Triggering and measuring social inhibitory response in humans immersed in interactions with virtual humans
(Poster Presentation)

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Disinhibition to (social/anti-social) stimuli is exaggerated by several deficits of mind, including dementia, autism and Tourette's syndrome. This study focuses on the social domain and aims at investigating if a virtual human can evoke a measurable inhibitory response to anti-social stimuli within the prefrontal cortex (pfc). This follows a previous study demonstrating that neural responses can be measured within an immersive virtual reality display. We adopt the approach of combining functional Near Infrared Spectroscopy (fNIRS) and virtual reality head mounted display (HMD). Participants' performance in a neuropsychological test of executive function (the Hayling test) is measured initially; this is then correlated with haemodynamic changes in participants' pfc (measured with the fNIRS) as they engage in interactions (with virtual humans) that seek to evoke a response that would normally be inhibited. Psychophysiological responses such as heart rate and skin conductivity are also monitored. Haemodynamic responses in the brain are computed using Statistical Parametric Mapping, which is adopted by the NIRSLab software. Changes in psychophysiological responses, participants' perception of virtual humans, captured using the Godspeed questionnaire are analysed using SPSS. We hypothesize that participants with high scores in the Hayling test will show higher haemodynamic changes in their pfc during social interactions than their counterparts with lower scores. The outcome of this research could potentially improve tools for better understanding anti-social behaviour as well as its therapy. This is only a prototype; consequently, presentation will be based on pilot study.

Keywords. Virtual humans, Virtual reality, Inhibition, Social interaction, Anti Social

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Perceptions and Realities of Online Safety
(Poster Presentation)

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The increasing number of young people using social networking in the Gulf States creates concerns about their online safety. While the internet offers many benefits and opportunities for adolescents, it is also the source of many potential threats, including exposure to violence and pornography, vulnerability to attack and exploitation from adult predators, and cyberbullying from peers (Moreno et al, 2013). This study indicates how adolescents from the Gulf States perceive they can stay safe online and then shows that their actions do not match their perceptions. Despite knowing the dangers of providing personal details on webpages, 25% of the youngsters surveyed do publicise such information across the internet. Having been warned about arranging to meet up with someone in person whom they had first contacted online, 17% admitted that they had done so. Passwords, regarded as security risks, are freely given out to someone else to use by 44%. Sasson et al (2011) suggest that adolescents are aware of the risks but have mechanisms to deal with them; however, little research has been carried out on longer-term risks such as the impact of social media on mental health of young people (Niemer, 2012). It is significant that the adolescents surveyed perceived online risks as being related to financial transactions and viruses, rather than any potential personal damage or hurt to themselves, such as cyberbullying, threats to their psychological wellbeing, or physical abuse.

Keywords. Online safety, Young people, Social networking, Gulf States

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Who wants to Live Forever?: Living, Dying and Grieving in our Digital Society
(Oral Presentation)

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"I mean, they say you die twice. One time when you stop breathing and a second time, a bit later on, when somebody says your name for the last time" - Banksy.

The quest for digital immortality and the creation of digital memories are seen by some as a way to 'live on' in the lives of others, but what about those left behind? Will these technologies help or hinder the bereavement process?

The need to be remembered is a powerful desire for some; the ability to curate and store memories and thoughts for future generations is a tempting offer. In my 2015 paper, I introduced the term "digital zombies" to describe the resurrected dead who remain "alive" and "active" in our digital society. The exponential growth of big data ensures the amount of these zombie cyber identities will increase, as new service providers and users join the quest to attain digital immortality.

I am a second year PhD candidate at the University of Warwick and my qualitative research using semi-structured interviews focuses on three categories:
- Service Providers
- Digital Creators
- Digital Inheritors

My preliminary findings show that Digital Inheritors are using the digital memories left by Digital Creators as a positive tool for grieving. Furthermore it highlights the difference between biological and social death, and raises important questions about whether we need a new definition of death.

Keywords. Digital immortality, Digital zombies, Digital memories

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Exploring screen-time in young children: passive exposure versus active use
(Oral Presentation)

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The aim of this research is to assess what is known about infants' and toddlers engagement with emerging technologies, such as touchscreen devices and smartphones, and the impact of this on their cognitive and socioemotional development. The research focuses on the shift in the last decade from passive screen time exposure, such as TV watching, to interactive screen time exposure, such as a video call with a relative. While much is known about the effects of passive screen time exposure, research investigating the effects of emerging technologies and more active screen time use is still relatively scarce. This highlights the need for a review of the timeline and development of screen time over the years. The aim of this study therefore is to explore current definitions of screen time exposure and use in young children and highlight factors that may be important in classifying the different types, and effects, of screen time. These factors may include the interactive and educational nature of both the media and the content, in addition to the role of

the adult caregiver in interacting with the child during the media use. This exploration of the definition and classification of screen time will provide a basis for future research to examine the effects of emerging technology on children's cognitive and socioemotional development. This research may have implications for government recommendations on levels and types of screen time appropriate for young children and for caregivers in the type of media their children are exposed to and use.

Keywords. Screen-time definition, Emerging Technology, Young Children, Cognitive Development, Socio-emotional Development

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Robots and Socio Cognitive Conflict Enhance Wayfinding in Children
(Oral Presentation)

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This research aims to verify the effectiveness of robots (MecWilly, a humanoid robot and Blue-Bot, a non-humanoid robot) as learning-partners in children that act within their Zone of Proximal Development (Vygotsky, 1978) through the Socio Cognitive Conflict (Doise & Mugny, 1981), compared to children acting with human learning-partners. The study aims to evaluate how a specific activity (define a route from beginning to end) can enhance the wayfinding skill in a group of 156 five years old children. All experiments were held in primary schools attended by the children. The first experimental condition is called Child Socio Cognitive Conflict (CSCC), in which two children reaching the solution discussing together perform the task with the robot. The second experimental condition is called Robot Socio Cognitive Conflict (RSCC), in which a child interacts with the robot in the task resolution. In both groups they were performed pre-test and post-test. There was a control group that doesn't perform any activity between the pre-test and post-test. The results show that children improved from pre-test to post-test in all experimental conditions. There are significant gender differences in the time taken to perform the task. Also, there are differences in the use of the robot, children who performed the task with Mecwilly (which improve like CSCC condition), significantly improved compared with children who have used Blue-Bot. Humanoid robots used as partners in wayfinding tasks improve the performance of children, through negotiation present in the Socio Cognitive Conflict, than using non-humanoid robots.

Keywords. Socio cognitive conflict, Robot, Children, Wayfinding

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The influence of Technology on Elementary Teachers in Ecuadorian Context
(Oral Presentation)

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There has been a great deal of research on the role of technology on education. However, considerably less is known about how it impacts on the well-being of teachers. So, although the purpose of technology is to improve and simplify teaching work and educational process, the lack of training, inadequate infrastructure and the absence of technical support can cause these teachers to suffer from anxiety and emotional strain. In light of all these factors, the objective of our research study was to characterize and understand the teachers' perceptions about technology. For this purpose, we performed a qualitative study with nine focus groups with the participation of 75 teachers working in the city of Guayaquil (Ecuador). Based on the results obtained, this study detected that some teachers believe that they lack the necessary professional competences to successfully deal with new technological changes. Many teachers tend to perceive themselves in the role of educators and caregivers with an emphasis on all aspects related to children (where they feel more secure) rather than on more technological aspects of their job. The consequences of all these technological demands are reflected in an exponential increase in perceived chronic stress levels in teachers, accompanied by feelings of anxiety, and in many cases, other symptoms. For this reason, it is important that educational institutions to foment suitable organizational actions and train teachers in order to capacitate them and to help them to generate positive attitudes in the face of technological demands.

Keywords. Computer attitudes, Influence of technology, Stress

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Mobile video chat, gesturing and conversational engagement: An integration of embodied cognition in computer-mediated communication
(Oral Presentation)

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Classical perspectives on computer-mediated communication (CMC) have focussed on the type and breadth of information that can be transmitted through a media channel, but have ignored the wider constraints imposed by the physical set-up of technology on the communicator. Adopting a motor cognition perspective on video chat use, we compared mobile (tablet) and static (laptop) forms of video chat on their potential to engage the user in a conversation, both physically and psychologically. Participants were guided through structured interviews via Skype under three different set-ups (tablet in hand and standing; tablet in hand and seated; laptop on table and seated) conversing about three topics (neutral, positive or negative valence). Combining real-time motion capture with content coding of video recordings and self-reports, we were able to relate different types of data to each other: wrist velocity as an indicator of gesturing, observed levels of engagement as well as self-rated expressivity and remembered conversational content. Results show that gesturing was influenced by both experimental condition and conversation topic with a more unrestricted set-up and less neutral topics leading to higher wrist velocity. Gesturing was further positively related to observed engagement and negatively related to self-reported expressivity. Additionally, a less restricted set-up resulted in more memories of the content of the conversation. Findings indicate that there is more to CMC than information bandwidth. The affordance of physical/bodily engagement in CMC set-ups has substantial psychological consequences for the conversation and needs to be considered in wider models of communication technology use.

Keywords. Video chat, Motor cognition, Conversation, Motion capture, Embodiment

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Typology of Facebook users; What do they do on Facebook and how is it related to their personality?
(Oral Presentation)

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It this research we were interested to examine if there are different types of Facebook users which can be described in terms of the psychosocial aspects of their Facebook use. We also wanted to determine if these types of users are characterized by different personality traits. The sample consisted of 443 Facebook users. Based on five dimensions of psychosocial aspects of Facebook use (compensation, addiction, socialization, self-presentation, and virtual self), the cluster analysis differentiated five clusters of users. The clusters were named Uninvolved, Moderately involved, Sociable, Highly involved, and Addictive users. ANOVA showed that Addictive and Highly involved users are characterized by highest neuroticism, social anxiety, introversion, lowest agreeableness and conscientiousness, as compared to other clusters. Uninvolved users were characterized by the opposite pattern of personality traits. Extraversion and agreeableness were highest among Sociable users, while conscientiousness and emotional stability were the highest among Moderately involved users. Since Addictive and Highly involved users showed similar personality profile, we were interested to examine the differences between the two user types, because they might indicate what are the risk factors for developing Facebook addiction. Discriminative canonical correlation analysis showed that Addictive users were characterized by somewhat lower extraversion, conscientiousness, and agreeableness, as well as higher openness. This study showed that both extraversion and introversion are related to high levels of Facebook use, but among different user profiles. This finding gives confirmation to the two opposing hypotheses about what users benefit the most from Facebook use – Rich-Gets-Richer and Poor-Gets-Richer.
Keywords. Facebook, Typology, Personality traits

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"Thanks for writing but I'm not interested": A qualitative analysis of men's experiences of online dating
(Oral Presentation)

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The current study set out to explore the experiences of online dating from a male perspective. Previous research by Zykto, Grandhi and Jones (2014) has highlighted that men typically experience frustration with online dating, noting that conversations with other potential daters would often halt abruptly, leaving them to ponder the reasons why and impacting negatively on their self-esteem. A purposive sampling procedure utilising a typical case strategy was employed to seek males who were currently using or had within the past 2 years used online dating sites, to gather a rich narrative of the male experience. The participants (N=8) were all heterosexual and aged between 18-60 years old (M= 39.4 years). A semi-structured interview script was followed asking open ended questions to probe a) how men experience online dating, b) perceived advantages and disadvantages, c) strategies used to connect with others, d) how using dating sites affects self-evaluations, and e) how using dating sites might link to general attitudes towards dating and romance. Data were coded at the latent level using thematic analysis and the six- phrase framework devised by Braun and Clarke (2012). The findings from this study support and further those by Zykto et al. (2014) giving a unique insight into the lived experiences of male online daters and the strategies and barriers to success they incur. Themes of affirmation and resilience, frustration, updating and clouded judgments in how the males interact online will be discussed, alongside their implications.
Keywords. Online dating, Males, Experience, Frustration, Self-esteem

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Safety of a VR Environment developed for the treatment of gambling disorder
(Oral Presentation)

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Virtual reality (VR) can be used in the treatment of gambling disorder (GD) to induce cravings and allows patients to practise cognitive behaviour therapy (CBT) techniques while emotionally aroused. This raises the question of whether the cravings are manageable enough to remain clinically safe. A sample of 25 adults with a primary diagnosis of GD according to the DSM-5 criteria was recruited, with 11 participants in the control condition (VR environment without cues related to gambling) and 14 participants in the experimental condition (At Fortunes VR environment, with gambling cues and slot machines). The treatment consisted of a well validated CBT program (Ladouceur et al., 2000), with group therapy sessions combined with four individual sessions dedicated to immersions in VR. Participants documented the severity of urges to gamble immediately after the session, 12, 24, and 36 hours post-session. A descriptive approach was adopted for the data documenting side effects, accompanied by Student t tests and 2 Conditions by 4 Times repeated measures ANOVAs. Data was analyzed with the goal of documenting the safety of using VR, and therefore no correction was applied for the inflation of error rate when assessing side effects. Results confirm that using VR does not lead to urges that are stronger, last longer or feel more out of control than using patient's imagination. Outcome data and effect sizes are reported to prepare larger randomized control trials. Suggestions for future research are provided, including on increasing the number of VR sessions in the treatment program.
Keywords. Virtual reality, Gambling disorder, Cravings, Safety

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Automation of Community-based HIV Testing
(Oral Presentation)

Richard BOYLE
HIV Ireland

Research indicates that up to 1 in 3 people in this country who are HIV+ do not realise it. To help these people connect with proper medical treatment, a key strategy is to encourage widespread, easily-accessible testing services. In response to this, Ireland's largest and oldest HIV/AIDS charity "HIV Ireland" introduced a free, drop-in HIV/STI testing service at their premises on Eccles Street in 2013. This 'low threshold', community-based, informal approach proved very popular amongst traditionally "difficult to reach" and immigrant communities, with queues regularly forming down the street on testing days and resulting in exceptional detection rates. In 2015, HIV Ireland introduced a number of technologies to streamline the service including:
- Wi-Fi delivery of registration to client's own phones

- Gamification techniques to gather anonymous qualitative information
- Live online access to the queue with estimated waiting times
- SMS instant number validation and automated test results delivery
- Detailed statistical analysis for management and key stakeholders
As a result of the automation, HIV Ireland has been able to
- Increase testing capacity by ~30%
- Build detailed qualitative and quantitative profiles of testing populations
- Create targeted educational campaigns based on identified areas of need
Richard Boyle, therapist at HIV Ireland for 20 years and the designer and implementer of the automation system, will
- Give a whirlwind tour of the system
- Provide an overview of the technologies used
- Discuss some of the exciting implications for widening the install base to other community-based testing services
Keywords. Gamification, Automation, HIV Testing, SMS, Wi-Fi, Community, Public Health, Edugames, Stigma, Health, Healthtech

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Modes of Cyberstalking and Cyberharassment: Measuring the negative effects in the lives of victims in the UK
(Oral Presentation)

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and Emma SHORT
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Cyberstalking may occur solely in the digital realm, or may form part of a wider campaign targeting individuals on and off-line. The impact cyberstalking has on victims may differ depending on the type. In this paper, we use Sheridan and Grant's (2007) classifications of, "Proximal with offline", "Online only" and "Crossover" stalking types. Here, online only specifies cases where the cyberstalking behaviours have been carried out solely through the use of digital communications; proximal with offline, indicates cases where the behaviours began offline, but then continue via digital communications and; crossover indicates cases where the behaviours begin online and then continue offline. These classifications are applied to responses gathered from 278 victims of cyberstalking and cyberharassment through the 2011-2014 ECHO survey. We analyse the responses to first classify the type of stalking experienced and then the reported number and types of effects in the life of the victims on a per-group basis. Using chi-square analysis, we identify that victims in the case of proximal and crossover stalking are more likely to report negative changes to their work, relationships and financial lives and to report more negative changes in these areas than those experiencing online only. In addition, in the relationship and financial areas, crossover cases provoke significantly more changes than proximal cases. This indicates that cases where the stalker moves from being an online presence to a proximal presence have an extreme impact and therefore should be treated with the utmost concern, both in terms of support and safeguarding strategies.
Keywords. Cyberstalking, Cyberharassment, Work, Relationship, Financial, Impact, Cyber abuse, Online abuse

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Virtual reality delivered mirror visual feedback for psychosomatic symptoms using limb swapping
(Poster Presentation)

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Motor cortex abnormalities have been documented in psychosomatic illnesses involving body perception such as Conversion Disorder (CD). Evidence suggests that cortical motor reorganization occurs after Mirror Visual Feedback (MVF) which can be delivered using Virtual Reality (VR). To date no exploratory studies of VR or MVF for CD have been reported. In this study, we use CD patients' unaffected limbs to control movements of their affected limbs. Outcome measures included weekly symptom frequency and the Oxford Handicap Scale. Patients' movements in VR were recorded and exploratory analysis performed. Subjects (N=30) meeting criteria for CD were randomized to receive 8 sessions of MVF or placebo in a single-blind fashion. The control group egocentrically viewed unembodied virtual content thru the LUMEN application that reinforced attention by growing objects in the environment. To estimate symptom change over time, standard linear mixed effects modeling was employed utilizing all available cases and intention to treat principals. Preliminary findings include 100% retention rate and one adverse event. The study is near completion and analysis of results will occur prior to conference date and not prior to study completion as not to bias the unblinded raters. The current study evaluates the feasibility, safety, and evidence of symptom improvement using VR and MVP for CD. We will discuss a summary of the findings in the context of VR treatments for psychosomatic illness and the overlap of the hypothesized neurobiological mechanisms of CD and MVF and embodied VR.
Keywords. Virtual reality, Mental illness, Psychiatry, Psychosomatic, Embodiment, Rehabilitation, Mirror therapy, Neurorehabilitation, Technology for therapy, Cognitive and physical therapy, Somatic symptom related disorders, Functional neurological disorder, Conversion disorder

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"It won't happen to me": Implications of social network site use and FOMO on online vulnerability and psychological wellbeing
(Oral Presentation)

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Online social network sites (SNS) are a ubiquitous method of socialising in the digital era. A potential source of social support, their continued and frequent use has been linked to a fear of missing out (FOMO) and the implicit desire to regulate psychological needs deficits through online friending and information disclosure. Personal online safety is a regular source of political debate and media scrutiny. To this end, an examination of the implications of social networking and FOMO in a 24/7 connected world is considered. A cross-sectional survey study in which 489 UK based Facebook users (53% male) responded to an extensive online survey about SNS behaviours, FOMO, perceptions of vulnerability, psychological wellbeing and online risk. A misperception of personal online vulnerability sets the scene for a comparison of the associations between the factors driving SNS use and online vulnerability across different age groups. Structural equation modelling was used to conduct a

multi-group mediation analysis comparing school-based adolescents (N = 267; 13 to 17 years) and adults (N = 222; 18 to 77 years). FOMO, SNS behaviours (friending and disclosure) and exposure to online risk mediated the relationship between SNS use and psychological wellbeing for all age groups. Increases in SNS use lead to increases in FOMO related behaviours and risks, which in turn lead to decreased levels of wellbeing. The research provides an insight into age-related perceptions of online life and the implications these might have on an individual's online vulnerability and psychological wellbeing.
Keywords. Social network sites, FOMO, Online vulnerability, Psychological wellbeing

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(Life) after a tablet education: Digital Self Efficacy, Cognitive Skills and Self Esteem in Older Adults
(Oral Presentation)

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Ageing is usually related to physical, social, and cognitive decline. Many older individuals want to remain cognitively healthy and take part actively to social life, which nowadays is partially carried out through ICTs, of which older adults often have no knowledge. This research aims to explore on an empirical basis if people aged 65 and over perceive improvements in self-esteem, digital self efficacy and perception of cognitive skills when they take part to a digital education program to learn how to use a tablet and its basic functions. Fifty over 65 participants participated in a digital education program. The following questionnaires were filled out before the start and at the end of the program: Digital Self Efficacy (ad hoc), Rosenberg's Self Esteem Scale, Cognitive Failure Questionnaire. On average, participants experienced significantly greater general digital (t(30)=-10,642, p<.001) and app-specific self-efficacy (t(30)=-10,3, p<.001) after the end of the course (respectively MGSE_t1=28,81, SD GSE_t1=8,70; M SSE_t1=24,61, SD SSE_t1=6,61) than before the course (M GSE_t1=13,68, SD GSE_t1=8,22,; MSSE_t0=11,13, SD SSE_t0=6,92). There are no significant changes in Self Esteem and the Distractibility, Personal Intelligence, Memory for Names dimensions of the Cognitive Failure Questionnaire. Pre-Post comparisons for memory (Mt0=1,42, SDt0=,59; Mt1=1,19, SDt1=,52) and concentration (Mt0=1,92, SDt0=,56; Mt1=1,43, SDt1=,65) are significantly lower (respectively: t(38)=3,876, p<.001; t(38)=7,681, p<.001).
The training program seems to help participants to be more confident in handling the tablet, but also rising difficulty in the course appears to make people less confident in their memory and concentration skills.
Keywords. Healthy aging, Digital education, Digital self efficacy, Self esteem

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Acceptability of an internet-based Exposure treatment of Flying Phobia: Results from a Randomized Controlled Trial
(Oral Presentation)

