduate community.
- Committee members also include Practitioners-in-Training who are represented by PsyPAG.

Mailing list
Psypag maintains a JISCmail list open to ALL psychology postgraduate students. To join, visit [www.psypag.co.uk](http://www.psypag.co.uk) and scroll down on the main page to find the link, or go to [http://tinyurl.com/PsyPAGjiscmail](http://tinyurl.com/PsyPAGjiscmail). This list is a fantastic resource for support and advice regarding your research, statistical advice or postgraduate issues.

Social networking
You can also follow Psypag on Twitter ([http://twitter.com/PsyPAG](http://twitter.com/PsyPAG) and add us on Facebook: [http://tinyurl.com/PsyPAGfacebook](http://tinyurl.com/PsyPAGfacebook). Again, this information is also provided at [www.psypag.co.uk](http://www.psypag.co.uk).
Contents

Editor’s Column ........................................................................................................ 1
Claire Wilson

Chair’s Column ....................................................................................................... 2
Laura Neale

Discussion paper:
How social interactive skills develop in autism spectrum disorder and Williams syndrome ............... 5
Silviya P. Doneva

Discussion paper:
Exploring the experiences of parents who have a child with autism spectrum disorder: The need for more father-focused, qualitative research .......... 11
Jill McKnight

Discussion paper:
Psychopathy: An overview ................................................................. 13
Patricia Lockwood

Discussion paper:
Are people smart lie detectors?: A new theory of belief formation .................... 17
Chris N.H. Street

Research in brief:
Coping and mental health in parents of obsessive compulsive disorder patients .................................... 21
Mujeeba Ashraf & Afshi Yahya Khan

Discussion paper:
Reflecting upon qualitative research with spinal cord injured patients: A personal experience .......... 25
Jasmine Hearn

Discussion paper:
Feeling through the eyes ............................................................... 28
Saima Eman

Psychology people in profile:
Professor Neil Rackham ........................................................... 31
Kate Doran

Discussion paper:
Psykologi i Sverige: Lessons learned from a two-month study visit to Sweden .................... 35
Gillian Hendry

Discussion paper:
A hall of mirrors: Promoting critical reflection as a means of enhancing and improving teaching practice .......... 38
Charlotte R. Pennington

Hints and tips:
Tips for conducting a systematic review as part of a PhD ................................................................. 43
Mei Yee Tang

Hints and tips:
Tips for conducting hypnosis research .................................................... 47
Hazel Anderson

Discussion paper:
Some positive psychological interpretations of the PhD experience ........................................... 50
Charlie Lea

Discussion paper:
Why and how we should all be making our research open access .................................................. 54
Annie Brookman

Conference review:
When bigger isn’t always better: The benefits of a small conference ........................................... 56
Kelly Hubble

Conference workshop review:
Negotiating the PhD journey ............................................................ 60
Jillian Adie & Robert Buck

PsyPAG Quarterly submissions guidelines ...................................................... 63

Dates for your Diary ........................................................................................... 64

PsyPAG Committee 2014/2015 .......................................................................... 65

The British Psychological Society
Promoting excellence in psychology

St Andrews House, 48 Princess Road East, Leicester LE1 7DR, UK
t: 0116 254 9568 f: 0116 227 1314 e: mail@bps.org.uk w: www.bps.org.uk
© The British Psychological Society 2015
Incorporated by Royal Charter Registered Charity No 229642

ISSN 1746–6016