Report from the 1st International Conference on Deceptive Behavior, University of Cambridge, 24–26 August 2015

The first large-scale interdisciplinary conference on deceptive behaviour, organised by the University of Cambridge, took place from 24 to 26 August, 2015. Because deception research is fragmented among many disciplines and sub-disciplines, the aim of Deception 2015 was to bring all practitioners and academics together.

The topics discussed included verbal and nonverbal cues of deception, interview techniques, use of technologies to detect deception (e.g. polygraph, fMRI, EEG, eye-trackers, and motion capture suits), prevention of deception and fraud deterrence, cultural differences, border-control, lying about intentions, self-deception, malingering, and socially acceptable lying (e.g. white lies).

The conference encompassed seven symposia with interesting topics such as cues of deceit, high stake lies, automated lie detection, guilty knowledge test, online deception, tendency to lie, and interview techniques. There were also two poster sessions, during which 45 posters (on display throughout the conference) were presented. The best posters were awarded three prizes, with the first won by Adam Harvey's is presentation on *The Verifiability approach in insurance contexts; exploring the effect of the information protocol.*

A significant share of the papers concerned non-instrumental lie detection, utterance analysis, micro expressions, and linguistic analysis of text for extraction of deceptive cues.

Some researchers focused on instrumental methods of detection. Jay Nunamaker, the Director of the Center for the Management of Information and the National Center for Border Security and Immigration (BORDERS) at the University of Arizona, presented the *Automated Virtual Agent for Truth Assessment in Real-time* (AVATAR), a screening system whose technology is based on an array of non-invasive sensors to assess credibility and to verify identity and documents while ensuring individual privacy. The AVATAR may be useful for airports, visa processing, and personnel screening.

Sophie Van Der Zee from the University of Cambridge demonstrated motion-capture equipment, which can accurately measure differences in full-body movement between truth tellers and liars. Motion capture suit can more objectively measure nonverbal behaviour, and results of research suggest that liars move all limbs more. There is a promise in the unobtrusive measurements. If ongoing research is successful, the technology will increase applicability of motion-based lie detection.

Two special panel sessions included prominent deception researchers. Panellists in the first special session were Aldert Vrij, Dan Ariely, Steve Porter, and Timothy R. Levine who focused on the future directions in deception research. Aldert Vrij discussed interview techniques and future directions in methods of cognitive lie detection in different contexts. Steven Porter analysed ten ideas for lie detection research, including more work on high-stakes deception and on affective and not just cognitive approaches. He also wondered how police techniques should change to eliminate coerced confessions, and Timothy R. Levine presented his Truth Default Theory.

Discussed in the second special session were *Technology assisted lie detection*, with Jeff Hancock, Judee Burgoon, Bruno Verschuere, and Giorgio Ganis among the panellists. The session was hosted by Ross Anderson, professor of Security Engineering at the Computer Laboratory (University of Cambridge) and organiser of Decepticon 2015. As Judee Burgoon told, detecting deception is an intrinsically complex problem, linguistic analysis has recently given plenty of good results, while other indicators of detection deception such as microexpression, kinesic analysis, and eye movements may themselves be feeble, yet their fusion may be significantly better. The speaker is working on detecting non-contact technologies and moves to real time. Remote measuring of nonverbal behaviour in an accurate and objective manner will further help bridging the current gap between theory and practice in improving ways to detect deception.

Giorgio Ganis wondered why we cannot find neutral correlates of deception, falling back on his EEG analyses.

The conference gathered 160 researchers from many universities around the world: University of Arizona, University at Buffalo, Stanford University, Huddersfield University, Lancaster University, Maastricht University, Dalhousie University, University of Portsmouth, and of course University of Cambridge. Joanna Ulatowska from Poland (The Maria Grzegorzewska University) discussed eye movement tracking as a potentially accurate tool for distinguishing between truths and lies. During a poster panel, Karolina Dukała from the Institute of Psychology of the Jagiellonian University presented a poster on *The effects of training police officers and prosecutors in deception detection by CBCA or non-verbal cues*, Anna Szuba-Boroń from the Andrzej Frycz Modrzewski Kraków University presented a poster on *Polygraph examination and non-instrumental detection of deception in Poland*, and Justyna Sarzyńska and Marcel Falkiewicz (University of Social Sciences and Humanities) – a poster reinforcing the concept that *Form of instruction influences neural correlates of deception*. Present among the delegates from Poland was also Marcin Gołaszewski, President of the Polish Society for Polygraph Examinations (PTBP).

Two special practical sessions accompanied the conference. The first entitled Thiefspotting portrayed deception from a more practical perspective and was conducted by Bob Arno, a pickpocket expert, who presented latest tools and techniques to spot sophisticated diversion thieves. In the second session, Martin S. Taylor presented another fascinating practical implication of deception: magic and the role of suggestion.

The conference was organised at the Lecture Theatre in the William Gates Building in Cambridge, and the Best Poster Award Ceremony took place at King's College, one of the finest examples of Gothic English architecture.

The idea of gathering together researchers, practitioners and students from different disciplines interested in detection of deception should be appreciated, not unlike the idea that instrumental and non-instrumental methods of lie detection should be complementary. It would be good if there were more polygraph experts involved in the conference discussions, especially on instrumental lie detection.

<div align="right">Anna Szuba-Boroń</div>