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The treatment of choice for specific phobias is in vivo exposure which has proven its efficacy in several studies. Nevertheless, this technique has been linked to several limitations in its implementation such as the low acceptance among patients and therapists as well as the difficulties to access the treatment. Internet-based treatment has been suggested as a promising tool in order to overcoming these issues. However, few studies on this topic are available for specific phobias. To the best of our knowledge, there are not studies that investigate the acceptability of an Internet-based exposure treatment for Flying Phobia (FP). The aim of this study is to offer data about the patients' acceptance towards an Internet-based treatment for FP (NO-FEAR Airlines) with and without therapist guidance. The sample was composed of 46 participants from a randomized control trial who had received the entirely self-applied program via the Internet (n = 23) or the same treatment plus telephone therapist guidance (n = 23). All participants completed a protocol assessment carried out online and by telephone at pre- and post-treatment. Expectations, satisfaction, treatment preferences, opinion and usability were assessed. Results showed good acceptability of NO-FEAR airlines with no statistical differences when considering the therapist guidance particularly referred to attrition rate, expectations, satisfaction, opinion and usability. However, participants broadly preferred the supported condition. In conclusion, NO-FEAR Airlines was a well-accepted Internet-based treatment for FP that might help to enhance the exposure technique acceptation and the access to the treatment.
Keywords. Specific phobia, Flying phobia, Acceptability, Computer-assisted exposure, Internet-based therapy

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Tele-rehabilitation for attention and memory disorder in patients with traumatic brain injury through Virtual Reality
(Poster Presentation)

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This study aims at assessing an online portal where patients with traumatic brain injury (TBI) can carry on memory and attention exercises outside clinic premises. The training took place in a Virtual Reality setup where one TBI patient had to complete daily life activities. Concerning the application of the new technologies on rehabilitation, the most promising advance may reside on the use of Virtual Reality in combination with Internet wideband in order to provide and support rehabilitation training. This paper describes initial results of the implementation and evaluation of VR platform for Tele-Rehabilitation (Lisbon System Battery) with Mexican population. The main goal is to adapt it to the social

and cultural context in Mexico. To reach this goal, the virtual environment was changed according to be more faithful to the Mexican social life. The development of a fully comprehensive online platform – portal, that will enable TBI patients to exercise attention and memory through a VR devised to replicate their daily activities may promote their autonomy and increase the quality of life. This application will be validated both internally and externally. On the first case, a system evaluation methodology will be applied. On the last, a sample of TBI patients will be randomly assigned to two groups: the experimental group, which will undergo rehabilitation exercises in the portal, and the control group, which will practice using traditional procedures. The expected result is an increase in working memory and attention levels from the first to the final assessment.
Keywords. Telerehabilitacion, Brain injury, Virtual reality

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Friend of Phone? Smartphone use and digital companionship
(Oral Presentation)

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Smartphones are our everyday companions, they provide us with numerous services and ubiquitous online connectivity. Beyond specific apps and tools, we posit that smartphones have ceased to be mere technical devices and that user-phone relationships are marked by psychological processes formerly confined to human-human relationships. Under the concept of digital companionship, we investigated the emotional bonds users have developed with their phones and the psychological functions that phones can fulfil as a result. Combining a web-based assessment task with standard survey measures, we conducted a cross-sectional study on 1168 respondents, based in Germany and the UK. For the assessment task, psychological distances to others and to technical devices were elicited by visualising self, others and devices as tokens on a chessboard. Further, smartphone attachment, involvement and trust were measured to capture additional aspects of companionship. Results indicate that smartphones are closing in on social actors in terms of their psychological distance to self. Indicators of companionship together with antecedent (fear of missing out) and outcome (phone-related stress and coping) variables were used to test a comprehensive, theory-driven model using structural equation modelling. Support was found for a process in which users are driven to develop stronger companionship which in turn affects stress levels and coping. This holds particularly for problematic levels of attachment and involvement, reminiscent of dysfunctional human-human relationships.

Our findings indicate that the medium for social connectedness is turning into a socially relevant agent itself, thus blurring the boundaries between passive device and (pseudo-)social actor.
Keywords. Smartphone, Fear of missing out, Problematic phone use, Stress, Coping

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Context Reinstatement of Eyewitness Memory: Comparing the Impact of Differing Virtual Environments
(Poster Presentation)

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Context reinstatement is the process where a participant or an eyewitness is returned to a familiar environment to aid memory recall. The current research analysed the effects different types of virtual environments had on eyewitness memory for a fictitious crime. The participants (N = 98) viewed a video of a fictitious crime and participants in the control conditions (N = 22) were interviewed in a non-virtual environment. Participants in Study One (N = 31) were interviewed in a C.A.V.E replicating either the crime scene or a neutral room. Participant in Study Two (N = 24) and Study Three (N = 21) were interviewed in an Oculus Rift replicating the same locations as Study One. However, participants in Study Three were also provided with an Xbox controller to enable movement through their environments. Statistical analysis suggests that the quality of information recalled by participants is affected, not by recall location (Crime Scene or Neutral Room) as expected but rather through recall in a virtual environment (p = .003) and more specifically through recall in the Oculus Rift (p < .001). Further, there is statistical evidence to suggest that there is an impact on the quantity of information when an Oculus Rift is used to display an environment compared to the C.A.V.E. (p < .001). This research presented the possibility that an environment displayed in an Oculus Rift may have a greater impact on eyewitness memory than a C.A.V.E displayed environment.
Keywords. Context reinstatement, Memory, Virtual Environment, C.A.V.E., Oculus Rift

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Video games as learning tools at school: parents' attitude
(Poster Presentation)

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Interest in video games for educational purpose is continuously increasing. Few studies have investigated the attitude of students and teachers towards video games as learning tools, but almost none have addressed parents' perspective. This study investigates attitudes towards video games at school in a sample of parents of primary and secondary school level children. Specifically, the survey consists of several sections investigating the following aspects: 1) demographic data, 2) parents' and children's familiarity with new technologies and video games; 3) parents' computer self-efficacy (Vekiri and Chronaki, 2008) and attitude towards video games as learning tools (Bourgonjon and colleagues, 2010, adapted for parents). At the present time with the research still ongoing, 20 fathers and 33 mothers completed an online survey after signing an informed consent; almost all were residents in Northern Italy (96.2%). Their children are attending mainly primary school (83%) and are predominantly males (66%). Participants are typical Internet users, quite confident in their computer abilities and conscious of the Internet risks. For what regards video games at school, generally they are mildly favorable: they report moderate preference for schools that will adopt them and they believe that video games would be simple-to-use tools for their children, even in an educational context.Some doubts emerge about their specific usefulness.

Parents' computer self-efficacy positively correlates with attitude towards video games: thus, increasing parents' computer self-efficacy may be useful to improve video game perception and to reduce mistrust and prejudice towards the technology.
Keywords. Video game, Education, Parent attitude, Computer self efficacy

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Enhancing psychological well-being of women approaching the childbirth: a controlled study with a mobile application
(Oral Presentation)

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Pregnancy is a critical period in a woman's life, a time of great physical and psychological changes: in this context maternal prenatal anxiety is often present and negatively associated with perceived self-efficacy to face with labor and possible negative outcomes. Relaxation and meditation represent good practices to help women to feel more competent in facing this experience and to reduce complication rates. To help pregnant women to better manage their affective state and childbirth expectations, especially in the last trimester of pregnancy, the mobile app BenEssere Mamma was developed. The app consists of a self-help protocol containing mindfulness meditation and relaxation exercises. The purpose of this investigation is to test the efficacy of BenEssere Mamma as complement tool to existing childbirth class on psychological well-being and delivery expectancy. The effectiveness is assessed through self-report validated questionnaires, administered at the beginning and at the end of childbirth class. Currently, ninety-two Italian primiparous women are enrolled in the controlled study (age M=32.89; 95.6% married or living with partner). All women reported an improvement about delivery expectations (a decrease of lack of confidence, fear and negative feelings). Furthermore, although women used the app differently, preliminary data show significant difference between groups related to psychological well-being.. Specifically, experimental group (n. 43) maintains constant levels of psychological well-being, while the control group (n. 49) shows discomfort signs (lower Environmental Mastery, Personal Growth and Purpose in Life). The study is ongoing. Further data are needed to explore whether the positive effects are maintained after the childbirth.
Keywords. Mobile app, Pregnancy wellbeing, Positive technology, Mindfulness

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Applying large-scale corpus analysis methods to online forum content: a study of a community of sex workers and 'punters'
(Oral Presentation)

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Research on online forum content and communities often adopts a traditional thematic analysis approach (Attard & Coulson, 2012; Carter & Agnew, Submitted). While this allows detailed qualitative analyses, it also introduces issues with the subjective selection of the themes and the practicality of dealing with the volume of written data within a sample. In contrast, Corpus Linguistics offers a data-driven approach that can extract similar information from very large text databases. In this paper, we compare the two approaches by drawing on data from an online sex work forum. A sample of posts were collected for the thematic analysis (containing 2631 posts across 60 different threads covering one week). Nvivo was used to conduct a thematic analysis (Braun & Clarke, 2014), which revealed five themes: preferences, personal narrative sharing, advice, philosophical issues, and community maintenance. The second approach involved the construction of a corpus containing the text of the general discussion forum (comprising 16.5 million words from 255,891 posts covering six years) using web-scraping methods. Topic Modelling (Blei et al. 2003) was used to automatically identify themes within this larger corpus. While this approach revealed some of the same themes as the thematic analysis, it also highlighted additional ones such as the community's concerns with health, cleanliness and legal issues. We argue that such methods provide a more rigorous and objective framework for the analysis of online forum content. We will also present ideas for further analysis using Corpus Linguistic methods that are enabled by studies at this scale.
Keywords. Corpus, Linguistics, Forums, Sex-Work, Punters, Thematic analysis, Corpus linguistics, Corpora

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Touching Emotions: Evaluation of Affective Pictures is influenced by Moving Direction
(Oral Presentation)

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Evidence based on theories of embodied cognition suggests that the mental representation of positive and negative valence is strongly connected to our bodily experiences within the surrounding space. As multi-touch environments involve bodily interactions, the question arose, how such interactions with affective digital objects would influence the evaluation of these objects? It is expected that the type of interaction may potentially influence user's affective experiences. Thus, the present study investigated how touching and subsequently moving affective pictures horizontally or sagitally on a multi-touch monitor (MTM) would influence the evaluation of the pictures. Therefore, one group of participants moved the pictures on the MTM performing either horizontal arm movements from the right to the left side of their body or from the left to the right side of their body. A second group moved the pictures on the MTM performing sagittal arm movements away from their body or towards their body. The findings revealed that (a) positive pictures moved with the dominant right hand from right to left reached more positive valence evaluations, whereas negative pictures moved with the non-dominant left hand from left to right reached more negative valence evaluations, and (b) that positive pictures moved toward the body reached more positive valence evaluations whereas negative pictures moved away from the body led to less negative valence evaluations. The results suggest that the valence evaluation of affective pictures is influenced by the type of interaction determined by hand and movement direction. This is supported by the view of embodied cognition.
Keywords. Embodied interaction, Affective pictures, Valence evaluation, Multi touch environment

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'You want to know that you're safe': Experiences of Risk, Restriction and Resilience Online among People with an intellectual Disability
(Oral Presentation)

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Online risk research has primarily focused on young people with little research considering online risk and cybercrime in the lives of adults with intellectual disabilities (ID). Perceived vulnerability may increase digital exclusion for people with ID. Risks have previously been classified as either contact, conduct and content but little is known about the experience of these specific types of risk for adults with disabilities. This study presents a qualitative study exploring experiences of risk of adults with intellectual and developmental disabilities. Individual interviews were conducted with thirteen adults with intellectual and developmental disabilities. Interviews considered online experiences of online risks. Data were audio recorded and analysed using thematic analysis. Three overarching themes of risk experiences, awareness and support to manage risks, and developing independence and resilience through online participation were identified. Accounts also identified concerns around online risks and carer gatekeeping as a potential instrumental factor in digital exclusion. Adults with intellectual and developmental disabilities with low support needs appeared more able to manage online risk than may be presupposed by a vulnerability-focused perspective. Enabling people and their carers to better understand and manage online risk appears a way forward for both research and practice.
Keywords. Intellectual disability, Online risk, Qualitative Resilience, Support, Digital inclusion

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Online support group use and psychological wellbeing for family carers of people with intellectual disabilities
(Oral Presentation)

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Carers of people with intellectual disabilities (ID) may face considerable challenges, exhaustion and a lack of services and support which can affect their wellbeing. Little research has focussed upon use of online support groups (OSG) by this group of carers. The primary objective of this research was to explore how accessing and engaging with OSG correlates with wellbeing amongst family carers of people with ID. Information was collected from and self-selected sample of family carers of a person with an ID. A mixed methods online survey gathered self-report quantitative and qualitative data regarding motivations to use OSG, OSG use (Access frequency, engagement and satisfaction with OSG, and their reasons for using OSG), empowering processes gained from OSG use, and their resilience, optimism and wellbeing. Correlational analysis, multiple regression and thematic analysis were used to analyse the data. A significant positive correlation was found between resilience and wellbeing amongst the carers. A significant negative correlation between being motivated to use OSG due to a lack of understanding in offline life and wellbeing was also found. Thematic analysis of qualitative data uncovered themes of belonging/connectedness, information sharing, support seeking and convenience as reasons for using OSG. Findings suggest lack of support in offline life can be a significant motivator for using OSG amongst carers of people with ID. Carers appear to accrue social and informational benefits from using OSGs, which may also be more readily accessible for carers. Further study of OSG use in carers is recommended.
Keywords. Intellectual disability, Online support, Carer wellbeing, Resilience

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How do we present ourselves online? Validation of the Presentation of Online Self Scale (POSS).
(Oral Presentation)

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The Internet offers features such as anonymity, opportunities for asynchronous interaction and greater control over what individuals share about themselves. These features are suggested to promote optimal self-presentation (Walther & Parks, 2002). Individuals with certain characteristics (e.g. introverts) are also more likely to experiment with self-presentation online, perhaps because of perceived limitations in their offline interactions or because they are especially motivated to garner desirable impressions (Fullwood, 2015). However, there is yet an instrument available that measures and identifies different types of self-presentation behaviour in cyberspace.

This study aims to validate a questionnaire, the Presentation of Online Self Scale (POSS) that measures an individual's propensity to experiment with self-presentation online. The scale has been piloted on adolescents (Fullwood, James and Chen-Wilson, 2016). To examine POSS's reliability, adults in four English-speaking counties (Australia, UK, Ireland and the US) are being recruited to complete the questionnaire. Factor analysis will be conducted to see if the four factors previously identified in adolescents are still valid: ideal self, multiple selves, consistent self, and online presentation preference. Data from the following questionnaires are being collected to examine the POSS's construct validity: Self Monitoring Scale (Snyder, 1974), Facebook Intensity (Ellison et al., 2007), Social desirability scale (Crowne and Marlowe, 1960), Social anxiety scale (Leary, 1983) and the Self-concept clarity Scale (Campbell et al, 1996). The data collection is on going with a current sample size of over 100 participants from the UK and Ireland. This paper will present the preliminary results from the final sample
.**Keywords.** Presentation of Online Self, Online presentation preference, Self-presentation online

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The sensorimotor Dimension of the Networked Flow: an Exploratory study Using an Interactive Collaborative Platform
(Oral Presentation)

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The ability to cooperate with another individual in order to achieve a shared goal is crucial for human survival and it is called joint action. It is noted that this process can originate when actors are synchronized at a sensorimotor level. However, experiential correlates of sensorimotor synchronization are nearly unexplored. The aim of this study was to investigate the relationship between the experience of flow and social presence in a sensorimotor collaborative task. 12 female couples (mean age = 22.33; S.D. = .815) and 12 male couples (mean age = 22.88; S.D. = .789) were involved in a tower-building task across 10 consecutive trials using the COLLEGO platform. Couple members alternated their leader/follower role. Platform recorded time stamp (ms) and position of each selected object when it was picked/released, providing a measure of performance. Thereafter, participants' level of flow (Flow State Scale) and social presence (Networked Minds Social Presence Inventory) were assessed. Flow and Social presence correlated positively at a global level. Having clear goals and perceiving a balance between challenges and skills were associated with a higher performance. The autotelic dimension of flow was negatively related with global performance. At the same time, task duration correlated negatively with cognitive and behavioral dimensions of social presence, but positively with emotional dimensions. Results are discussed in light of the Networked Flow model that assumes a strong positive link between social presence and flow at the base of the highest levels of collaborative performance.

Keywords. Flow experience, Social presence, Networked Flow model, COLLEGO platform, Sensorimotor interaction, Synchronization, Joint action

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Examining the Culture of Information Security Awareness for Post-Millennial African-American Undergraduate Students
(Poster Presentation)

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The age of information technology impacts the way people manage their lives and how organizations conduct business. With it, negative consequences have become commonplace, accompanied by increases in security breaches and identity left for individuals, organizations, and governments. Emerging adults use technology in almost all aspects of their lives, but their overall information and computer literacy does not necessarily follow. Accordingly, it is important they have knowledge about security threats and their roles in minimizing them. As these emerging adults enter college and then the workforce, they will bear the responsibility to protect their work environments. As such, educational institutions have a duty to instruct students on the proper ways to keep information and assets safe. This is particularly true of historically Black colleges and universities (HBCUs) which are responsible for teaching diverse groups of African Americans in the United States who have been traditionally underrepresented in the corporate workforce and may have the additional pressure of managing negative assumptions and stereotypes while becoming responsible, self-sufficient adults. But are HBCUs instilling a culture of information security into these emerging adults? The literature is limited in this area, therefore, the purpose of this study was to explore the information security attitudes and behaviors of the current generation of African American students attending a HBCU. Results of this preliminary study will be discussed in relation to developing programs to educate African American students on information security and creating a security awareness culture prior to matriculation at the university level.

Keywords. Information security awareness, Cybersecurity, African American college students, Big 5 personality traits

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Do female YouTubers receive more hateful comments? Results of three content analyses
(Oral Presentation)

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Hate on the Internet has become a common concern. Although the video platform YouTube is the second most visited website worldwide, research on hate –especially gendered hate– on YouTube is scarce. This study comprises of three independent sub-studies that explored if female YouTubers receive more hateful video comments than male YouTubers. Building on the pioneer study by Wotanis and McMillan (2014), comparable female and male YouTubers were selected, and samples of video comments to their most popular or most current videos were collected. The video comments were content analyzed regarding different types of negative or hateful feedback. Sub-study 1 (direct replication of Wotanis & McMillan, 2014) confirmed that the U.S. comedy YouTuber JennaMarbles receives significantly more negative and hateful comments than the U.S. comedy YouTuber nigahiga (N = 2,400 comments, Chi²(1) = 81.9, p < .001, V = .19). Sub-study 2 (conceptual replication with five female/male pairs of North American Comedy YouTubers) did not reveal a gender effect (N = 6,000 comments, Chi²(1) = 0.6, p = .243, V = .01). Sub-study 3 (conceptual replication with four female/male pairs of German YouTubers from Comedy, Gaming, HowTo&Style, and Sports) confirmed gendered hate on YouTube (N = 8,000 comments, Chi²(1) = 22.5, p < .001, V = .05). Results indicate that hate on YouTube is gendered. However, other characteristics of the YouTuber (e.g., race) and the video content (e.g., controversial topic) might play a role. Further research is necessary to better understand and prevent hate on YouTube.

Keywords. YouTube, Online hate, Gender, Gendered online hate

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Influence of Simulation Fidelity on Perceived Realism- An Exploratory Study in a Virtual Public Speaking Training Application
(Oral Presentation)

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Public speaking skills are essential for many professions. However, public speaking anxiety (PSA) is one of the most common phobias. PSA can be treated effectively by training in virtual environments. When trainees perceive the virtual environment as realistic (simulation realism) training effectiveness is improved. This study investigates which specific simulation fidelity factors of a virtual public speaking training application predict perceived overall simulation realism. A cross-sectional correlational study was conducted with N = 40 participants (62.5% male, 37.5% female, M age = 25.60, SD = 6.29). Participants used a virtual reality training application with a virtual audience that consisted of video recordings of real humans. Three different simulation fidelity factors were measured as predictors (scene realism, audience behavior, and audience appearance; Poeschl & Doering, 2013). Perceived overall realism of the application was the criterion. A linear stepwise regression revealed that only three-dimensionality of the scene (an item from the scene realism factor) significantly predicted perceived overall realism ($F_{(1,37)} = 9.87$, $p = 0.003$, $R^2 = 0.46$). None of the audience behavior or audience appearance items showed any impact. Based on this result developers should focus on scene realism (especially three-dimensionality of the scene), when trying to achieve high overall simulation realism. The fidelity factors of audience behavior and audience appearance should not be neglected, though. In this study the virtual audience was created by video recordings of real humans and therefore was highly realistic. Further research is necessary to better understand simulation realism.

Keywords. Virtual audience, Virtual reality, Fear of public speaking, Training application

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When wearable fitness devices fail: Towards an improved understanding of what makes a successful wearable intervention
(Poster Presentation)

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Many champion wearables as devices that will revolutionise 21st century medicine. However, this technology has often failed to provide new insights for healthcare professionals and patients. Current research paints a mixed picture when demonstrating their effectiveness. While some patients claim that these devices are beneficial, recent clinical trials targeting weight loss have failed to replicate this early promise. Related work also highlights failures in the design and implementation of similar devices. Nevertheless, these outcomes remain a key cornerstone in the literature because they emphasise the importance of understanding errors in order to capture the ideal functioning of any device or intervention. Therefore, this research had two complementary objectives that aim to help realise the potential of future wearable technologies. First, we have identified patterns and documented the key reasons why wearables and other mobile technologies can fail to change behaviour. Insights have been gained not only from the latest research, but also by looking back at early attempts at self-monitoring health (e.g. telehealth). This has generated new ideas concerning how the next wave of wearable technology can be better designed and implemented – increasing the chances of success. Second, we have considered how existing study designs and outcome measures may need to be adapted in the future. Current research, for example, may not employ sensitive enough measures to capture progress and accurately quantify outcomes. While existing measures are borrowed from traditional behavioural interventions, these may not be appropriate when it comes to real-time feedback that is 'always on'.

Keywords. Wearable devices, Digital health, Behaviour change

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Acceptability of a positive technology by patients with eating disorders: Results from a Randomized Control Trial
(Poster Presentation)

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Interventions addressed to improve well-being in patients with eating disorders have been suggested as a way to buffer against the harmful effects caused by these disorders. In this sense, positive technologies can play a role in the implementation of these interventions by enhancing the quality of the user experiences that, in turn, can serve to foster the benefits obtained from them. The present study is aimed to analyze the acceptability levels of the positive technologies rated by patients with eating disorders. The sample was composed of 29 participants with a diagnosis of eating disorder. The participants were asked to think and imagine about their best possible self (BPS) during one month. In order to perform the BPS exercise a module of the EARTH of Well-being virtual system, called "The Book of Life" was used. This device seems like a diary, where users write about a specific topic and choose some multimedia contents that may improve the quality of the user experience. Treatment satisfaction questionnaire was administered after the intervention. All participants reported adequate levels of overall satisfaction (M=7.33, SD=3.38) and utility (M=7.41, SD=3.38) with the technologies. Also, they reported that they would recommend it to their friends (M=7.44, SD=2.68). These results suggest that positive technologies can serve as a supporting tool delivering interventions aimed to improve positive emotions and well-being in clinical samples. The importance of this fact lies on the necessity of providing the patients with positive resources in order to cope with severe conditions.

Keywords. Positive technology, Best possible self, Eating disorders, Well-being

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Assessment of the Attention Performance Test based on Virtual Reality: A Comparison with the Traditional Continuous Performance Test
(Poster Presentation)

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The Virtual Reality-Continuous Performance Task was developed to add ecological validity in assessing attention in school-aged children. This study aims to investigate the attention-measuring capacity of VR-CPT in a classroom setting compared to the traditional computer-based tool to measure attention. A total of 38 participants (M=11.97, SD= 2.52), 18 typically

developing children and 20 with ADHD according to the DSM-V, were recruited to receive CPT in virtual reality. VR-CPT consisted of two conditions: without a virtual teacher and with a virtual teacher's visual and auditory cues in a classroom setting. Participants' attentional performance was measured on five different domains: accuracy, commission error, omission error, reaction time, and reaction time variability. The results suggested that there were positive associations between ADHD-Rating Scale scores and reaction time (p=0.017), reaction time variability, commission error, and omission error, and a negative association with the total accuracy in VR-CPT (All p's<0.01). A multiple regression analysis suggested that predictabilities of traditional CPT (p=0.002, R2=0.414) and VR-CPT (p<0.01, R2=0.391) on ADHD symptoms were comparable. The results also suggested that reaction time variability was smaller when teacher and social cues were present than when absent (χ2=5.158, p=0.023). The study demonstrated that VR-CPT program in a classroom setting showed association and comparable predictability with traditional attention test. Also, the presence of social cues from the virtual teacher seemed to affect attention levels, specifically reaction time variability.

Keywords. Virtual reality, CPT, Attention, Assessment, Adolescence, Social cue

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Does owning a "fatter" virtual body increase body anxiety in college students?
(Oral Presentation)

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This study aims to assess the ability of a virtual reality (VR)-based software to produce body anxiety responses in a non-clinical sample. 30 male and female college students will participate. Overweight (BMI>25) and severe mental disorder will be considered exclusion criteria. Participants will be exposed to an immersive VR environment displayed with HTC-Vive, where the illusion of ownership of a virtual body will be induced by means of visuomotor synchronization. Each participant will be exposed to three body sizes (from first perspective and from third perspective): an avatar with the same body measures as the participant, an avatar 20% larger than the participant, and another avatar 40% larger than the participant. BMI, drive for thinness (EDI 3-DT) and body dissatisfaction (EDI3-BD) will be assessed before exposure, while body anxiety (PASTAS), fear of gaining weight (Visual analog scale [VAS], from 0 to 100) and ownership illusion (VAS from 0 to 100) will be assessed after exposure to each avatar. It is expected to find a strong relation between the level of drive for thinness and body dissatisfaction, and between body anxiety and fear of gaining weight experienced during the exposure to the avatars with increased body sizes. The mediator role of BMI and body ownership induction will also be explored.

This study is the first step in the development of a new VR-based body exposure therapy for reducing weight-gain anxiety in anorexia nervosa patients and the consequent resistance to change that characterizes these patients.

Keywords. Virtual reality, Body ownership illusion, Visuomotor synchronization, Body anxiety, Non-clinical sample

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Self-presentation variation between different online dating site profile texts: A Content Analysis
(Oral Presentation)

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When deciding what information to disclose about themselves online, people consider their potential or imagined audience, as well as the perceived social norms of the particular environment they are presenting within. Online dating is not a homogenous environment; there are a variety of ways in which sites differ. For example, eHarmony is a paid site where only members can view other profiles, whereas Plenty of Fish is a free site, where the public can view profiles without logging in. Content analysis has been used to look at self-presentation on dating sites, however researchers have not yet looked at self-presentation differences between profiles on different types of site. The effect of imagined audience and social norms of the particular dating environment could contribute to varying self-presentation on different dating sites. This study will investigate whether daters on different online dating sites have differing self-presentation in their 'About Me' profile texts. A codebook has been created including a priori themes such as positive and negative expressions of emotions towards self or others; expression of hopes and dreams or fears and worries; personality traits; formality and standard of grammar and spelling; the use of emoticons, and demands for characteristics in a partner. Any emergent themes will also be analysed. This study will seek greater understanding of self-presentation in online dating profiles, in particular the differences or similarities of themes that emerge across paid and free, public or private, web based or mobile application dating sites, as well as gender and sexual orientation differences.

Keywords. Online dating, Self-presentation, Audience effect, Content analysis

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A mixed-method investigation of contemporary problematic smartphone use
(Oral Presentation)

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Approximately 97% of young adults, and 70% of adults in Great Britain regularly use smartphones. There is a growing interest in the problematic aspects of smartphone use, as this technology can negatively impact wellbeing and lead to behavioural addiction. However, theory has failed to adapt with the speed of technological advancement. Relatively recent smartphone interactions, particularly those which are supported by 'on the go' internet technology, have not been accounted for and may influence problematic smartphone experiences. This study aimed to explore and develop an up-to-date understanding of problematic smartphone behaviours. A mixed methods study was conducted. Firstly, 510 smartphone users participated in an online

survey using existing measures of problematic and addictive patterns of smartphone use. Secondly, 20 participants took part in focus groups which explored perceptions of problematic interactions. Factor and thematic analyses were triangulated to redefine current constructs and measures of problematic smartphone interactions. In an age of internet-enabled phones, smartphone dependence and dangerous uses were key problematic interactions. Furthermore, behaviours which caused a social stigma were associated with problematic mobile phone use. Contrary to existing theory, use of smartphones in prohibited spaces was not a reliable construct for problematic smartphone use. Smartphone integration poses increasing demands and challenges on modern life. This up to date understanding of smartphone difficulties provides new direction for behaviour change programmes. Considering the ubiquity of this technology, future research should investigate the impact such problematic behaviours have on the wellbeing of smartphone users. **Keywords.** Smartphones, Wellbeing, Problematic mobile phone use

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My Virtual friend: Understanding psychological attachment to smartphones
(Oral Presentation)

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As the mobile phone has evolved into the Smartphone, these gadgets have become more than just communication devices. There has been a special focus in the recent research literature around developing measures to assess Smartphone addiction. However, there has been far less attention given to the different ways in which individuals experience owning and using these devices and whether this could help to explain why some individuals might develop an attachment to them. The current study reports on a thematic analysis of three focus group discussions centred on young people's attitudes towards and experiences of owning and using Smartphones. A number of themes emerged, including 'representation of phone', which highlighted a bifurcation in attitudes to Smartphones as simultaneously materialistic objects, and ones which users express anthropomorphic and sentimental views about. Participant accounts also reflected varying 'uses' of the smartphone, echoing the evolution of the Smartphone from a very functional communication device, to one which may also serve informational and recreational purposes. Participants also discussed using their phones to alleviate boredom and that device usage had become habituated for some of them. However, it was also noted that context determined phone use and in particular, participants expressed using these devices to help them to feel secure when they were away from the familiar, home setting. Participant accounts from this study provide a richer insight into the reasons why individuals may experience psychological attachment to their Smartphones and findings are discussed in light of Uses and Gratifications theory and Attachment theory. **Keywords.** Smartphones, Attachment, Focus groups, Thematic analysis

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Healthcare representatives tweeting about #diabetes: Follow the leaders!
(Poster Presentation)

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Healthcare representatives (professionals and institutions) could serve as opinion leaders on diabetes, and behaviour change endorsers, according to Kelly's model. With 300 million of users, Twitter could represent an effective education channel to promote health-related behaviour change. However, is not common that healthcare representatives on Twitter are perceived as opinion leaders. This study analyzes if healthcare representatives are tweeting about #diabetes could be perceived as opinion leaders on Twitter. Ten thousand tweets tagged with the hashtag #diabetes were downloaded (including number of retweets and favorites). Users' profile details, number of followers, and date of creation of the Twitter account were also extracted. Users identifying themselves as healthcare representatives were identified. Among the 10,000 tweets, 545 were posted by healthcare representatives (441 by individual healthcare professionals, and 104 by healthcare institutions). The healthcare users had a similar number of followers than the rest of the users (8899.4 vs. 8982.1;p=0.97). However healthcare institutions had more followers than healthcare professionals acting as individuals (29323.4 vs. 4082.9;p<0.001). Seniority of healthcare users was higher than the rest of the users (1714.6 days on Twitter, vs. 1320.4;p<0.05); and their tweets were more often retweeted and favourited than the ones posted by the rest of the users (10.6 vs. 6.7; and 1.3 vs. 0.5, respectively;p<0.05). Healthcare representatives seem to be perceived as key opinion leaders on Twitter (their messages are more retweeted and favorited). Thus, there is a potential in healthcare representatives tweeting about #diabetes for promoting health-related behaviour change among diabetes patients. **Keywords.** Diabetes, Twitter, Social media, Health personnel

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"Positive Bike"- An Immersive Biking Experience for Combined Physical and Cognitive Training of Elderly Patients
(Poster Presentation)

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Previous evidence shows that combined cognitive and physical exercises (dual-task intervention, (I-DT)) potentiates cognitive performance more than either type of single training alone (Lauenroth et al., 2015). Here, we describe the rationale, the design and the implementation of the "Positive Bike", a fully-immersive virtual reality biking experience for implementing I-DT training protocols in older patients. The system consists of a

cycle-ergometer equipped with blood pressure and cardio-frequency sensors positioned within a Cave Automatic Virtual Environment (CAVE). The system also features a cloud-based platform which allows the therapist to configure the exercise parameters (i.e, duration and load) as well as to set personalized cardiovascular profile of the patient. Using the Positive Bike, the patient can take a virtual ride by physically pedaling at variable paces within a simulated scenario (i.e., a park). During the virtual ride, the patient can be presented with different interactive cognitive exercises (attention, memory). In one of such exercises, for example, the patient has to cross a busy traffic road and to control his/her pace in order to avoid collisions with passing vehicles running at different speeds. In addition, the Positive Bike allows monitoring cardiorespiratory function during the virtual exercise and provides visual or auditory feedback to the patient to keep him/her in the "zone" of optimal cardiovascular fitness (in case of abnormal cardiovascular response the exercise is automatically interrupted). Potential applications of Positive Bike in geriatric wellness and rehabilitation are discussed.

Keywords. Positive technology, Dual-task intervention, Cycle-ergometer, Virtual reality, Rehabilitation

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Using Graded Sound-intensity Techniques to Facilitate and Enhance VRET
(Poster Presentation)

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Roughly 10 million individuals across the UK are affected by some form of phobic anxiety. A single phobia can have a debilitating effect upon everyday function and often phobic anxieties are components of comorbid conditions, associated with mood disorders and depression. Graded exposure therapy presents us with an established therapeutic response. It involves systematically exposing patients to phobic stimuli of incrementally increasing intensity, gradually normalising and relaxing phobic response behaviours. By application of digital technology, Virtual Reality Exposure Therapy (VRET) has already been shown to be an affordable and flexible variant of graded exposure. However, very little is understood about the potential of sound in VRET and often, sound it not used at all.

This raises two significant concerns. Firstly, blind individuals or those with partial sightedness are largely excluded from current VRET. Secondly the lack of multimodality in current VRET is missing a great opportunity to increase the immersive qualities of the therapy (particularly where phobic stimuli are primarily auditory, e.g. dental anxiety), that would support both its real-world applicability (by way of being more realistic and comparable to the real world) and the precision and flexibility with which therapists could control the different exposure grades. This poster is a positional piece written in advance of an international collaborative study that justifies the value of considered sound design within VRET. It also presents the theoretical foundation to explain the auditory-perceptual mechanisms by which sound would enhance visual VRET and will facilitate sound-centred VRET for the blind and partially sighted.

Keywords. Virtual Reality Exposure Therapy, Auditory perception, Sound design, Phobia, Anxiety

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Facebook use and subjective well-being: the impact of differing levels of engagement and use
(Oral Presentation)

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The increased use of social media has revolutionised modern communication over the past decade. Facebook is currently the most popular social media platform, with the company reporting 1.86 billion users in late 2016 (Facebook Newsroom, 2017). The purpose of this study was to explore how different types of Facebook use and engagement impact subjective well-being, measured as life satisfaction, eudaimonic well-being, and positive and negative affect. Data were collected online for 228 respondents and analysed using OLS regression. Facebook use was measured with the multidimensional Facebook intensity scale (MFIS; Orosz, Tóth-Király, & Bőthe, 2015), which contains four subscales: persistence, boredom, overuse, and self-expression. Each subscale of the MFIS seeks to quantify users' Facebook motivations and habits to measure their level of involvement with the site. Facebook engagement was assessed with a recently developed passive and active use measure (PAUM; Gerson, Plagnol, & Corr, mimeo). Passive Facebook use describes the consumption but not the creation of content, while active Facebook use describes active engagement with the site. Results revealed that life satisfaction is positively associated with persistence and active Facebook use, and negatively associated with overuse. Eudaimonic well-being and positive affect were both positively associated with using Facebook for self-expression or to alleviate boredom. Negative affect was positively associated with overuse, and negatively associated with using Facebook to alleviate boredom. With more of our social lives taking place online, it is important to understand how social media platforms impact subjective well-being.

Keywords. Social networking, Subjective well-being, Passive Facebook use

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Behavioral craving, and anxiety responses among light and heavy drinking college students in alcohol-related virtual environments
(Oral Presentation)

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and José GUTIÉRREZ-MALDONADO
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The aim of the present study was to determine which measures (behavioral and self-reported measures of craving and anxiety) differentiate best between light- and heavy-drinking college students when exposed to a virtual reality (VR) alcohol-cue environment. 25 college students participated in this study, of whom 13 were light drinkers (standard drink units (SDU)/month ≤ 10) and 12 heavy drinkers (SDU)/month ≥ 11). Participants completed the Alcohol Use Disorder Identification Test (AUDIT) before exposure to the VR environment. Heavy drinkers scored higher than light drinkers on AUDIT. The virtual environment consisted of four situations: restaurant, bar, chill-out area, and bedroom, where participants could choose alcoholic or non-alcoholic beverages. An Oculus Rift DK2 headset was used as the HMD. In each situation, craving and anxiety were self-reported on a visual analog scale (VAS, from 0 to 10). The results showed differences between groups in the type of beverage chosen in the four VR situations, whereby heavy drinkers chose alcoholic drinks more frequently. However, no statistically significant differences were found between groups in craving or anxiety levels reported on the VAS during VR exposure. Conclusions:

Heavy-drinking students show a preference for alcoholic beverages in all VR situations compared with light drinkers, but do not experience different levels of craving or anxiety as assessed with VAS. If virtual environments are used to detect heavy drinking cases, behavioral parameters such as choosing between alcoholic or non-alcoholic cues seem more suitable than self-reports of craving or anxiety.

Keywords. Virtual reality, Alcohol craving, Assessment

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The small-world of cybertherapy
(Oral Presentation)

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Is cybertherapy a scientific paradigm? Is it made up of heterogeneous individuals or an organized scientific community? How has it evolved since 2006? To answer these questions, we took an interest in the keywords used in the scientific literature dealing with cybertherapy. A network approach has been put forward in order to (1) highlight the most central concepts, (2) to make some themes emerge, (3) to determine whether this structure could testify to a small-world organization, revealing paradigmatic aspects of a scientific discipline. 1510 articles have been extracted from the Pubmed and Elsevier databases from the query: « cybertherapy » OR "computer based therapy" OR "online therapy" OR "tele-psychology" OR "telepsychotherapy" OR « tele-mental health ". Over the period considered, (i) the conceptual network appears coherent and organized (S = 3.28), (ii) 18 themes emerge, (iii) the anxious disorders seem particularly central. The analysis of the temporal evolution shows an increase in the number of keywords which, combined with a reduction in the number of themes, makes possible to circumscribe the cybertherapy more than to promote its scattering. Although still above 3, the S-smallworld index decreases from year to year. All the results support an exemplary cybertherapeutic paradigm. However, the decline in the small world index over time invites us to ensure that this scientific coherence remains at the risk of a scattering of cybertherapy that could lead to an impoverishment of its identity. Ethical, methodological and educational implications are considered.
Keywords. Cybertherapy, Scientific paradigm, Network approach, Text-mining, Smallworld

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Chronic pain treatment through Virtual Reality
(Poster Presentation)

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Chronic pain is a note issue of public healthcare, causing enormous direct and indirect costs, and a reduction of the quality of life in the affected patients. The standard therapy consists in the assumption of drugs (which is a very expensive approach, and brings side effects and tolerance) and/or physiotherapy. The aim of this study is to demonstrate that is possible to reduce the levels of pain experienced by the patients, even with non-pharmacological interventions. The Virtual Reality (VR) has been demonstrated to be capable to produce this results, by "distracting" the individual from his pain, and producing analgesia. A group of 6 patients, with various conditions ranging from back pain to neck pain has been treated with 8 VR training sessions. The training consisted in the exploration of the virtual environments, that have been created with the specific purpose to elicit relaxation and pain distraction. The experimental group, has been compared to a control group, giving encouraging results. To evaluate the perception of the pain before and after the training , has been used a biofeedback measurements and self-report questionnaires. After the training has been outlined how, in all the patients, the perception of the pain has decreased substantially. The introduction of this method to a large quantity of patients could improve the quality of life of the individuals, and reduce the costs linked to the therapy. Otherwise, while the experimental group has voluntarily suspended the pharmacological therapy, the control group had a constant assumption of drugs.
Keywords. Palliative care, Chronic pain, Virtual reality, Pain distraction, Biofeedback

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Evaluating presence in telepsychotherapy. A complementary study on intersubjectivity co-construction processes
(Oral Presentation)

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Evaluating the efficiency of online psychotherapies is an important issue in the field of Cyberpsychology: research shows that the efficiency of this type of support depends on a correlation between the sense of presence and the emotional investment of participants. Also interactive exchanges reinforce the sense of presence and the intersubjective dimension of the relational exchange. The creation of online intersubjectivity can be linked to the process of co-construction of meaning and presence. This contribution aims to describe and evaluate the improvement of intersubjective interactions happening during online psychotherapies. The sampling and selection procedures are based on a multisite and multicultural study. Four adults were selected from a larger pool of participants who received either psychodynamic or cognitive-behavior therapy delivered in videoconference, with one case per psychotherapeutic approach with a very positive and one with a less positive treatment outcome. The therapy sessions were transcribed and one external judge read the conversations and selected extracts considered to be significant in terms of creation of intersubjectivity. These extracts were then analyzed for verbal (linguistic and paralinguistic) and nonverbal cues, searching for the integration of interlocutors' contributions to the interactional accomplishment of what could be defined as 'the therapeutic project'. Results may help to define typical intersubjective interactions in clinical online context and also permit to know further and explore the concepts of sense of presence and intersubjectivity in digital relationships.
Keywords. Intersubjectivity,Videoconference telepsychotherapy, Sense of presence, Online interactions

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A re-validation of the Smartphone Addiction Inventory (SPAI): Exploring the link between problematic smartphone use and cognitive failures in daily life
(Oral Presentation)

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The aims of the present study were to revalidate the previously developed Smartphone Addiction Inventory (SPAI) and to explore the relationship between smartphone addiction and cognitive failures in daily life. 300 participants comprising of 71 males and 229 females, with an age range between 18-65 (M = 23.12, SD = 8.079) completed an online questionnaire. This included a reworded 26-item SPAI and the Cognitive Failures Questionnaire (CFQ; Broadbent, Cooper, FitzGerald, & Parkes, 1982). An exploratory factor analysis revealed a five-factor solution for the reworded SPAI, these being 'compulsive behaviours', 'emotion and motivation', 'social withdrawal', 'fatigue' and 'physical and financial consequences'. The overall internal consistency of the reworded SPAI was very good (Cronbach's α = 0.94). A further analysis revealed a significant positive correlation between SPAI scores and those on the CFQ scale (p. = .000). A significant difference between high and low scoring groups for the SPAI and scores on the CFQ (p. = .000) was also found with those in the higher group presenting greater self reported cognitive failures. The results present a newly validated scale with which to explore smartphone addiction as well as highlighting a relationship between addiction to smartphone use and an increase in daily cognitive failures.
Keywords. Smartphone addiction, Cognitive failures, Cybercognition

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Investigating the contributory role of Social Anxiety and Impulsivity in Smartphone Addiction Undergraduate University Students
(Poster Presentation)

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A questionnaire-based study aimed to explore the link between smartphone addiction, impulsivity, social anxiety and smartphone usage. Data were collected from 214 undergraduate participants who completed an online questionnaire containing a smartphone demographic scale, an adapted version of the Smartphone Addiction Inventory (SPAI) (Lin et al, 2014), Barratt Impulsivity Scale (BIS-11) (Patton, Stanford & Barratt, 1995) and a Social Interaction Anxiety Scale (SIAS) (Mattick & Clarke, 1998). It was found that impulsivity and social anxiety were significant positive predictors of smartphone addiction, with impulsivity being the stronger of the two predictors. The overall findings suggest that smartphone addiction is moderately related to increased social anxiety and impulsive behaviour. These findings add to previous research that has suggested that individuals with lower impulse control are more likely to become addicted to technology and socially anxious individuals rely heavily on technology for communication. The findings are consistent with previous research that self-control is important in protecting against smartphone addiction. Implications for future research directions are discussed..
Keywords. Mobile phones, Addiction, Smartphones, Impulsivity, Social Anxiety

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Problematic Use of Massively Multiplayer Online Role-Playing Games: Characteristics and Definitions
(Poster Presentation)

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Problematic use of massively multiplayer online role-playing games (MMORPGs) represents the principal reason for a request of services for personal difficulties associated with Internet usage. However, it is presently a misunderstood phenomenon. MMORPGs are distinguished from other kinds of video games due in part to their important social aspect, so it is relevant to evaluate their consequences separately. The present systematic review was conducted on November 27, 2015 using 5 electronic databases (PsychNET, Pubmed, Isi Science, Ebsco and Proquest). It allowed to synthesize the existing knowledge on the phenomenon of problematic use of MMORPGs and to identify potential identification criteria for the condition. Scientific writings in any language that reported a definition or characteristics of MMORPG problematic use, based on a sample of problematic users in the case of studies, were included in the review.Possible identification criteria include saliency, appearance of problems, loss of control, withdrawal symptoms, compulsion, increase in the amount of time spent playing, compensation, conflicts, and several spheres of life being compromised. An illustration of the phenomenon is also provided, based on the writings. While the found criteria differ to some extent from those suggested by the DSM-5 for online video game problematic use, it is also concluded that there is currently a lack of studies using adequate identification of the disorder. Some recommendations for researchers and clinicians are provided.
Keywords. Problematic use, Massively Multiplayer Online Role-Playing Games, Definitions, Criteria, Review, Behavioral addictions

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Effects of Aging in Joint Attention Virtual Classroom
(Poster Presentation)

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Previous studies suggested that virtual classroom can offered ecological valid and sensitive measures, and we suggested that there was significant joint attention effects in joint attention virtual classroom (JAVC). As an ongoing research, we investigated the effects of aging in the JAVC. Ten young adolescents (8~12), eight old adolescents (13~16) and sixteen young adults (19~24) were recruited for current study. Participants conducted two-button of AX-version of continuous performance tasks in four experiment conditions: equipment control, virtual-classroom control, low joint attention, and high joint attention. Dependent measures included accuracy, response time, response time variability, commission error, omission error and head movement. All dependent measure showed significant differences among age groups (all ps < 0.05). There were significant interaction effects in accuracy (F (6, 93) = 2.603, p < 0.05, n2 = 0.144) and commission error (F (6, 93) = 10.222, p < 0.05, n2 = 0.136) between experiment conditions and age groups. Post hoc results suggested that older groups had higher joint attention effects then younger group. The results suggested that

joint attention promote information processing and those effects are more prominent in the older groups. It can be connected with developments of social interaction and joint attention should be included as one of pivotal elements of virtual classroom.
Keywords. Human-human interaction, Virtual reality, Joint attention, Continuous performance test

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Persuasion and Influence in the Age of Terse Text Cyber Communication
(Poster Presentation)

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Over the past few decades, communication behaviour has evolved dramatically. As a society we increasingly consume information in the format of short messages, rather than lengthy text and verbose speech. Meanwhile our understanding of persuasion has hardly moved on from the 1980s and continues to be spread across a variety of academic disciplines. Existing models of persuasion are to date lacking interdisciplinarity and applicability to the terse text format found in social media. This mixed-method project seeks to bring our knowledge of persuasive and influential communications into the 21st century, by adapting existing models of persuasion and information processing from behavioural science to the terse text context, as well as by exploring the rhetorical content, semantic detail and linguistic features of persuasive microblog discourse, their frequency of use, distribution, and function. In behavioural science, it has traditionally been thought and partially evidenced, that deep cues and arguments are key to successful persuasion with lasting impact. Microblog character limits present a unique challenge for the persuasive communicator, likely to skew a majority of persuasive attempts towards a reliance on heuristic cues instead, a hypothesis so far confirmed by our analysis of several pilot datasets. Additionally, we found that Aristotelian appeals (ethos, pathos, and logos) continue to be applicable to terse text, albeit individually more so than in combination. Persuasive microblog communications rarely include all three types of appeals, but instead rely on just one or two, often with a clear preference for appeals to emotion and credibility over appeals to reason.
Keywords. Influence, Persuasion, Social media, Microblog, Communication

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Creating and testing a purpose made video game to measure moral decisions
(Poster Presentation)

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Video games have attracted much media controversy in the last few decades, with a notable but not isolated example being Grand Theft Auto series, which content includes; nudity, prostitution, guns, drug dealing and driving recklessly. This has prompted research to start examining the role of morality in video games. However, there are inconsistencies in the findings; for example a significant amount of research has used the game Fallout 3 reporting in-game moral decisions were similar to real-life moral decisions. In another study the game Half-Life II was used and results showed morality would disengage. These inconsistencies could be due to issues with the method, using commercial video games such as Fallout 3 and Half Life II which both contain potentially strong biases such as familiarity with the game and favourite characters. By designing and creating a custom-made video game for research some of the biases can be reduced; offering many benefits for the research and consequently the methodology. These benefits include, amongst others, the level of control over the games features. Before the game was used to measure morality, 31 participants tested the game and completed a survey about their experiences of the game and previous commercial game play. Preliminary results investigated the participants' experiences with the purpose-made game and how this compared to their commercial game play. The aims of the next stage of the research are to administer a game to measure morality, to investigate how moral decisions are made in video games.
Keywords. Video games, Methods, Morality

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Exploring the impact of hand movement delays and hand appearance on myoelectric prosthesis embodiment using Immersive Virtual Reality
(Poster Presentation)

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Prosthesis embodiment, the feeling of a prosthesis being part of the user, is reported by some prosthesis users. Embodiment is believed to be influenced by agency over the limb and its appearance. Myoelectric prostheses are electrically powered and controlled via electrodes measuring electromyographic (EMG) signals from muscle within the user's remaining limb. The difficulty in controlling such prostheses and their appearance have been noted by users as reasons for prosthesis rejection, and may influence prosthesis embodiment. The delay between intended and actual hand movement includes a fixed (electromechanical delay in the hand) and variable amount (reliability of electrodes picking up the EMG signal), introducing uncertainty over how the hand will behave, likely influencing embodiment. Embodiment may also be influenced by appearance of the hand. As encouraging prosthesis embodiment has been proposed as a goal of rehabilitation, designers of prostheses need to understand the impact of such factors. An Immersive Virtual Reality study is currently in preparation and the background, protocol, and pilot study will be presented. The study will use anatomically intact participants and systematically measure the impact of movement delays and appearance on embodiment of a virtual prosthesis. This involves a novel approach in testing prosthesis embodiment by using a myoelectric hand displayed virtually. VR provides controllability in assessing several questions in embodiment research. The experiment includes a head-mounted display (Oculus Rift) with myoelectric prosthetic hand movements motion tracked (Leap Motion) and presented virtually, with various appearances and hand-movement delays introduced. Embodiment will be measured subjectively and objectively.
Keywords. Embodiment, Myoelectric prosthesis, Virtual reality Virtual hand illusion

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Investigating the Effect of Physical and Psychological complaints on Simulator Sickness- A Non-Experimental Driving Simulation Study
(Oral Presentation)

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Simulator Sickness is a common negative side effect in simulator studies. Although physical illness can enhance the susceptibility to simulator sickness, studies investigating the influence of current physical and psychological complaints (as indicators of participant indisposition) on simulation sickness are scarce. This study explored if the level of simulator sickness in a driving imulation study differs between levels of self-reported complaints. We conducted a non-experimental cross-sectional study with N = 94 participants (Mage = 24.77, SDage = 4.74, 26.6% women, mainly students) who gave informed consent. Subjects answered a questionnaire about current complaints (30 items; four-point Likert scale) before performing a driving simulator task. Subsequently, participants filled out the Simulator Sickness Questionnaire (16 items; four-point Likert scale; total scores ranging from 0 to 179.52; scale weighting according to Kennedy, Lane, Berbaum, & Lilienthal, 1993). Due to multi-collinearity, participants were grouped according to high, medium, and low complaint levels and compared concerning Simulator Sickness with a MANOVA and Bonferroni post-hoc tests. With exception of nausea all findings show that subjects who experience higher levels of complaints also show significantly higher levels of average simulator sickness (group means: Mlow = 9.08; SDlow = 7.16; Mmedium = 22.33; SDmedium = 24.09; Mhigh = 33.40; SDhigh = 24.99; F(2, 91) = 9.77, p < .001; η2 = .18). Results indicate that simulator sickness increases with rising levels of physical and psychological complaints. Future research should investigate causal relations between expressed complaints and the experience of simulator sickness, for example with repeated measures designs

Keywords. Physical complaints, Psychological complaints, Simulator sickness, Driving simulation

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Using Eye-Tracking Methods to Measure Attention to Facebook Content
(Oral Presentation)

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Facebook has evolved to become a popular tool for social communication with 1.86 billion monthly active users. Many studies have used survey methods to investigate social networking sites (SNS). There are very few studies that have used new and innovative methods to examine social networking use. In one of the first studies of its kind, this experimental study used eye tracking technology to identify eye gaze and fixation patterns of Facebook users (n = 69; Mean age = 23, SD = 7.5). The study also examined the relationship between Facebook use and personality, depression, anxiety, stress, self-esteem and problematic use. Participants were asked to complete self-report measures before and after Facebook use. During the study participants Facebook use was recorded with the use of an eye tracker. The results showed that participants eye fixations and gaze were drawn to the 'who's online' and chat area of Facebook. After the initial fixations, the results revealed that most time was spent reading the newsfeed section, the trending section of Facebook followed this. There were some interesting findings in terms of problematic Facebook use and other psychological characteristics. The research highlights the capabilities of eye

tracking methods, the depth of information acquired and the behaviour of users that can be viewed with new and innovative methods. Implications for future research and theory are discussed.

Keywords. Social networking, Facebook, Psychology, Problematic use, Personality

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Saccadic Eye Movement as a Reliable Cue to Deceit: Using Wearable Eye-tracker
(Poster Presentation)

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This study aimed to examine the effect of cognitive load and long-term memory (LTM) during deception on visual and non-visual saccadic eye movement, and further to test the possibility of saccadic eye movement as a reliable index for lie detection. To measure visual saccades, 60 participants were randomly assigned to guilty-visual saccade group (G-V) and innocent-visual saccade group (I-V), and to measure non-visual saccades, 90 participants were randomly assigned to guilty-non visual saccade group (G-NV), rehearsal guilty-non visual saccade group (RG-NV), and innocent-non visual saccade group (I-NV). Guilty group committed a mock-crime and innocent group went on a non-criminal mission, and all participants were interviewed about their prior mission. During the interview, G-V and I-V were viewed complex and blank stimuli, and NV were viewed blank stimuli which minimized visual interruption, and the saccadic eye movement rate was measured with wearable eye-tracker. The expected results would be as followed: G-V would show more frequent visual saccades toward the simple stimuli than I-V, and G-NV would show more frequent non-visual saccades than RG-NV and I-NV. These results suggest that (a) in order to lower additional cognitive burden, eye movement toward the simple stimuli increased, and (b) retrieval of deceptive memory is not readily accessible in LTM, therefore takes higher effort of searching from LTM which leads non-visual saccades to increase. The implication for this study is that examined the cognitive load and LTM effect on visual and non-visual saccade separately, and confirmed saccade as a reliable index for lie detection.

Keywords. Wearable eye-tracker, Lie detection, Saccade, Long-term memory, Cognitive load

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Attributions of blame and responsibility in Online Interactions
(Oral Presentation)

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The illicit sharing of private images online is a growing concern within the UK legal system. Nevertheless, individuals' (and particularly celebrities') private photographs are appealing targets for computer hackers. 2014 saw a high profile public release of a large number of illegally obtained, sexually suggestive photographs of celebrities. Media coverage of this event provided a public forum for discussion of the consequences, responsibilities, morality, expectations, entitlements and ideologies of womanhood, celebrity status, online privacy and security. How do users of online fora co-construct notions of blame and culpability in discussions of the 2014 celebrity photo scandal. 850 comments were drawn from a naturally occurring online discussion in a newspaper comment thread. Data was analysed from a discursive psychological perspective. Findings indicated that internet users are shown to excuse themselves of responsibility through the mobilisation of three repertoires:

Neutralisation (the denial of wrong-doing), blame (attribution of responsibility to a third party), and inevitability (that digital data will necessarily end up in the public domain). Moral responsibility for immoral act is discursively and collaboratively separated from the human actors, and instead imputed to the technology which facilitates the action. Consequently, human actors may not be motivated to moderate their own online behaviours, as long as they are capable of assigning responsibility to another entity.

Keywords. Blame, Discursive psychology, Neutralisation, Online discussion, Responsibility

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Measuring Flow on the Go: The effect of real-time flow and context on in-vivo positive mood in digital gaming
(Oral Presentation)

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Although research extols the positive effects of social gaming, the dynamic processes underlying these effects remain unclear. In a hitherto unused approach in this field, we utilised a Smartphone App to model the effect of context and flow on positive mood in de facto real-time. Data was obtained from 41 gamers who play shooting games, producing a total of 2796 data-points. We also explored individual-level variables; demographic gaming variables (average hours per week playing, gamer-type, preferred type of play) and Big-5 personality traits. Multi-level modelling revealed real-time positive mood was associated with real-time reports of flow in gameplay, current context and individual-level variance in the number of hours typically spent engaged in playing per week. Specifically, in-vivo positive mood was higher for players when playing online with friends (relative to those playing solo). Higher reports of real-time flow were, nonetheless, associated with decreases in positive mood. Finally, players who indicated playing less frequently experienced higher positive mood, relative to those who played more. These findings support and extend previous work in group flow in gaming and highlight the importance of obtaining real-time measures of experiences. They demonstrate that positive mood in gaming is not static, but changeable depending on one's current gaming environment and flow.

Keywords. Digital gaming, Context, Group flow, Flow, Mood, App

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A novel assessment of spatial learning and memory: Head mounted display-radial arm maze (HMD-RAM)
(Oral Presentation)

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A radial arm maze is an essential tool for assessing spatial learning and memory impairments. The goal of current study was to investigate the human's spatial learning and memory using a head mounted display radial arm maze (HMD-RAM), and compared the spatial abilities between old and young adults.
We developed the HMD-RAM which was manipulated by participant's head movement and joystick. Eleven old adults (60-80) and 11 young adults (20-25) were recruited, and required to discover treasures as quickly as possible in five consecutive blocks. Dependent measures included reward number, detection time, travel distance, working memory (WM) error, and reference memory (RM) error. Both groups showed training effects as blocks progressed in dependent measures including the reward number ($p < .001$), detection time ($p < .001$), and travel distance ($p < .005$), and they showed significant effects of age group. However, WM and RM errors monotonously decreased as blocks proceeded in the young adult group, but it increased from first to third block in the old adult group. There were significant differences between two groups in WM error ($p < .05$) and RM error ($p < .05$). This research suggested that the HMD-RAM can assess the spatial abilities in humans, and it showed different pattern according to age groups. Both groups generally have similar patterns, but old adults may need more learning time in this program. It could be one of pivotal characteristics for early assessments of spatial learning and memory deficits.

Keywords. Spatial learning and memory, Virtual reality, Head-mounted display, Radial arm maze, Working memory, Reference memory

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Virtual Body-Ownership, Motion-Synchronization, and Body-Size Matching in Adults
(Poster Presentation)

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People can feel body-ownerships even if they are facing non-real body like virtual avatar. However, there are not yet rigorously studied about the interaction among virtual body-ownership, motion-synchronization, and body-size matching. In this study, we designed a novel virtual body-ownership paradigm with a real-time motion capture system, and investigated the effect of motion-synchronization and body-size matching toward virtual body-ownership. Thirty participants were recruited for current study. The experiment contained four independent conditions (2 x 2; Sync-Match, Sync-Unmatch, Async-Match, and Async-Unmatch). During each condition, the participants were asked to conduct body movement task in front of virtual mirror. Right after each condition, the participants filled out questionnaires about body-ownership and body-size. As expected, the Sync-Match condition induced highest level of virtual body-ownership, and the Async-Unmatch condition induced lowest level of virtual body-ownership. Interestingly, participants reported that they felt their own body size in the Sync-Unmatch condition, and we also found several unique patterns on emotional induction, simulator sickness, and presence. These results suggested that the motion-synchronization is one of pivotal components for the virtual body-ownership, and the motion-synchronization and the body-size matching can affect emotional and cognitive changes of participants.

Keywords. Virtual body ownership, Body size, Motion-synchronisation

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Process Outcome Analysis of Human Field of Regard (FoR) Training for Patients with Hemispatial-Neglect
(Oral Presentation)

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People with hemispatial neglect often fail to detect or respond to stimuli in the contralesional space (generally the left side) even though there are no problems in their vision. We proposed a novel human FoR paradigm for human's attention bias (Jang et al., 2016). In the current study, we applied this paradigm to hemispatial-neglect patients, and analyzed their process outcome of training. We hypothesized that participants' search abilities would be improved after the FoR training than waiting list. Eight chronic patients who having left hemispatial neglect were recruited for current study. The rehabilitation program was designed for sixteen weeks. Over eight weeks of training, each patient conducted twenty sessions of FoR training (Jang et al., 2016), and they conducted another eight weeks waiting list sessions with crossover experiment design. The results of detection time indicated that there was statistically significant difference between training-pre/-post (t(7) = 4.608, p < .005), but no significant difference between waiting list-pre/-post (p > .882). The results of success rate also represented statistically significant difference between training-pre/-post (t(7) = -4.032, p < .01), but no significant difference between waiting list-pre/-post (p > .921). In addition, the result of conventional measures (i.e., line bisection task) showed marginal training effects between training-pre/-post (t(7) = -2.113, p = .072). These results suggested that the human FoR training has a possibility for rehabilitation of chronic neglect patients.
Keywords. Field of regard, Virtual reality, Head-mounted display, Hemispatial neglect, Rehabilitation

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Measuring ethnic prejudice in user-generated content
(Oral Presentation)

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The role of prejudice in interethnic anxiety, contact and conflict has been a long-studied topic in ethnic psychology. Recent pervasiveness of social media has allowed prejudiced views to spread to large audiences, which has led to new research tasks of measuring and monitoring online ethnic prejudice and/or tolerance. As psychological methodologies have never aimed at finding prejudice in written text, we have to combine psychological and sociological concepts of prejudice with text analysis and machine learning techniques. Using text data from a Russian-language blog service, we develop a hand-coding methodology to capture various aspects of attitudes to different ethnic groups and test its reproducibility though inter-coder reliability tests. From 1,119 entries obtained, we find that Caucasus ethnicities are perceived as both negatively alien and aggressive, while Central Asians are portrayed as positively alien and non-aggressive. Both groups get much less attention than Americans, Germans or Jews, and direct calls for physical attack or extermination of any ethnic groups are extremely rare. We then refine our methodology and hand-code a sample of 6,719 messages from the two-year population of Russian-language

social media texts while over-representing rarely occurring ethnicities. We train a classifier to automatically detect some aspects of prejudice in texts and get good quality for intergroup conflict, positive intergroup contact, and overall negative and positive sentiment. We obtain insufficient quality in predicting general attitude to an ethic group and find the lack of data to predict more specific aspects of prejudice which is the subject of our further research.
Keywords. Online prejudice, Ethnicity, Measurement

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The Effect and Persistence of Online-based Attentional Bias Modification in Obese with/without Binge Eating
(Poster Presentation)

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The goal of this study is to investigate the effect and persistence of online-based attentional bias modification (ABM) in obese with/without binge eating. 50 obese individuals were categorized into two groups according to the presence or absence of binge eating by the scores of Korean version of Eating Attitude Test-26. After checking the baseline of both groups for food cravings, attentional bias and attentional disengagement difficulty for high-calorie food cues, and food intake were measured by using General-Food Cravings Questionnaire-Trait (G-FCQ-T), eye movement, gap-overlap task, and bogus taste test, then, online-based ABM training consisted of once a week for five weeks and a follow-up session after one week from the post-training session was conducted. Although this study has been in progress, the expected results could demonstrate that both groups showed a significant reduction in G-FCQ-T scores, dwell time bias scores, gap-effect scores for high-calorie food cues as well as food intake after post-training and follow-up session compared to pre-training. There could be no significant difference in measurements between post-training and follow-up session in both groups, but in the post-training, the reduction of the measurements was more significant in obese individuals with binge eating than without binge eating. That is, the effect and persistence of online-based ABM is useful in both groups, but it is more effective in obese individuals with binge eating. The implication of the current study is that non-laboratory environment with repetitive training may also bring the effect and persistence of online-based ABM for obese with/without binge eating.
Keywords. Attentional bias modification, Binge eating, Obesity, Eye movement

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Towards a Mobile Application and Reporting Mobile Victimisation among South African High School Students
(Oral Presentation)

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Mobile victimisation is one form of cyber aggression that is increasing and affecting many young people today in the developing world. However, the focus on mobile victimisation in the developing nations is limited. There is also limited theoretical work to enhance conceptualisation of mobile victimisation. Understanding this phenomenon in the developing countries is particularly critical as mobile phone usage and crime are among the highest in the world. Literature shows that in addition to the above challenges, schools that have adopted paper or programme

based interventions have not been very successful in combating victimisation. Research from other disciplines, suggests that digital interventions (DIs) can effectively address health and psychological challenges by offering self-intervention in digital form. Lusinga and Kyobe (2017) developed a typology of mobile victimisation (Mobile Victimisation Typology (MVT)). This typology is based on (a) the frequency of mobile phone use, (b) the advancement of the mobile phone, and (c) the attachment to the mobile phone. With this typology, one can identify, describe, compare, explain and predict mobile victimisation of learners. The current study describes the process of automating this typology and the application useful to the potential victims. The researchers adopted pragmatism as their research paradigm and design science (DS) strategy to develop the mobile application. The automation of the MVT contributes to combating mobile victimisation by creating a means of self-intervention for those students who are victims of mobile bullying.

Keywords. High school, Mobile bullying, Mobile victimisation Mobile victimisation typology, Mobile application, South Africa

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Neural Basis of Virtual Exposure Treatment
(Poster Presentation)

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Virtual Reality Exposure Therapy (VRET) has demonstrated promise in treatment for a range of anxiety disorders, however neuropsychological mechanisms underlying its efficacy are still not well understood. This paper reviews current literature on neural basis of VRET. Psychophysiological monitoring during VRET has been researched, with the argument that it will provide more objective methods to assess emotional state of the patients and improve the progress of a treatment. However the evidence for the impact of VRET on physiological reaction is mixed. Brain imaging has been combined with VRET in order to investigate inhibitory function in substance use disorders, specific phobias and PTSD. VRET neuroimaging studies emphasized an essential role of the prefrontal cortex in regulation of emotion and fear inhibition to reduce fear responses and thus reduction of anxiety, phobias and PTSD symptoms. This work surveys papers on neural mechanism underlying VRET across these areas, comparing them in terms of methods and results. Combining VRET with neuroimaging would help to understand its neural mechanisms, aid tailoring more efficient VRET interventions evaluate treatment effects, confirm their ecological validity and potential benefits or directions in research and clinical application. Moreover it could provide neurofeedback to the therapist or client about neural activity in a patient's brain during the treatment session. This paper will inform researchers and clinicians about current evidence on neural basis of VRET.
Keywords. Virtual reality exposure therapy, VRET, Neuroimaging, Prefrontal cortex

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Education Robotics to improve mathematical
and metacognitive skills
(Oral Presentation)

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This paper describes the use of robotic kits as tools in developing mathematical and metacognitive skills, as the planning, reasoning and problem-solving capabilities in young students.
We recruited sixty students and we assigned them to the control and the experimental group, each composed of thirty subjects (15 Male and 15 Female). The experimental group was provided with a robotic kit and it was involved in an extra-curricular laboratory based on robotics activities (10 meetings; three hours each, once a week). The participants have to build a robot body and, subsequently, they have to create a program in order to assign it an artificial intelligence. Before and after the training we assessed the metacognitive skills and subjects' beliefs related to the acquisition of mathematical knowledge through a questionnaire, "Questionario di Matematica e Metacognizione", that explores the presence of specific mathematics skills and some aspects of metacognition in mathematics. Furthermore, during all the construction and programming sessions metacognitive strategies were registered using observational grids that provided quantitative and qualitative indicators about: frequency of checks made by subjects to verify if the correct bricks were taken and assembled; frequency of spontaneous self-corrections, frequency of trough-other corrections made by the experimenters. Results showed that robotics activities may be intended as a new metacognitive environment that allows students to improve the attitude in mathematics, or increase the propensity to reflect on themselves and on their own learning, and higher-level control components, such as forecasting, planning, monitoring and evaluation exercises and problems related to implementation.
Keywords. Educational robotics, Metacognition, Learning, Problem solving, New technology

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The Effect of Binge Eaters` Computerized
Evaluative Conditioning on Implicit and
Explicit Attitude toward Food
(Poster Presentation)

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The present study aimed to investigate the influence of computerized evaluative conditioning on changing implicit and explicit attitude toward food. Considering implicit wanting and explicit liking should independently measure, we examined separately the effect of images of foods paired with body images on implicit and explicit attitudes and food choice behavior. 50 higher binge eaters and 50 lower binge eaters were recruited and randomly assigned to either an experimental condition that paired images of high caloric foods with negative body images and low caloric foods with positive body images or a control condition that featured no paired (experimental condition, n=25; control condition, n=25). Implicit attitudes and explicit were assessed pre- and post-intervention using implicit attitude test and food choice task for computer-based. Although the study in progress, expected results were following: Compared to participants in the control condition, high binge eaters in the experimental condition showed more negative attitudes toward high-caloric food, experienced less craving, and choose less high-caloric food during the food choice test. The results from the present study suggest that computerized evaluative conditioning can change implicit attitudes, which impacts on subsequent food choice behaviour.
Keywords. Binge eating, Implicit attitude, Implicit attitude test, Explicit attitude, Computerized evaluative conditioning,

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Platform differences in identity motivations and self-disclosure for multiplatform users of online social networks
(Oral Presentation)

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This study investigates differences in Online Social Network (ONS) users' self disclosure online, and whether different OSN platforms serve different identity motives. 128 active users of both Twitter and Facebook completed an online survey measuring the intent, control, amount, positivity and honesty of their online self disclosures (Chen & Marcus 2012) on each platform, along with details of the composition of their audience on each OSN. We also assessed the extent to which using each social network satisfied the six core identity motives identified by Motivated Identity Construction Theory (Vignoles, 2012): self-esteem, continuity, distinctiveness, meaning, efficacy and belonging. Participants disclosed in different ways on the two platforms: Facebook self disclosure was more positive, intentional and controlled; whereas disclosures on Twitter were more revealing and honest. Satisfaction of self-esteem, continuity and belongingness motivations was stronger on Facebook than Twitter, but distinctiveness, efficacy and meaning motives were met equally well by either platform. We then used hierarchical regression to investigate which identity motivations predicted self-disclosure on each platform, controlling for demographics, usage rates, personality and audience composition. Satisfaction of belonging motives predicted the amount of information disclosed about the self on Facebook, and continuity motivations predicted how honest these disclosures were. Satisfaction of meaning motives was a negative predictor of both control and intentionality of self disclosure on Twitter. Finally, belonging motivations were also associated with intentional self-discloser on Twitter. These findings suggest that users seek to satisfy different aspects of their identity on different OSN platforms, resulting in different self-disclosure strategies.
Keywords. Social networks, Identity, Motivations

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Developing a Typology of Internet Trolling: A Content Analysis of Trolling Data
(Oral Presentation)

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Trolling has become of great interest to both the public and academics in recent years. This is due to the increased media interest in high profile cases and the potential damaging impact such behaviour may have on those affected. Research in this area is emerging, however much research does not acknowledge the spectrum of behaviour which is argued to exist from the mild and manageable to the more severe and potentially damaging. As changes in the law are being discussed in countries such as the UK and Australia, it is increasingly important that distinctions between behaviours are made. Therefore, this research is the first stage of developing a typology of trolling behaviour which aims to adequately classify trolling behaviour, including distinguishing different levels of severity. Data was collected from YouTube and Twitter from three separate incidents; the Tunisia Terror attack, the shooting of Harambe at Cincinnati Zoo and the Emma Watson 'He for She' speech at the UN. A content analysis was used to identify the characteristics of the behaviour within the trolling being observed. In total, 10 categories were identified; threats, aggression, violence, comments of a sexual nature, discrimination, fantasy, humour, enjoyment, random and political

or conspiracy. These types will be discussed, highlighting the varying manifestations and levels of severity. The findings of this research endeavour to highlight the spectrum upon which trolling behaviour exists and to inform future legislative and political debate in prioritising the more serious and potentially harmful forms of trolling.
Keywords. Trolling, Typology, Online abuse, Legislation

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Bystander behaviour in response to traditional/cyber bullying scenarios: a consideration of empathy and severity
(Poster Presentation)

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How bystanders respond to different types of bullying, specifically addressing bullying severity, has been a largely unexplored phenomenon. The current study aimed to explore bystander behaviour according to type of bullying (traditional vs cyber), bullying severity (mild, moderate & severe) and bystander empathy. A total of 868 pupils' (males: N = 458, females: N = 410) across two year groups (year 7: N = 405, year 8: N = 463) participated. All participants completed a 24-item questionnaire measuring bystander behaviour, comprising of three hypothetical scenarios that increased in severity (mild, moderate & severe), for both traditional and cyber bullying respectively. An inter-rater reliability analysis between two coders, revealed a good agreement for the coding frame. A subset of the sample (N = 448) completed a 20-item "psychopathic personality traits scale". The findings showed that positive bystander behaviour was higher in cyber compared to traditional bullying. A positive correlation between empathy levels and positive bystander behaviour was found for both traditional and cyber bullying scenarios respectively. It was found that severity did have an effect on bystander behaviour with severe scenarios leading to greater positive bystander behaviour in both types of bullying compared to moderate or mild scenarios, although no difference between severe traditional or cyber scenarios were found. The study contributes a new insight with its findings on bullying severity and bystander behaviour. Educators should acknowledge the importance of bystanders and implement bystander training for pupils to understand how to react and respond accordingly to the type of bullying.
Keywords. Cyberbullying, Bystanders, Education

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Losing weight online: A study of the #instafits universe
(Poster Presentation)

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The article aims to explore the women´s use of social media as a specific tool for losing weight. Instagram was integrated into the daily routine of women that were seeking to eliminate fat excess by opening an exclusive fitness account to share their regular routine of exercise and diet using selfie type of picture. Data for this study were based on 28 interviews with Brazilian women selected by social media profile (type and number of pictures posted daily, number of likes and comments) who were interviewed via the Internet (Skype and Facetime) in 2015. Participants were aged between 19-40 years old, which reduced up to 176lb in one year by sharing their virtual diary of pictures

on Instagram. It is important to underscore that women who previously had bariatric surgery were excluded from this present research based on the idea they had already lost weight when they decided to open a virtual account. First and foremost, the outcome results remark the positive importance of the group and the primary support to "keep on track" and also to boost the low self-esteem. Additionally, social media became a safe environment – even if it is an online environment – to share negative feelings about being overweighed in a lipophobic society, which automatically leads to physical and emotional difficulties in life. Furthermore, the daily record in the virtual screen diary of the body changes increased the belief that it would be possible to "tame" the body to achieve the main purpose: lose weight.
Keywords. Social media, Instagram, Food, Exercise, Sharing, Weight loss

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Virtual Reality: a promising tool for the assessment of spatial neglect in stroke patients (Oral Presentation)

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Research in human neurosciences is witnessing a growing interest in using more ecological tools in the assessment of stroke deficits. Immersive Virtual Reality (IVR) offers the potential to create more ecological tasks to assess and rehabilitate disabling outcomes like spatial neglect. We compared patients suffering from spatial neglect (N = 16) and healthy subjects (N = 15) performance within 2 tasks. Firstly participants were invited to visually scan an IVR environment (a kitchen) while in the second task they had to search for scattered fruit within the kitchen (visual search). For the analysis of task performance we used the following measures: 1) scan bias (neglected vs. non-neglected side), 2) reaction time to detect stimuli in neglected side and 3) omitted stimuli. Traditional tasks like Mesulam's subtest and Line Crossing task from the Behavioral Inattention Test (BIT) were baseline measures for both groups. For statistical analysis we used Student's t test for continuous (numerical) variables, Chi square for categorical and ROC analysis to explore tasks' sensitivity and specificity. Performance in both traditional tasks and IVR was significantly different between patients and controls. ROC analysis showed IVR tasks have a high sensitivity to discriminate neglect patients from controls (80-94%) and significant differences were found in all 3 measures above mentioned (1-3). Our IVR task could represent an ecological alternative to traditional pen and paper tasks for the assessment of spatial neglect in stroke patients and its potential as a rehabilitation tool is worth studying..
Keywords. Virtual reality, Neglect assessment. Stroke

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A qualitative exploration of the online safety needs of secondary school children (Poster Presentation)

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Internet use of young people has risen dramatically over the past 10 years with increasing ease of access via various digital devices to younger age groups. The internet has many positive benefits for young people such as access to educational resources, health advice, and leisure interests available online. However, issues including cyberbullying, sexting, viewing of inappropriate content, grooming and hacking have all raised concerns about online safety of young people. This project aimed to understand the current online activities and experiences of young people of secondary school age 11-16 in relation to online risks and resilience, as well as their understanding of online safety practices. Twenty-six students (males =14, female=16) from years 7 to 11 (ages 11-16) participated in four focus groups. NVivo 10 qualitative data analysis computer software was used to assist the organisation and analysis of the data into themes. This is explored using a qualitative method of enquiry. Five codebooks were identified from the analysis of the data. They combine a wide range of issues and include E-safety education, Risk taking behaviour, Generation Gap, Help-seeking, Online experiences. Young people are keen to know how to stay safe online and who is appropriate to contact if they have concerns, and voice a general need for more consistent education and support appropriate to their needs. Implications for future practice in education settings are discussed regarding the findings that in the UK this issue has gained priority on the policy agenda.
Keywords. Online safety, Young people, Support

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Pokémon Go: Exploring Player Motivations and Differences (Oral Presentation)

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The success of Pokémon Go brought the concept of location-based augmented reality mobile games to the general population. Since similar games are likely to emerge in future, it is of interest to establish players' gaming motivations. Although player motivations have been researched in online and video games, it is unclear whether they apply to Pokémon Go or whether other motivations are also important due to some differing features (e.g. mobility). The goal of the study was to (i) develop and validate a gaming motivations scale relevant for the context of Pokémon Go and (ii) to determine key player motivations and differences in terms of demographics and gaming behaviours. Items from an established measure (Yee, 2006) were adapted for Pokémon Go and included aspects such as achievement (i.e. advancement, mechanics and competition), social aspects (i.e. socialising, relationships and teamwork), and immersion (i.e. discovery, customisation, role-playing and escapism). Additional items specific to Pokémon Go (e.g. physical activity) were created through discussions with players. Responses of 577 players were included in the analyses. Exploratory factor analysis uncovered 16 factors, but 11 were retained following reliability analyses (above α = .7). Findings showed that motivations established in other game types were also relevant for Pokémon Go, with the social component emerging as the most significant motivator. Other unique motivations included physical activity, nostalgia and novelty of augmented reality. Differences in player motivations in relation to demographics and gaming behaviours were also found. Implications of the findings are discussed in line with current literature.
Keywords. Player motivations, Gaming, Augmented reality, Pokémon Go

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A Robot Game to Enhance Wayfinding and Recycling in Children
(Poster Presentation)

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The study aims to evaluate how children playing a game (throw the waste in the right bin on a checkerboard square-shaped map) can enhance the wayfinding and recycling skills in a group of 156 five years old children, through the support of robots (MecWilly, a humanoid robot and Blue-Bot, a non-humanoid robot). All activities were held in primary schools attended by the children. They have carried out a pre-test, test and post-test. In the first condition the child has performed the task alone, while in the second, children performed the task in pairs. For MecWilly it is used a 6X6 chessboard (3x3 meters), while for Blue-Bot it is used a shortened version (90x90 centimeters). In some of the chessboard squares it was placed recycling bins. The children (either alone or in pairs) have to guide MecWilly and Blue-bot giving voice commands (forward, backward, right, left). The goal is to get to the plastic in the recycling bin. The results show that children improved from pre-test to post-test in all experimental conditions. There are significant gender differences in the time taken to perform the task. Humanoid robots used as partners in wayfinding tasks improve the performance of children, through negotiation present in the Socio Cognitive Conflict, than using non-humanoid robots. Furthermore, children improve in differentiated waste collection..

Keywords. Robot, Children, Recycling, Wayfinding

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Only a joke: Misogyny, banter and online humour
(Oral Presentation)

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As has been demonstrated in previous research and in several recent high profile cases social media frequently includes content which could be considered to be misogynistic. Such beliefs can be harmful and have been linked to topics such as cyberbullying and rape supporting attitudes. However there is a lack of research on how these attitudes are formed, how they propagate and how they relate to the attitudes that people express offline. A preliminary two part study was conducted with students at a British university. A survey (n = 268) made use of real tweets to ask respondents what they consider to be offensive. These issues were further explored in focus groups discussions which were subsequently analysed using thematic analysis. The results of the first stage of the work suggested that male students were significantly less likely to find the chosen tweets offensive as compared to female students, yet more significantly more likely to state that they felt other male students would find the content offensive. Amongst other results female participants in the focus groups spoke of their discomfort with some social media content but felt that they were expected to tolerate such material. Male participants discussed the concepts of banter and intent to cause offense. The results suggest that both male and female students have complex attitudes around banter, humour and online misogyny. The online and offline expression and perception of these attitudes appears to differ. The second stage of the project is currently underway.

Keywords. Misogyny, Twitter, Banter, Humour

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The Internet as a possibility of empowerment for the urban popular classes in Brazil
(Oral Presentation)

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This study reflects on the Internet and its resources, especially social media websites, as a scenario of empowerment for the Brazilian urban popular classes, which find in that space an opportunity to express their opinions, to socialize with their friends and family and to discover new horizons and conjunctures. Regarding subjects with internet access, 81% of D / E class users and 84% of C class users sent messages via WhatsApp, Facebook chat or Skype; 68% of D / E class users and 76% of C class users communicated on social networks sites, such as Facebook, Instagram and Snapchat (CETIC, 2015). Based on a literature review and on reports from social networks, we found evidence that the Internet is a place removed from the oppressive and stigmatizing gaze of various social and state authorities, beyond their daily lives marked by violence, inequality and segregation. The findings show that the Internet seems to offer them a safe environment where they may expose their reality and to reflect about it, to have fun, and to strengthen interpersonal relationships, even if the Brazilian elite seems to be somewhat reluctant to share the same virtual spaces.

Keywords. Internet, Empowerment, Brazilian popular classes

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The Relationship between Posting and Photo Manipulation Activities on social Networking Sites and Skin Cancer Risk Factors among Australian Adolescents and Young Adults
(Oral Presentation)

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Previous research has found that interacting with content related to tanning on social networking sites is associated with more frequent sun exposure and less frequent use of sun protection. We examined whether using social networking sites and, in particular, the approach to sharing photos online, was associated with internalisation of a tanned ideal and appearance comparisons. A further aim was to determine age differences in skin cancer risk variables. Adolescents and young adults (N = 668) completed measures of social networking site use, photo activities, internalisation, appearance comparisons, and sun exposure. Social networking site use was significantly and positively correlated with skin cancer risk factors. Adolescents (aged 12-17; n = 146) spent more time in the sun than young adults (aged 18-29; n = 441) and shared more self-photos online, although there was no statistically significant difference in social networking site use, internalisation or comparisons between these age groups. Internalisation was associated with the level of investment of photos shared online, measured as the concern for the quality and effort expended in selecting shared photos, whereas appearance comparisons were associated with photo manipulation, or the editing of photos prior to posting, as well as investment. Future interventions to reduce skin cancer risk factors should target regular photo sharers on social networking sites. Interventions should address users' investment in the quality of the photos they

shared online and the desire to manipulate photos to adhere to appearance ideals.
Keywords. Social networking site, Selfie, Sun exposure, Tanning

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Internet use as moderator on the relation between cyberbullying and measures of psychological adjustments
(Oral Presentation)

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Internet use is getting more and more relevant in every day's lives and tj time spent online and the way it is used might be related to some negative experiences such as Cyberbullying (CB) which can have a long-lasting and weighty effect in its victims. Though most of the literature is focused on adolescence, the authors found some evidences of this problem in other age cohorts. This study aims to study the relationship between CB and other demographic and psychological variables, having internet use as a moderator. Method: The sample consisted of 772 adult participants with a mean age of 29.44 years (SD = 12.4), in which 112 were excluded due to reported psychiatric/neurological diseases or substance abuse. The sample is mostly composed by single (68.7%), women (62.6%) and white Caucasian (86.4%). 60.8% reported having an intermediate experience with computers and 65.8% reported accessing online social networks several times a day. Results: Positive and moderate correlations were found between Cyberbullying and Anxiety, Depression and Stress. Also, higher values of Internet addiction (a measure of internet frequency use) lead to significantly higher values of Cyberbullying. Significant differences in Cyberbullying and Internet addiction were found for social networking frequency of use. Considering gender, men reported significantly higher values of Cyberbullying. More computer experience led to higher levels of Internet addiction, while the same pattern was found for gaming frequency. Higher frequency of use in Internet and related activities seems to play a role in both CB and Internet addiction.
Keywords. Cyberbullying, Internet addiction, Psychological adjustment, Internet use

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Game Transfer Phenomena and the Augmented Reality Game Pokémon Go: The prevalence and the relation with benefits, risks, immersion and motivations
(Oral Presentation)

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The videogame Pokémon Go (PG), places images of virtual creatures in the physical world through augmented reality. Research on Game Transfer Phenomena (GTP) has demonstrated that playing videogames can lead to seeing images, hearing sounds, tactile sensations, automatic thoughts and behaviours after playing. The aim of the study was to investigate i) the prevalence of GTP, and ii) the relation of GTP with benefits/risks, immersion and motivations in PG. Totally 1,085 PG gamers (18 to 87; M=32.55, SD=10.34) were recruited online. More than half were female and most were frequent gamers. Most (80.9%) had experienced GTP with PG at least once, particularly thoughts (63.4%) and visuals (50.3%). Those who had experienced GTP

with PG had also experienced GTP with other videogames, and endorsed smartphone addiction items. Some GTP types were more common in PG than in other videogames, e.g., tactile sensations but not body sensations of movement. GTP were significantly associated with: i) positive consequences (e.g., less anxious to go outside, less negative thoughts, seeing the world as a nicer place), ii) negative consequences (e.g., neglect responsibilities), iii) immersion (e.g., lose track of time, feeling Pokémon as real, search outside the screen), and iv) motivations not related to socialization. The findings suggest that GTP is highly prevalent across platforms (e.g., console games), but some types of GTP may be more common per platform/genre/title. Videogame structural characteristics appear to be crucial for GTP to manifest, but also the individual's engagement and immersion in the game, and the susceptibility to GTP.
Keywords. Pokémon Go, Game transfer phenomena, Video games effects, Augmented reality, Mobile

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The Facebook (R)evolution: gossip, Passive Consumption and Social Media
(Oral Presentation)

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This study investigates whether the relationship change elicited by social media interaction is affected by evolutionary principles of socialising. The study compares relationship change after receiving status updates or wall posts (non-directed vs. directed) and wall posts or private messages (non-private vs. private). It also examines whether participants who feel less comfortable mentioning shared social media information in offline encounters – therefore treating the information more like gossip – show a smaller relationship change after receiving information over social media. 446 participants were introduced to an unknown avatar ('target') online, and then read ten of her online self-disclosures. The self-disclosures were either formatted as status updates, wall posts or private messages. After reading the self-disclosures, participants were asked about their feelings of social connection with the target. They were also asked about how comfortable they would be sharing what they read with the target if they met her in person ('comfort level'). We found that comfort level was the main predictor for participants' feelings of social connection to the target. Those participants with a higher comfort level felt closer to the target. While the format in which information in transferred on social media is important, a main predictor of relationship change is how the receivers treat the information they read. If they treat the information like gossip, there is less of a relationship increase, than if they treat it like public information. This has interesting connections to evolutionary psychological theory and implications for social media design.
Keywords. Social interaction, Social media, Gossip, Social connection. Friendship. Psychology

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Preventing Post-Traumatic Intrusion Development using Virtual Reality as a Clinical Distractor
(Oral Presentation)

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Post-Traumatic Stress Disorder (PTSD) research is of upmost importance due to the high lifetime risk of experiencing a traumatic event. While there is a successful treatment protocol for

PTSD, there can be practical delays in accessing treatment and early interventions are often lacking. Recent research has suggested that loading working memory with a primarily visuo-spatial task immediately following a traumatic experience can potentially reduce the frequency and development of intrusive trauma-related images (Holmes, James, Coode-Bate & Deeprose, 2009). It was hypothesised here that completing a visuo-spatial task in an immersive virtual environment (IVE) could enhance such interventions given its distinct attention-capturing ability. 34 non-clinical participants watched a traumatic film, then engaged in Tetris® on a desktop display, in an IVE, or sat in silence (control condition). Participants then kept a diary of intrusions experienced for the next 7 days. Participants in the IVE condition recorded significantly less intrusions over the 7 days than those in the no-task control condition. Using an IVE was also rated as significantly more engaging than the desktop condition and had the secondary gain of significant post-task mood improvement. Although only initial findings, using an IVE clearly has the potential to be both a more effective and a more appealing intrusion prevention technique following a trauma.
Keywords. Post-traumatic Stress Disorder, Virtual Reality, Distraction, Clinical

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A Pilot Study on the Use of Virtual Reality for Exposure in Group
(Poster Presentation)

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Specific phobia is a widespread psychological disorder in the general population with prevalence rates of approximately 9%. Among individuals suffering from a specific phobia, 3% meet the diagnostic criteria for snake phobia. Researchers have demonstrated that exposure is the most effective technique in the treatment of specific phobia. Virtual reality has demonstrated efficacy rates comparable to in vivo exposure and offers an interesting alternative to treat snake phobia. As exposure therapy has been typically conducted individually and never used in the context of a group, this pilot study aims to evaluate the feasibility of using virtual reality as a therapeutic tool to treat snake phobia in a group setting. A total of 6 participants who met the diagnostic criteria of snake phobia completed 8 two-hour cognitive-behavioural treatment sessions. During the exposure session, participants were randomly immersed one at a time in VR for 10 minutes while the others watched the patient and the virtual environment projected on a large screen. All participants rated their anxiety levels (%) every 5 minutes. Fear, avoidance of snakes and self-efficacy were measured before and after each session. The hypotheses of this study were that immersions in VR would lead to changes within session even when not immersed in VR, and that overall the treatment would be associated with a significant improvement in phobic symptoms. Results showed that exposure is effective and applicable to group settings and support conducting larger clinical trials.
Keywords. Snake phobia, Group therapy, Cognitive-behaviour therapy

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An initial validation of virtual human administered neuropsychological assessments
(Oral Presentation)

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Appropriate neuropsychological assessments are often not readily accessible due to remote geographical locations. The current study performs construct validation of a virtual human-administered neuropsychological assessment of learning and memory. Construct validity was assessed through comparison of virtual human with face-to-face (human) administered neuropsychological assessments. Computerized (virtual human) learning and memory scores were hypothesized to correlate with traditional measures of learning and memory, but not with tests of executive functions or picture naming. Convergent validity results indicated that AVANT learning and memory tasks correlated significantly with traditional learning (CVLT Trials 1–4; $r = 0.47$, $p<0.001$) and memory test (CVLT delayed free recall; $r = 0.32$, p 0.009; CVLT delayed cued recall; $r = 0.43$, $p < 0.001$). Divergent validity was found in that AVANT learning was not correlated with traditional executive functioning (DKEFS Inhibition/Switching: $r = 0.12$, p 0.33) or confrontational word retrieval (RBANS Picture Naming ($r = 0.05$, $p<0.69$) measures. Likewise, no significant correlations were found between AVANT memory and executive function (DKEFS Inhibition/Switching (AVANT recall $r = 0.06$, p 0.61) or confrontational word retrieval (RBANS Picture Naming (AVANT recall $r = 0.01$, p 0.91). Results supported both convergent and discriminant validity. Findings suggest that the virtual human tests measure a capacity that is consistent with that assessed by traditional paper-and-pencil measures involving learning and memory; and inconsistent with traditional measures of domains other than learning and memory. We conclude that the virtual human-based computerized assessment is a valid test of learning and memory.
Keywords. Virtual reality, Neuropsychology, Virtual human, Psychometrics

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Exploring the use of social media by adolescents and young adults with a life limiting condition.
(Poster Presentation)

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The diagnosis of a life limiting condition (LLC) for adolescents and young adults can have deep psychological impacts. In particular, the induced lack of autonomy and the uncertainty surrounding future orientations and goals, can lead to psycho social issues. The global effects of LLCs can particularly impact on self-identity. Social media is an ever emerging tool for interpersonal communication within healthcare. However, the extent to which social media can support adolescents and young people with life LLCs is unclear. In order to explore the impact social media may have on the psychological wellbeing of adolescents and young adults with LLCs, a scoping review was conducted across all major healthcare research databases. The review illuminates the impact of social media on the psychological wellbeing of adolescents and young adults with LLCs. Social networking is related to lesser feelings of isolation, and allows for deep social expression to take place through peer interpersonal communication. Social media provides a platform for frank, honest and open discussion regarding the psychological impact of a LLC. However, an individual's gender and age influences the degree of impact that social media has on psychological factors, such as the influence of masculine barriers on the ability for young men to feel comfortable with self-expression. Social media can break down some of the psycho social barriers associated with LLCs. Perceptions of the self are strengthened via the self-expression and interpersonal communication social media allows from the safe haven of individual's own homes/safe spaces. These two proponents enhance psychological wellbeing.

Keywords. Social media, Identity, Life limiting condition, Adolescents and young adults, Scoping review

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Longer the game, better the sleep: intense video game playing is associated to better sleep quality and better daytime functioning
(Poster Presentation)

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Sleep is a behavioural and physiological state that contributes to physical and mental health in children and adolescents. It is believed that sleep is beneficial not only for energy conservation, neuronal recuperation, and brain plasticity, which are linked to daytime brain functioning and body homeostasis, but also for growth and cognitive and psychological development. Few investigations assessed the effects of exposure to video games on sleep. Two contrasting hypotheses can be stated; on the one hand, video games intense use may cause sleep deprivation and therefore negatively impact on overall sleep quality and daytime functioning (Hp1); on the other hand, video gaming may promote a better sleep, as other demanding and intense activities do according to literature (e.g., sports) (Hp2). The purpose of this study was to examine sleep quality and sleep-related variables in a group of hard (HG) and casual gamers (CG); the sample has been created selecting 300 participants from a bigger sample, balanced by extremely low or high video gaming, according to the Assessment of Internet and Computer Game Addiction Scale (AICA-S). Partially supporting Hp2, the HG group reported significantly better subjective sleep quality, habitual sleep efficiency and daytime positive functioning compared to CG. Taking into account the potential biases affecting measures of sleep quality based on self-report, the results are interpreted according to the possible relation between the intensity of daily activities and overall sleep quality.

Keywords. Video game, Computer game, Sleep, Sleep quality, Video gaming, Adolescence

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#txtspeak; Examining the Theory of Planned Behaviour Components, Self-Concept Clarity, Age and Gender as Predictors of Textspeak Use Among Adolescents
(Poster Presentation)

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The use of textspeak evolves in recent years, as technologically-mediated communication grows rapidly. Textspeak is a truncated form of communication that is mediated by technology and most commonly takes place on digital and online platforms. Although textspeak use appears to be a widely-shared practice among adolescents, there has been relatively limited research on the related impacts of behavioural and sociodevelopmental factors. This study used the Theory of Planned Behaviour framework to examine the extent to which young adolescents' use of textspeak might be predicted by intention, perceived behavioural control, attitude and injunctive and normative beliefs towards textspeak. Factors such as age, gender and self-concept clarity were also examined. 166 adolescents aged between 11-14 years completed the Self-Concept Clarity Scale and Computer and Texting questionnaire in this study. The results of the regression analyses indicated that adolescents' attitude and particularly their perceived behavioural control significantly predicted their intention to use textspeak, while injunctive and normative beliefs did not. Furthermore, self-concept clarity, age and gender did not predict the intention to use textspeak. Finally, intention significantly predicted their reported textspeak use. The findings suggest that behavioural factors, such as recurring benefits from textspeak use, control over use and intention appear as more important than sociodevelopmental factors such as having a clear self-concept, age and gender when adolescents' use of textspeak is concerned. However, subtle gender differences were observed in terms of different types of textspeak being recognised and reported by adolescents. Implications of these findings will be discussed further.

Keywords. Textspeak, Adolescence, Theory Of Planned, Behaviour, Control, Attitude, Beliefs, Self-Concept, Gender, Age, Communication, Digital, Online

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Exploring the characteristics of violent video game players based on moral choices in the video game Call of Duty: Modern Warfare 2
(Poster Presentation)

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This study aimed to examine the difference in personality traits of video game players and their choices made while playing a popular 18 rated violent video game. 598 video game players were recruited for this study, which used an online questionnaire was created which used full measures of motivations for playing, aggression, empathy, and personality. Participants were asked about their choice in an optional "campaign" of the video game, which contained "disturbing content." Players were also asked about what influenced their decisions and their justification for their choice. Interpersonal factors and personality were predictive of player choice, which were likewise predictive of aggression scores. There was no significant predictive finding relating to video games and aggression. The results of the study highlights the importance in understanding the differences between player's motivations for engaging in video games generally, as well as violent content. It also emphasizes the need to explore protective factors involved in preventing increased aggression despite repeated exposure to violent content.

Keywords. Video game, Violent video game, Motivation, Aggression, Empathy, Personality

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VR-based cue exposure therapy (VR-CET) versus VR-CET plus pharmacotherapy in the treatment of bulimic-type eating disorders
(Oral Presentation)

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Antidepressant medication is recommended in treatment guidelines for bulimic-type eating disorders either as an alternative or as combined intervention together with cognitive behavioural therapy (CBT). This study compares the efficacy of two second-level treatments for bulimic-type eating disorder patients resistant to CBT: virtual reality-based cue exposure therapy (VR-CET) alone, or VR-CET in combination with pharmacotherapy. Participants were 32 outpatients with a diagnosis of bulimia nervosa or binge eating disorder, according to DSM-5 criteria, who presented active episodes of binge eating behaviour after an initial structured course of CBT. Seventeen participants received the combined intervention (6 sessions of VR-CET plus antidepressant medication), while 15 underwent VR-CET alone. Frequency of binging episodes, bulimic symptomatology (Bulimia scale of the EDI-3) and food craving (FCQ-T/S) were assessed before and after second-level treatment and at 6-month follow-up. All participants showed significant reductions in binging episodes, bulimic symptoms, and food craving at the end of the second-level treatment. However, no significant differences were found between the combined intervention and VR-CET alone. Improvements were well maintained at the 6-month follow-up in both groups. The VR-CET is effective in reducing the frequency of episodes of binge eating, self-reported bulimic symptomatology, and food craving in patients with bulimic-type eating disorders who had undergone prior unsuccessful CBT. The addition of antidepressant medication to VR-CET did not provide any additional benefit..
Keywords. Virtual reality, Cue-exposure therapy, Clinical sample, Food craving, Bulimic-type disorders, Binge eating

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Determinants of Speech Performance in a Virtual Reality Public Speaking Training- An Experimental Study
(Oral Presentation)

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Public speaking skills are essential in many professions. However, speech anxiety is a common problem. While Virtual Reality (VR) speech training applications are effective, comprehensive studies on determinants of speech performance in VR are scarce. Based on the QUEST-VR framework, the influence of training features (task difficulty: low–speech with preparation / high–speech without preparation) and user factors (fear of public speaking, social presence, and ability to concentrate) on speech performance in a VR training application was investigated. An experimental within-subject laboratory study was conducted with N = 36 undergraduate students (64 % women, Mage = 26.42 years, SD = 3.42) who gave informed consent. The effect of task difficulty on speech performance (observation coding from 1 = poor to 3 = excellent) in a virtual training application was analyzed by an ANCOVA, including the user factors as covariates. High task difficulty resulted in lower speech performance (M = 2.13, SD = 0.41) than low task difficulty (M = 2.30, SD = 0.35; $F(1, 35) = 8.55$; $p = .006$; $\eta p2 = .20$); including the covariates led to an insignificant result. High task difficulty reduces speech performance in VR. However, the user factors share explained variance with task difficulty. They seem to represent further aspects of task difficulty. Future studies should both include other target groups (e.g., professional speakers) and manipulate other determinants of the virtual training situation (e.g., casual vs. formal audience) to enhance knowledge about performance in VR and virtual training effectiveness.
Keywords. Virtual reality, Public speaking, Training application, Task difficulty, Speech performance

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A Cyberbullying and Online Risks Intervention using the information-Motivation- Behavioral Skills Model: A Pilot Study among South African adolescents
(Oral Presentation)

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Given the ever-increasing concern about cyberbullying and other online risks (e.g. contact with online strangers, sexting, and access to harmful online content), there is a need for developing effective intervention strategies. The Information-Motivation-Behavioural Skills (IMB) model (Fisher & Fisher, 1992), a three-step cognitive-behavioural framework, was used to develop an exploratory intervention to increase adolescents' online risk perception and enhance online safety. The model posits that information about risks is not sufficient to alter behaviour, instead individuals also need personal and social motivation as well as the necessary behavioural skills to enact positive behaviours. The intervention was tailored to online risk behaviours and perceptions of participants, who completed an initial questionnaire prior to the development of the intervention. The workshops were piloted with 177 females in grades 8-10 (13-16 years) in South Africa. Participants' online risk perception was measured either before (control group) or after the intervention (intervention group). Results showed that the intervention group had significantly higher online risk perception than the control, indicating that the intervention was effective in increasing online risk perception, a prerequisite for behaviour change. In addition, the intervention was more effective for those who had the intervention tailored to their online risk behaviours and experiences. Age differences also emerged, indicating that middle adolescence may be a critical period in intervention efforts. The initial findings of the exploratory study demonstrate the utility of the IMB model in the context of cyberbullying and online risks and may provide a useful framework for large-scale online safety efforts.
Keywords. Cyberbullying, Risk perception, Intervention, Information-motivation-behavioral skills model, Adolescents, South Africa

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The Dark Triad Traits and Short-Term Relationships on Tinder
(Oral Presentation)

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The Dark Triad traits of Machiavellianism, Narcissism, and Psychopathy have been found to be related to a preference for short term relationships. Males often tend to score higher in these three traits compared to women and also tend to have a stronger preference for short term relationships. There is some evidence to suggest that the traits of Narcissism and Psychopathy specifically play a mediating role between gender and preference for short term relationships. There is also evidence that shows males have a stronger attitude towards casual sex but the role of this attitude has not been researched in the context of the Dark Triad traits. Moreover, there is little research on these relationships within the online context. In a survey-based study involving 184 participants (100 male; M age = 28.89 years, SD = 7.38), the current study tests the mediating effect of the Dark Triad Traits and attitudes towards casual sex, on the relationship between gender and number of short term relationships acquired through Tinder. Preliminary analyses reveal that Psychopathy and attitude towards casual sex play a strong mediating role between gender and the number of booty call relationships, friends-with-benefits relationships and one night stands acquired through Tinder. These results suggest that males tend to have more short-term relationships through Tinder than females because of personality characteristics and attitudes towards casual sex. Limitations of the study and plans for future research will be discussed.
Keywords. Personality, Online dating, Relationships

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Exploring the relationship between the acceptability of a Flying phobia treatment delivered via the internet and clinical outcomes
(Oral Presentation)

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Acceptability is claimed as an important and additional criterion besides efficacy. Specifically, patients' expectations towards treatment are related to the psychotherapy process as well as the outcomes. Similarly, satisfaction with treatment refers to the feasibility of the intervention, which affects its effectiveness. Nevertheless, the literature addressing these issues in the field of Internet-based treatments for specific phobias is scarce, and no studies for Flying Phobia (FP) are available. This study aims to explore the relationship between expectations and satisfaction with treatment and clinical variables in patients who had received an Internet-based treatment for FP (NO-FEAR Airlines). The sample included 46 participants from a randomized controlled trial. Clinical measures were: Fear of Flying Questionnaire-II, Fear of Flying scale, Fear and Avoidance Scales, Clinician Severity Scale, and Patient's Improvement Scale. Broadly, results showed significant correlations between acceptability variables such as expectations and satisfaction and the change on different clinical variables. It is important to note that expectations and satisfaction measurements were differently related to outcomes. Particularly relevant is the data referred to aversiveness, pointing out that the perceived aversiveness at pre-treatment (expectations) might be more related to the change on clinical variables than the aversiveness reported after the intervention (satisfaction). In sum, this study offers data on the relationship between expectations and satisfaction measurements and clinical variables in patients receiving an Internet-based treatment for FP. Research on Internet-based treatments' acceptability in relation with efficacy variables might help to improve the treatment offered as well as its implementation, reaching more people in need.
Keywords. Specific phobia, Flying phobia, Acceptability, Computer-Assisted Exposure, Internet-based therapy

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Aggression and Adaptation: An Online Psychodynamic Discourse Analysis of Ego Defense in the Body Positive Community
(Oral Presentation)

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This study places online aggression within the larger context of human behavior and development research. There is a compelling need for research on online aggression that takes into account the potential for adaptivity in aggressive online discourse. By using psychodynamic ego defense research as a framework through which to analyze aggressive online discourse, this study provides insight into the complex psychological function of aggression in online discussion forums. 139 comments from three online sources were coded for behavior, cognitive distortion, and ego defense mechanisms. Results suggest that aggression in online forums falls primarily within the middle categories of ego defense (immature at 36% and neurotic at 52%) and includes a significant number of adaptive or mature comments at 12%. Each of the three samples had instances of either adaptive turns in the conversation, adaptive comments, or positive changes in the level of adaptation in response to negative comments. In spite of the prevalence of reports of violent or psychotic behavior online, the study found no instances of psychotic comments, and a significant number of adaptive comments, indicating the possibility of negativity bias in existing research and media reporting on online aggression. While the sample is derived from a discussion in the Body Positive community of a viral video, the method created to apply ego defense mechanisms to online discourse, termed Online Psychodyamic Discourse Analysis, can be used in any environment that engenders habitual conflict, providing insight into the intrapsychic roots of social conflicts.
Keywords. Online aggression, Cyberbullying, Psychodynamic digital discourse analysis, Cyberpsychology, Human development

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Web-based, self-help intervention for Adjustment Disorders: acceptance and usability
(Poster Presentation)

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Despite having proved their efficacy, Internet-based interventions (IBI) have not yet been implemented in health care systems. The acceptability of these interventions may be one key barrier. Therefore, the aim of the present work was to assess the acceptability and usability of a Web-based self-help intervention for Adjustment disorders (TAO) among patients and clinicians. Access to one of the seven modules of TAO was provided to 7 patients with Adjustment Disorder (AD) and 15 clinicians (12

clinical psychologists and 3 master students). After exploring freely the module and all its contents, participants completed the survey about system usability and acceptability of the intervention. 10-point Lickert scales were used to assess different characteristics and audiovisual resources included in TAO. Open answer questions were used in order to collect qualitative data. TAO was well accepted and described as user-friendly by both patients and clinicians. Regarding system features, all participants highlighted the inclusion of videos, clear and well-structured contents, simple terminology, and availability of examples as strengths of the intervention. Interactivity and the amount of written information were identified as aspects that could be improved. Preliminary results of this work suggest that certain aspects should be considered during the development of IBI. Inclusion of relevant therapeutic contents does not seem to be enough to promote adherence and achieve the desired changes. To our knowledge, this is the first work to explore specific features of an IBI that might impact on users' satisfaction and adherence.

Keywords. Internet-based self-help interventions, Acceptance, Usability, Adherence, Adjustment Disorders

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Can Virtual Reality reduce the perception of pain?
(Poster Presentation)

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The experience of pain is a multisensory phenomenon whereby visual and somatosensory information is integrated and perceived in one's own body. This multisensory process can be used to modify the experience of pain. For example, several studies have been carried out providing visual feedback though mirrors to reduce pain. Recent advances in Virtual Reality (VR) technology offer the exciting potential to create realistic immersive environments in which visual information about the body can be altered by the experimenter. The aim of this study is to use VR to provide visual feedback to reduce the perception of pain. 30 healthy participants rated pressure pain on a scale of 0-10 delivered via a probe to the nailbed of the non-dominant hand whilst the experimenter manipulated visual cues (provided via a VR headset). The visual cues could be either congruent or incongruent (i.e., understate or overstate) with the movement of the pressure probe onto the person's finger. Visual cues which underplayed how much pressure the participant was actually experiencing resulted in up to a 60% reduction in pain rating score. This equates to a pain rating of 6 being reduced to a pain rating of 2. This was particularly the case for the most intense pressure pain. The outcomes of this study give new insight into how visual feedback can reduce the experience of pain through VR technology and has wider implications for its use in the management of chronic pain conditions in health care settings.

Keywords. Virtual reality, Pain, Visual feedback, Rehabilitation

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Efficacy of telepsychotherapy for generalized anxiety disorder. Final results at the 6 month follow-up
(Oral Presentation)

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This is a multisite randomized non-inferiority trial comparing the efficacy of individual cognitive-behavior therapy (CBT) for generalized anxiety disorder (GAD) delivered face-to-face or by videoconference. A total of 106 patients with a primary diagnosis of GAD received 15 CBT sessions delivered according to a standardized manual already well validated for GAD. Following a semi-structured diagnostic assessment, participants were randomly assigned to one of the following two conditions: (a) CBT delivered face-to-face following the treatment developed by Dugas et al. (i.e., patient and therapist were physically located in the same room), or (b) CBT delivered by videoconference following the same treatment protocol (i.e., patient and therapist were physically located in different cities and met via videoconference). Treatment involved 15-weekly sessions and was supervised by the principal investigator and the co-investigators. The study was designed and conducted in accordance with CONSORT guidelines for randomized control trials, psychotherapy trials, and non-inferiority trials. Outcome measures included severity of GAD symptoms based on the ADIS, the Penn State Worry Questionnaire, the Worry and Anxiety Questionnaire, the Intolerance of Uncertainty Scale, the Beck Depression Inventory, etc. Treatment efficacy was assessed with standard repeated measures ANOVAs, with non-inferiority analyses, and with Hierarchical Linear Modeling (HLM). Predictors of outcome were examined with regressions analyses and HLM. Repeated measures ANOVAs confirmed that both treatments were effective on all measures. The Condition X Time interactions revealed very small effect sizes, which was supported by significant non-inferiority tests. Change in intolerance of uncertainty was the main predictor of patient's improvements.

Keywords. Generalized Anxiety Disorder, Cognitive-Behavior Therapy, e-Mental, Telepsychotherapy

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Attention and Social Cognition in Virtual Reality: The effect of engagement mode and character eye-gaze
(Oral Presentation)

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VR technical developments are manifest in modern character design. Specifically, eye gaze is a powerful and important aspect of such design. At the same time, researchers need to consider the contribution of participant controlled modes of engagement with the experience. In the current study we manipulated participants' engagement with an interactive virtual reality narrative called Coffee without Words. Participants sit over coffee opposite a character in a virtual café, where they wait for their bus to be repaired. We manipulated character eye-contact with the participant. For half of the participants in each condition, the character made no eye-contact for the duration of the story. For the other half of the participants, the character responded to eye-gaze from the participant by making and holding eye contact in return. To explore how participant engagement interacted with

this manipulation, half of the participants in each condition were instructed to appraise VR experience as an artefact, drawing their attention to the technical features, while the other half were introduced to the fictional character, the narrative and the setting as though they were real. With these elements together, this study allowed us to explore the contributions of character features (interactivity through eye-gaze) and cognition (attention or modes of engagement) to the participants' perception of realism, feelings of presence, time duration, and the extent to which they engage with the character and represent their mental states (Theory of Mind). Importantly it does so using a highly controlled yet ecologically valid virtual experience.

Keywords. Virtual reality, Social cognition, Attention

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Child Pornography users: penile and oculomotor response patterns recorded in virtual reality
(Poster Presentation)

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This study deals with the assessment of sexual preferences among child pornography users. Phallometry is used to diagnose deviant sexual interests. During this assessment, penile response is recorded. Eye-tracking improves the accuracy of the technique and may prevent faking results. This research hypothesizes that when the participant has a penile response, there are less fixations but longer ones, and less saccades too. The experiment was done in the laboratory Virtual Reality Applications in Forensic Psychiatry (VRAFP) at the Philippe Pinel Institute of Montreal. The participants (n=14) were recruited in forensic context, during a pre-sentencing assessment. Firstly, a socio-demographic survey was administered. Secondly, a phallometric evaluation was realized. In the latter, 14 virtual animated characters (6/7, 10/11 years and adults of both sexes) were presented while penile response was recorded. MANOVA with repeated measures were realized. There was a significant effect of age on the number of saccades $F(2,12)=5.545$, $p=0.020$, $2=0.480$, on the number of fixations $F(2,12)=5.926$, $p=0.016$, $2=0.497$ and also on the duration of the fixations $F(2,12)=5.298$, $p=0.022$, $2=0.469$. The analyze of the contrast showed that fixations are longer for the 6 year-old than for the adult virtual characters. There was no significant effect of age on the penile response $F(2,12)=0.773$, p=n.s., but the statistical power is 0.152. Finally, the study shows that the eye-tracking seems more accurate than the penile response measurement because there is a simple effect of virtual character's age. However, there are limitations because of the number of the subjects.

Keywords. Child pornography users, Sexual deviance, Virtual reality, Penile response, Oculomotor response patterns

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How much internet use is good for academic performance? Evidence from a large-scale study
(Oral Presentation)

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One of the areas where different information and communication technologies (ICT), including the Internet, could be applied is education. Specifically, for instance, both students and teachers can seek information online, use online platforms for homework

and communication with each other and their peers, and can keep track on school-related notifications. However, some detrimental relationships between ICT use and academic outcomes have been reported. The aim of this paper was to find how much Internet use both at and outside the school is related to better academic performance. We used the Estonian sample from the Programme for International Student Assessment (PISA). 5586 Estonian 15-year-old students participated in the study (49.3% boys). These students were administered cognitive ability tests in math, functional reading, and natural sciences; additionally, several other constructs, such as the ICT use in and outside the school settings, were surveyed. The results of analyses showed that the optimal time for the Internet use at school was up to 30 minutes per day; using the Internet at school for longer period had a linear decreasing pattern across all cognitive ability tests. However, in the case of the Internet use outside the school, the relationship between academic performance and Internet use was curvilinear, suggesting that using the Internet outside the school for 30 minutes to six hours is positively related to academic performance, whereas using Internet for up to 30 minutes or more than six hours per day had negative association with academic performance. Possible explanations for these results are discussed.

Keywords. Excessive Internet use, ICT and education, Internet PISA

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Hands on positive pictures: Hand proximity to positive pictures improves mood regulation
(Poster Presentation)

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There is evidence that depressed individuals show attention biases towards negative information. Moreover, it has been shown that attention deployment to positive information helps depressed individuals to regulate their dysphorical mood. Interestingly, recent research also showed that information presented in hand proximity receives more attention than information presented in distal places to the hand. These findings lead to the question whether hand proximity to positive pictures helps to improve mood. In the present study, participants were presented with positive pictures after a sad mood induction. In one group the pictures where presented in hand proximity, in the other group the pictures were presented far from the hands. It was expected, that the enhanced attention towards the positive content of the pictures due to hand proximity would help participants to regulate their sad mood. Results showed that participants with hand proximity to the pictures improved mood recovery compared to participants without hand proximity. These results support the notion that attention deployed by hand proximity can play an important role in mood regulation processes for depressed individuals. Considering applications with interfaces based on embodied interaction where digital visual information is close to the hand, this finding could have an impact for the design of applications for the treatment of patients with depression.

Keywords. Mood regulation, Hand proximity, Near Hand, Health Applications, Embodied Interaction, Cognitive Therapie

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"It begins to take over from real life": The social outcomes of Facebook use
(Oral Presentation)

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The question of whether social networking site use causes positive or negative social outcomes is becoming increasingly salient. Emerging research suggests that either outcome is possible; some individuals enhance their offline social networks, while others end up ostracised and alone. Most of this research has taken a deductive approach and focused on narrow aspects of social connectedness. As such, scholars lack knowledge regarding the breadth of social outcomes experienced by users. This first stage study aims to address this limitation by identifying the potential scope of social outcomes related to Facebook use. Data were collected using an online survey. Participants were 417 Facebook users (69% women) aged 18 to 80 (M = 31.57, SD = 9.33). Thematic analysis of open-ended responses relating to social outcomes was performed using an inductive approach. Demographic data were also used look for patterns within the themes. The results revealed a dominant positive outcome, social facilitation, particularly among shy Facebook users. Secondary positive themes were also evident, including enhanced social control and loneliness reduction. The foremost negative outcome associated with Facebook use was interpersonal conflict, while there was also evidence of reduced offline social behaviour due to Facebook use. This study confirms a diverse set of positive and negative social outcomes associated with Facebook use. These results inform a second stage study that seeks to develop a taxonomy of social outcomes and secondary effects related to social media use. Such research will improve the accuracy of future studies in this area.
Keywords. Facebook, Social risks, Social benefits, Social networking sites, Individual differences

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"Internet Addiction": A conceptual minefield
(Oral Presentation)

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With Internet connectivity and technological advancement increasing dramatically in recent years, "Internet addiction" (IA) is emerging as a global concern. However, the use of the term 'addiction' has been considered controversial, with debate surfacing as to whether IA merits classification as a psychiatric disorder as its own entity, or whether IA occurs in relation to specific online activities through manifestation of other underlying disorders. Additionally, the changing landscape of Internet mobility and the contextual variations Internet access can hold, have further implications towards its conceptualisation and measurement. Without official recognition and agreement on the concept of IA, this can lead to difficulties in efficacy of diagnosis and treatment. This paper therefore provides a critical commentary on the numerous issues of the concept of "Internet addiction", with implications for the efficacy of its measurement and diagnosticity
Keywords. Internet addiction, gratifications, contexts

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Virtual Intimacy: Propensity for Physical Contact Between Avatars in an Online Virtual Environment
(Oral Presentation)

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The widespread use of social technologies has altered the nature of everyday human contact. In face-to-face interactions, the degree of physical proximity and contact serves as a source of social information and positive social touch confers important benefits for health and well-being. However, popular social technologies are limited in their capacity to convey these aspects of human contact. One approach that can be used to represent interpersonal physical contact in a digital context involves visualizing interactions using avatars in online virtual environments. To examine the expression of physical contact in avatar-mediated interactions, observations were conducted in IMVU, an online 3-dimensional chat room platform where users are represented by human-like avatars. The movements and physical interactions of these avatars are controlled by selecting among available animated poses inside each one of a multitude of user-generated chat rooms. Across 53 different chat rooms studied, poses that enabled physical contact between avatars (intimate poses) made up 29% of all available poses. Observations of 7347 avatars across 70 different chat rooms revealed that intimate poses were used by 14% of avatars and the number of avatars in intimate poses was not related to chat room occupancy. There was no significant difference in the number of female and male avatars observed in intimate poses, but significantly more female avatars were observed in non-intimate poses. The findings provide insight into the propensity of online users to engage in physical contact using avatars and have implications for development of social technologies that facilitate virtual intimacy.
Keywords. Avatars, Intimacy, Online social interactions, Virtual touch, Virtual worlds

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Facebook reactions: how are they used and which personality factors predict their use?
(Oral Presentation)

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Facebook users have long had the option of reacting to online content by 'liking' it, and their personality has been shown to predict their likelihood of doing so. A recent addition to Facebook affordances is an expansion of the range of emotional 'reactions' users can employ, with the original 'like' reaction now supplemented by the positive emotional reactions 'love', 'wow', and 'haha', and the negative reactions 'sad' and 'angry'. We investigated how these reactions are utilized in response to different types of shared content, and which personality factors predict their use. We surveyed 262 Facebook users (160 female, mean age 26.89) measuring how often they used each reaction, and how likely they were to utilize each in response to different content (e.g., status updates, photos, links). A series of ANOVAs revealed that users utilized the 'like' reaction most often, followed by other positive reactions ('love', 'haha', 'wow'), but used negative reactions ('sad', 'angry') least often. This pattern occurred for different types of content, though users were most likely to react to status and picture updates, followed by shared links and information, and least likely to react to events. We also measured participants' Narcissism and Big 5 personality traits, and through a series of regressions explored their predictive value

for each reaction. Models were significant for all reactions, with personality predicting up to 23% of the variance. Openness was a positive predictor for all reactions, and extraversion and neuroticism contributed to the use of love and the negative reactions.

Keywords. Facebook, Reactions, Personality, Narcissism

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An investigation of the online warrants of personality, attractiveness, and employability on Facebook
(Poster Presentation)

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Warrants are cues utilized to form impressions of individuals. On Facebook, warrants of the Big 5 personality traits – individual components of profiles which influence the impressions formed of profile owners – have been determined. Although individual profile components (e.g., profile picture, language use) influence perceptions of attractiveness and employability when manipulated in isolation, warrants of these subjective measures have not been investigated on real Facebook profiles. Screen shots were taken of the profiles of 100 male and 100 female Facebook users. Based on these, profile owners were rated by nine independent raters on the Big 5 personality traits, social-, physical-, and task-attractiveness, and perceived employability. Each profile picture and group of friends' thumbs were also rated for attractiveness, and banner pictures were rated for valence. Other components of profiles (e.g., number of friends and likes, type of content such as status updates, shared stories, posts by friends, and amount of profile-owner generated content) were recorded by two raters. A series of regressions analyses established warrants for all personality factors, types of attractiveness, and employability. Profile picture attractiveness emerged as a predictor of several measures, as did recent activity and number of photos. Only three warrants predicted perceived extraversion, while openness and employability were each predicted by eight warrants. Timeline content, relationship status, and recent activity were identified as warrants of attractiveness as well as employability, highlighting the conflict between users' desire to engage in positive self-presentation for their online peers while simultaneously appearing employable.

Keywords. Facebook, Warrants, Attractiveness, Employability, Personality

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Development of the online self-presentation strategies scale (OSPSS)
(Poster Presentation)

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Self-presentation is an important aspect of online behaviour, but there is currently no universal measurement tool to assess the ways in which people present themselves online. The lack of such a scale is significant, due to the possibility that self-presentation strategies in the relatively new online context may differ from their offline counterparts. This paper describes the development of the online self-presentation strategies scale (OSPSS), which was based on the responses of 410 Saudi Arabian participants and 284 British participants. Factor analysis supported a six-factor structure, comprising the self-presentation strategies of self-

promotion, positive impression management, self-disclosure (mind casting), self-disclosure (life streaming), cautious self-presentation, and acceptance seeking. Limitations and implications for future directions are discussed.

Keywords. Online self-presentation, Culture, Online behaviour

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Death and Lolz- Understanding the Personality Characteristics of RIP Trolls
(Oral Presentation)

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Trolling occurs when comments are posted solely to cause disruption and aggravation at the expense of someone else. One type of trolling behavior, RIP Trolling, involves individuals posting rude/harassing comments to online memorial pages. Individuals often grieve the loss of family members and close friends through social media and other online platforms. However, online grieving allows strangers to make themselves a part of the grieving process; in fact, some individuals deliberately post inflammatory messages on memorial pages in order to incite an angry response. This study aimed to contribute to the body of literature by analyzing the prevalence of RIP trolling behavior as well as the personality characteristics associated with RIP trolls versus non-RIP trolls. For the current study, only the self-reported trolls from the Zezulka and Seigfried-Spellar (in press) study were analyzed (N = 149). Of the 149 trolls, 30 (20%) were classified as RIP trolls (17 males, 13 females). Respondents anonymously completed the Five-Factor Model Rating Form, Rosenberg's Self-Esteem Scale, and the Moral Decision-Making Scale to assess individual differences, morality, and self-esteem. Results indicated RIP trolls scored significantly lower on conscientiousness. Low conscientiousness is a characteristic of psychopathy; thus, the current study suggests RIP trolls may exhibit more psychopathic traits compared to non-RIP trolls.

Keywords. Trolling, Cyberharassment, Personality, RIP trolling

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Two-phases innovative treatment for anorexia nervosa: the potential of virtual reality body-swap
(Oral Presentation)

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It is known that experiencing body as one's own depend on the integration of different bodily signals (i.e., proprioceptive, tactile, visual, vestibular inputs). In the current study, a group of female participants suffering from Anorexia Nervosa (N=23) viewed within a first-person perspective a virtual body with a skinny belly substituting their own physical body in two experimental conditions (i.e., synchronous vs. asynchronous visuo-tactile stimulation). This allowed us to investigate whether illusionary ownership over a virtual body would result in differences in body representation (as measured by asking participants to estimate their body size) before and after a multidisciplinary treatment provided in a centre of excellence. Before treatment, there was a significant distortion in body representation, especially as concerns the estimation of the circumference of the abdomen and

the hips. After the treatment, the most interesting result is a decrease in the body-size distortions as regards these two emotional body parts. This innovative approach, if further investigated, may be useful for anorectic patients for specifically improving body representation disturbances.

Keywords. Anorexia nervosa, Virtual reality, Bodily illusion

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The Technology integration Model: Predicting Technology Adoption and Future use
(Oral Presentation)

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The Human – Technology relationship is still unclear and yet to be defined. Taking inspiration from previous theories such as the Technology Acceptance Model and Technological Extension Philosophies, we describe a holistic and multidisciplinary framework which aims to outline the processes behind everyday technology adoption and predicts future use. Coined the Technology Integration Model (TIM) a combination of user variables, human motivation, technological features and self-extension are seen as fundamental to the adoption process and influence whether a technology is used repeatedly over time. TIM is derived from a critical evaluation of existing theories and aims to address previous shortcomings such as lack of implementable concepts, immutable explanatory power and absence of a unified model that can be applied across a variety of situations. We end by discussing the wider applications of TIM, providing insights on technological design, privacy laws, psychological research methods, consumer quality of life and occupational initiatives.

Keywords. Technology use, Model, Technology adoption

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Exploring the use of health related online support groups by parents of adolescents with Type 1 Diabetes
(Oral Presentation)

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Parents caring for adolescents with Type 1 diabetes have reported experiencing physical and psychological problems. The ubiquitous nature of the Internet means health information, advice and support are readily available, augmented by the use of online support groups (OSG's). There is a dearth of information about how parents use OSG's when their child transitions from paediatric to adult diabetes services during late adolescence. The aim of this study was to consider if and how health related OSG's are beneficial to parents of adolescents with Type 1 diabetes during a period of considerable change. A mixed methods design was employed. 88 participants from diabetes OSG's completed an online survey incorporating demographic information, validated scales (IPQ-R, DDS-P) plus open-ended questions to assess illness perceptions, parental distress and empowerment. Data were analysed using SPSS, with open-ended responses coded using thematic analysis. Pearson's correlation coefficients were calculated to examine relationships between the IPQ-R dimensions, DDS-P subscales, empowering processes and outcomes subscales and demographic data. Initial results indicated whilst parents using OSG's experienced personal distress and found the long-term effects of diabetes on their

child's life most distressing, membership and participation was empowering and had beneficial psychological consequences. This was corroborated by the themes identified following thematic analysis of the qualitative data, including eustress as a novel positive outcome of OSG use. Diabetes OSG's provide a sense of community for parents with unique beneficial characteristics. Interacting with others who share similar experiences and concerns may reduce parental distress and empower individuals.

Keywords. Online support groups, Chronic disease, Empowerment, Psychological benefits, Parental distress

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Revenge Porn, Preliminary Findings from the Harassment and Revenge Porn Survey
(Oral Presentation)

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Revenge Porn is the sharing of private, sexual materials, either photos or videos, of another person, without their consent and with the purpose of causing embarrassment or distress. The offence applies both online and offline, and to images which are shared electronically or in a more traditional way so it includes the uploading of images on the internet, sharing by text and e-mail, or showing someone a physical or electronic image. This study reports preliminary findings of the Harassment and Revenge Porn (HARP) survey aimed to record the impact that this experience has had on victim's lives. The data revealed participants' experiences of trust issues, posttraumatic stress disorder (PTSD), anxiety, depression, suicidal thoughts, and several other mental health effects. These findings reveal the seriousness of revenge porn, the devastating impacts it has on survivors' mental health, and similarities between revenge porn and other types of assault.

Keywords. Revenge porn, Harassment, Cyber abuse, Online abuse, Stalking

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Development of effective virtual environment in eliciting craving in patients with internet gaming disorder
(Poster Presentation)

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Internet gaming disorder (IGD) is a new disorder, as recently exemplified by its inclusion in section 3 of the DSM-5. Offering controlled environments that increase cue-induced craving, virtual reality exposure therapy (VRET) has shown to be effective for some forms of addictive disorder. To assess the feasibility of virtual reality (VR) for patients with IGD, this study aimed to develop the virtual environments that represent risk situations and include environmental and social contexts for inducing craving and assess the effect of the VR in cue reactivity. A total of 64 male adolescent and young adult (34 with IGD and 30 without) were recruited for participation. We developed virtual internet cafe and the participants were exposed to 3 different sets of related-contexts. As the primary feasibility outcome, cravings were measured with a VAS inquiring on the current urge to play a game after exposure to the 6 different scenes. The virtual internet café induced significantly greater craving in patients with IGD compared to controls. Also, patients exhibited significantly

higher acceptance rate of friend's suggestion than those in controls. In IGD, craving response on some contexts was positively associated with the symptom severity score measured by Young's Internet Addiction Test, one of the most utilized diagnostic instruments for Internet addiction (all Ps < .05). These findings reveal VR laden with game-related contexts could evoke gaming craving in pathological gamer and could be used in the treatment of IGD as tools of VRET for eliciting craving.

Keywords. Virtual reality, Internet gaming disorder, Craving, Cue exposure therapy

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Self-disclosure online and offline: the Effect of Age
(Poster Presentation)

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Growth of Social Networking Sites (SNS) has brought about various privacy concerns and risks of which users are not always aware. This unawareness might be stronger among those who were socialized in the "pre-Internet era". In this research, we study how people of different ages disseminate personal information in an SNS and regulate access to their profiles. We focus on Vkontakte as the most popular SNS in Russia and obtain both observational data on privacy settings and self-reported data on users' offline behavior from 135 respondents. Data from online profiles have been used to calculate users' indices of online self-disclosure, while we applied Jourard Self-Disclosure Questionnaire to measure how people evaluate their level of openness in face-to-face communication. Unsurprisingly, people turn to be more open to their friends than to strangers online, however these two variables are positively correlated (r=0,513, p<0,01). A closer look at data distribution also reveals a cluster of those who are very closed from online strangers but are highly open to online friends. Offline and online realities are not closely related: most people report high levels of offline openness, while their self-disclosure behavior online may vary. We also find a weak positive relationship between age and level of general self-disclosure both to friends (r=0,204, p=0,018) and to strangers (r=0,243, p=0,004) in SNS. The effect of age on specific aspects of self-disclosure (e.g. on disclosing marital status or mobile phone number) is the subject of our current research in progress.

Keywords. Privacy, Online self-disclosure, Social networking site

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Perceptions of online support groups for carers of people with dementia: A critical review of the qualitative research literature
(Poster Presentation)

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Social support can act to buffer carer burden for carers of people with dementia. Carers can experience barriers to attending face-to-face support groups due to the demands of the caring role. Online support groups can enable and increase carer access to social support from others in a similar situation. The present literature review aims to critically evaluate the qualitative findings of studies that have explored dementia carers'

experiences of online support groups. The PsychINFO, Medline, CINAHL and Web of Science databases were systematically searched resulting in fourteen articles that met the inclusion criteria for the review. Additional manual citation searches did not result in any further relevant studies being identified. Findings from the studies reviewed indicate that online support groups provided meaningful intervention to carers in terms of group bonding, emotional support and information gathering. A number of perceived advantages and disadvantages of these support groups were also identified. The findings of the present review suggest how valuable online support groups can be for carers of people with dementia to build social relationships with others in a similar situation. This highlights the importance of the role that professionals can play in signposting carers to online support groups. A need for further research is indicated in order to build upon the findings of the present literature review and to more clearly determine whether online support groups provide equivalent benefits to face-to-face groups for carers of people with dementia.

Keywords. Online, Social support groups, Carers, Dementia, Review

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Exploring Social aspects of textspeak use by typically and non-typically developing young people
(Oral Presentation)

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Research on textspeak use has tended to focus on its educational impact, recruiting primarily undergraduate students. Furthermore, young people with intellectual and developmental disabilities (IDD) have not been sufficiently represented. This study aims to explore the social aspects of textspeak use/understanding, and attitudes to etiquette around use to understand the rules that young people perceive as important and the consequences of breaking these rules, allowing for a much broader picture to be ¬formed of the psychology of textspeak.
34 young people (13 IDD) from school year groups 5-11 have so far been recruited to take part in focus groups (Y5=5; Y6=3; Y7=4; Y8=3; Y9=5; Y10=6; Y11=8). Participants were asked questions about their use and understanding of textspeak, alongside more specific questions relating to textspeak etiquette. Preliminary results from an inductive thematic analysis suggest the following overarching themes: Communication; Social Expectation; Trust; Textiquette; Use of Emojis; Social Perception; Age Divide; Purpose of Textspeak. Further analysis is currently taking place. Preliminary findings indicate that young people with IDDs have concerns about gatekeeping by parents/carers not shared by their typically-developing (TD) peers. Further, there appears a stark difference in how textspeak is used by TD/ IDD young people. TD young people appear to use textspeak as a means to develop an identity within social groups, and as a way of having fun whilst conforming to social norms. IDD young people, however, appear to use textspeak as a functional tool to assist in communication, most notably using emojis to assist with expression identification.

Keywords. Textspeak, Communication, Inclusive research

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Thinspiration, fitspiration, and bonespiration – the construction of body ideals on social media
(Oral Presentation)

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Images which inspire certain body ideals, such as thinspiration, fitspiration, and bonespiration manifest on social media. Previous research has established that exposure to content may have a negative impact upon body image, yet no research to date has compared these three groups of imagery for their content. A content analysis was conducted to analyse the bodies featured within a sample of images with the hashtags, thinspiration, fitspiration, and bonespiration. A total of 734 images were analysed using codes for content that concerned body type and objectification. Using Chi-square, thinspiration and bonespiration content was found to more objectified and thinner bodies, compared to fitspiration which had a greater prevalence of muscles and muscular bodies; however, fitspiration content was similar to thinspiration content on codes for protruding bones. Fitspiration content constructs a less unhealthy body ideal, compared to thinspiration and bonespiration. Yet there appears to be a subgroup of fitspiration content that idealises the extremely thin body. The findings will be discussed in relation to social media platform's policies and media literacy in young people. Future research should investigate the motivations behind posting this content and qualitatively analyse the online comments concerning this imagery.
Keywords. Content analysis. Social media, Body image, Thinspiration, Fitspiration, Bonespiration

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Better the devil you know? How hiding your Facebook profile influences interpersonal trust and attraction
(Oral Presentation)

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Facebook is typically envisaged as a means to create and maintain social relationships. However, it can also be used as a reconnaissance tool, and there is evidence that some users (e.g. employers) will "cyber-stalk" others who they may come into contact with in the future (e.g. potential employees). As such, it may be tempting to make one's profile private so it cannot be seen by non-friends. This study examines whether such a change is advisable, and whether it may actually undermine user's trustworthiness and desirability. Using an experimental paradigm, participants were asked to assess an unknown other – actually fictional – who they would be working with in the future. To do this, they were presented with their partner's social media information. In two conditions, this information either gave rise to positive or negative affect; in a third, their partner chose not to share their information. Participants – unsurprisingly – showed the most favourable responses to partners with positive profiles. By contrast, participants responded the least favourably to a partner who would not share their information, and also showed less trust towards this person – even more so than a partner who elicited negative affect from their statuses. This study suggests that hiding Facebook information can give rise to perceptions that a user has something to hide, and may be untrustworthy. Thus, it may be wise to make sure one's profile is open to others, even if some posts are negative in content.
Keywords. Facebook, Impression formation, Cyber-stalking

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Challenge accepted: Data collection from hacking communities
(Oral Presentation)

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Research into online communities is increasingly necessary with the growth and overlap of the online world with the offline. This paper will discuss designing and implementing netnography, specifically internet-based data collection with hard-to-engage participants. This study was carried out as part of ongoing PhD research into online communities involved with hacking. Using a social psychological approach contributing to cyber security, it examines the awareness of community members to the social psychological processes, as well as the potential influences on the actions of the group and individuals. Processes of interest include: trust within the community; decision making with personal and group norms; risk taking on individual and group levels. Data is collected via quantitative online surveys; to date there are 138 individual responses. The specific obstacles in relation to collecting data from these communities and how these were circumvented will be explained. Feedback and responses on the forums covered the entire range of possibilities; there were confirmations of completion, polite and impolite refusals, and users who were very direct about their disapproval of the research and the presence of the researcher. The findings of this paper offer examples and areas of improvement for online research methodologies as well as reinforcing the importance of social psychological research and human factors within cyber security. The results are beneficial to those wanting to conduct their own online research in challenging areas, as well as those interested in online behaviour and hacking related topics.
Keywords. Data collection, Hacking, Cyberpsychology, Social identity, Netnography

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A Frame effect in Avatar Customisation: How users' attitudes towards their avatars may change depending on virtual context
(Oral Presentation)

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The sense of "being there" that Virtual Reality/Worlds may promote in users depends on multiple factors, one being the relationship between users and the digital figures representing their agency/identity in the simulation (i.e., avatars). Users may feel strongly identified with avatars, so that avatars offer innovative resources for psychological assessment, such as clues about users' self-conception. However, avatar customization may vary depending on the Virtual World context it has to enter. We hypothesize that users may have different attitudes towards avatars created for different contexts; feel more or less represented by different avatars; and that such difference may be influenced by sex, self-esteem (evaluation of one's own Self) and self-curiosity (disposition/interest to increase knowledge of one's own inner world). 87 students (45 females) created two avatars to be used in two different virtual contexts (i.e., leisure vs. work) and then responded to questions regarding attitudes towards both their own avatars, namely Similarity to Self, to Ideal Self, Attractiveness, Difficulty in Customization. Moreover, they filled in validated questionnaires on self-esteem (Rosenberg Self-

Esteem Scale) and self-curiosity (Self-Curiosity Attitude-Interest Scale). Results showed that Leisure-avatars were perceived more easy to customize and more similar to Self than Work-avatars. Moreover, Leisure-avatars were also perceived more similar to Ideal Self than Work-avatars when controlling for self-curiosity. Discussion deals with implications for avatar assessment, in that attitudes towards avatars can be influenced by the virtual context, and by individual characteristics such as one's own disposition to understand him or herself.

Keywords. Avatar, Self, Self-esteem, Self-curiosity, Context, Virtual Worlds

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How virtual embodiment affects episodic memory functioning: a proof-of-concept study (Oral Presentation)

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Recent theories in the field of embodied cognition have pointed out the role of the body for episodic memory, i.e. the memory for personally experienced events. Although virtual embodiment has been used traditionally to investigate the different components of bodily self (i.e., body ownership and agency), it provides great advantages to manipulate the whole embodied experience. In the current study, we manipulated three different levels of virtual embodiment ("full-embodiment", "medium-embodiment", and "low-embodiment"). All participants were asked to navigate in three different virtual cities and memorize all the events that they encountered within each environment. In the "full-embodied condition", participants were asked to stand upright in the same first-person visual perspective of a virtual body and to wear a head mounted display; their body movements were tracked by the Microsoft Kinect in a synchronous way. In the "medium-embodiment condition", participants were asked to move their body according to the movements observed in a recorded video. Finally, in the "low-embodied condition", participants simply observed a pre-recorded video. We evaluated the effect of different level of embodiment on the main features of the episodic recall (i.e., specific elements, perceptual and spatio-temporal details, and the quality of features binding), recognition, and sense of presence. Data emerge with interesting consequences on embodied cognition hypothesis. Accordingly, findings are discussed giving an innovative view of virtual reality as an embodied tool able to influence cognitive processes such as episodic memory.

Keywords. Embodiment, Episodic memory, Embodiment cognition, Virtual reality

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Virtual reality-based software for the treatment of fibromyalgia: A case study (Oral Presentation)

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The aim of this study is to explore the efficacy and acceptance of a virtual reality-based software for pain reduction (VirtualPain) in a 53-year-old female with fibromyalgia (FM), a chronic pain

syndrome. Treatment consisted of four 60-minute sessions. Each session involved 40 minutes of cognitive behavioral therapy (CBT) and 20 minutes of exposure to the VirtualPain software. Pain intensity was assessed on a visual analog scale (VAS, from 0 to 10). Before and after the treatment, the patient completed the Pain Anxiety Symptoms Scale Short Form, the Pain Catastrophizing Scale and the Pain Self-Efficacy Scale. During each session, the patient reported the amount of extra medication for pain consumed during the week. Follow-up was conducted at 6 and 12 months. The patient showed a significant reduction in pain intensity during the four sessions of exposure to the VirtualPain (Minitial VAS =4.68, SD=1.99; Mfinal VAS=2.27; SD=1.16; Z=-3.408; p<.001). Furthermore, pain-related anxiety, catastrophic thoughts and extra medication were considerably reduced after treatment, while pain-related self-efficacy increased noticeably. More importantly, these improvements were maintained at one-year follow-up. The patient assessed the software as being helpful for pain reduction and easy to manage. The inclusion of exposure to the VirtualPain software in a CBT program reduced pain intensity and psychological symptoms (anxiety, catastrophism and self-efficacy) in a patient with FM. The improvement was maintained at follow-up. Controlled studies with large samples are now needed to assess the specific additional contribution of VirtualPain to CBT in the treatment of fibromyalgia.

Keywords. Treatment, Pain, Virtual reality, Patient, Self-efficacy Anxiety, Fibromyalgia

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An e-health protocol to help elderly breast cancer patients to cope with chemotherapy: Preliminary results (Oral Presentation)

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Breast cancer is the most frequently diagnosed cancer in women and the aging population increases the number of new diagnoses. Women of all ages experience psychological stress for possible side effects of chemotherapy, and in particular for hair loss. To prepare women over 60 years diagnosed with breast cancer to face the imminent chemotherapy we developed an e-SIT (Stress Inoculation Training) protocol lasting two weeks. The online protocol includes 10 sessions to see once a day and each session integrates two parts: a live-video interview with women who have gone through breast cancer experience and a guided relaxation and meditation experience. The aim of this study is to test the efficacy of the training, in addition to traditional treatment provided by the hospital, through a controlled trial with a control group without treatment. The effectiveness is assessed through Italian self-report validated questionnaires aimed to evaluate women emotion regulation strategies, their adjustment to disease and their psychological wellbeing. Questionnaires are administered at the beginning and at the end of the training in two face to face meetings with the psychologist. At the moment 16 women (M=65 years old) have been enrolled in the study. They are mostly married and not workers. Data show that women in the e-SIT protocol group enhanced their emotion regulation skills, reduce cognitive avoidance strategies and increase perceived emotional and social wellbeing. These preliminary encouraging results suggest the importance for future interventions of designing and developing e-health interventions for elderly breast cancer patients.

Keywords. Breast cancer, e-health, Elderly, Emotion regulation, Wellbeing

The effect of immersion on measures of mood, presence and public speaking anxiety in response to a mock public speaking task (Poster Presentation)

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Virtual Reality exposure therapy is rapidly being utilised to treat a variety of disorders and ailments. While virtual reality's efficacy is reported consistently in research literature, details of virtual environment construction are often omitted. This makes replication and advancement of research difficult, considering that it is agreed that presence mediates the change within Virtual Reality Exposure Therapy. The current study constructed three virtual environments of a small teaching classroom with an audience, with differential immersive features, to determine whether higher graphical fidelity (Immersion) equalled higher change in self report public speaking anxiety within one session. The UWIST Mood Adjective Checklist was administered from the perspective that participants were going complete a public speaking task in the immediate future and the Personal Report of Public Speaking Anxiety were taken before and after along with the iGroup Presence Questionnaire. The current study found that by manipulating technical quantitative elements of Virtual Environment construction, dimensions of presence significantly differed between conditions. However, no significant difference in public speaking reports before and after were found between conditions, meaning that increased immersion did not reduce fear of public speaking. Future research should be longitudinal, taking a structure similar to conventional systematic desensitisation and include an actual speaking task to determine to what extent changes are generalizable to real life. Future research should also manipulate different elements of virtual environment construction to help determine how to maximise presence.
Keywords. Virtual reality exposure therapy, Public speaking anxiety

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The influence of cybersickness and presence on the effectiveness of virtual reality exposure therapy to treat anxiety disorders: A meta-analysis (Oral Presentation)

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The use of virtual reality exposure therapy (VRET) in the field of anxiety disorders has proven its effectiveness on reducing fear in many studies. But there are of course several variables influencing the effectiveness of VRET. Presence "the subjective experience of being in one place or environment, even when one is physically in another" (Witmer & Singer, 1998) is discussed to have a positive influence, whereas cybersickness associated with symptoms as vertigo, nausea, sweating, the main side effect of VRET, is discussed to have a negative influence on the effectiveness of VRET. We conducted a meta-analysis on the influence of presence and cybersickness on the effectiveness of VRET to treat anxiety disorders. We selected VRET studies to treat anxiety disorders as defined in DSM-5 or earlier versions (American Association of Psychology, 1994, 2000 & 2013) that collected self-report data on presence, cybersickness and fear measures. The search was conducted for studies published from January 1, 2000 up till January 14, 2017. In total 8 articles using VRET to treat anxiety disorders with 13 effect sizes and a total sample size of 129 participants were included in the meta-analysis. The results of the moderator analyses revealed no significant influence of cybersickness and presence on the effectiveness of VRET for anxiety disorders. The results indicate that presence and cybersickness can be tolerated in every level they appear without influencing fear reduction, but results have to be treated with caution. Results and implications will be discussed at the conference.
Keywords. Virtual reality exposure therapy, Anxiety disorders, Presence, Cyber sickness

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Social Media Uses, News Consumption, and Trust in Government (Poster Presentation)

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Political trust represents a key indicator of how closely citizens relate to politicians and government; trust also has significant effects on citizens' behaviour in ways that affect the effectiveness of democratic governance. Longitudinal local data, so as the current global atmosphere, revealed a descending trend of trust in government and public administration. Are the people, especially our new generation, losing their faith and confidence in the government? It is suggested that the rise of social media more or less influence the government-citizen trust relationship. The empowerment by social media facilitates citizens' civil engagement, while a positive or healthy government-citizen trust relationship is threatened by the social media "echo chamber". Would the social media use and the new forms of news consumption affect the youth's attitude towards the government? By using representative survey data collected from high schools in Hong Kong, this study examines the associations among traditional and social media uses, daily news consumption, online political participation and their impacts on confidence in government, satisfaction with public administration and governance transparency, faith in social justice, and evaluation of citizen-government relationship. Hopefully the statistics findings of this study would contribute to the on-going debate on news consumption, social media uses and trust in government among the younger generation.
Keywords. Social media, News consumption, Trust in government