

psych-talk

Psychology for students by students



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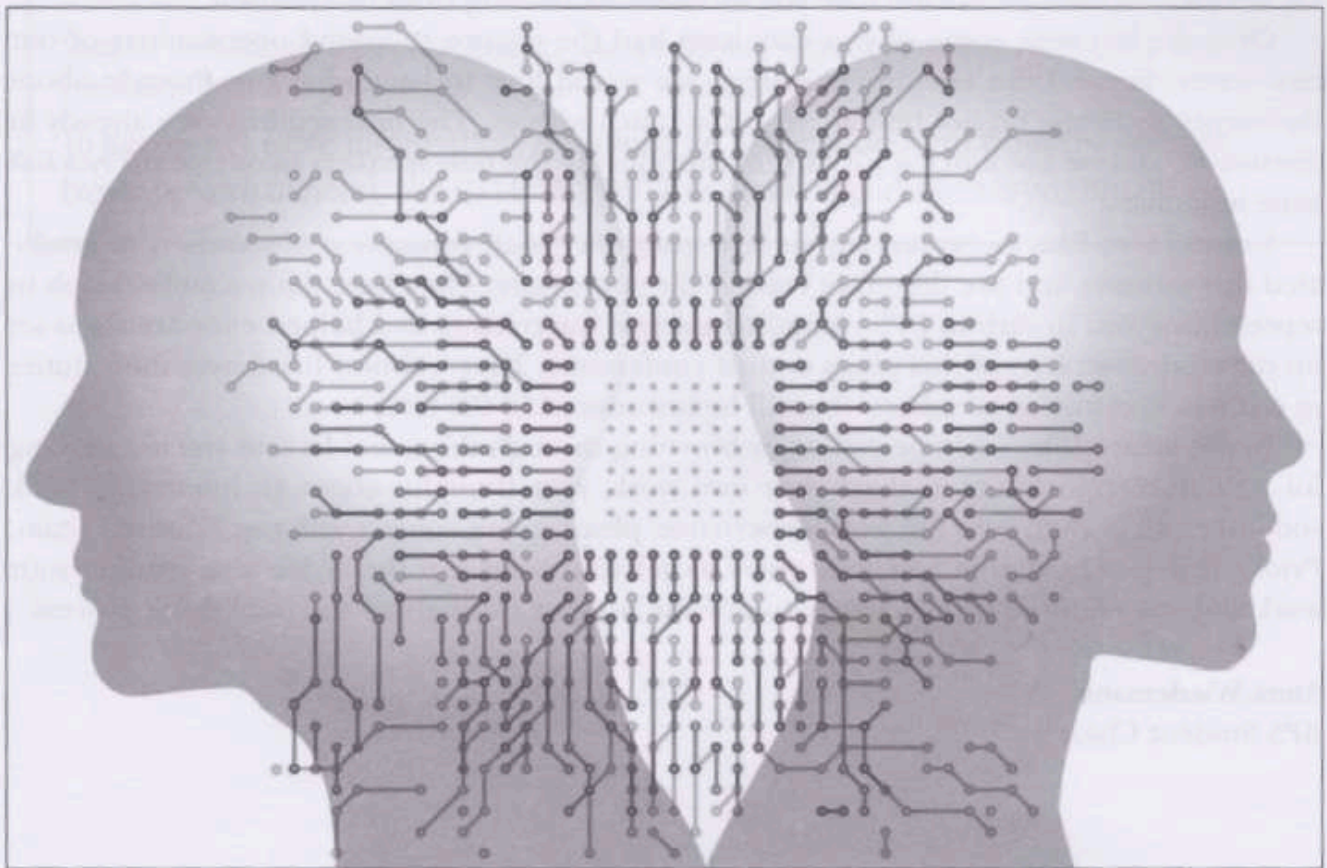
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Forging interdisciplinary teams – psychology and cyber security

Dray Agha



I'M NOT A PSYCHOLOGIST. I study cyber security. Right now, I'm visiting Gothenburg, Sweden, examining how 'digital innovation' is understood by companies, governments, and citizens. I'm also being told about the issues that are cropping up during digitalisation, and there's one that's recurring: 'it isn't a tech problem; it's a people problem – they aren't adapting to the cultural shift for digitalisation'. What I hear, then, is that organisations may need tech researchers, but they definitely need psychology researchers.

Resistance to change cannot be solved by an app, or 'AI-powered Blockchain quantum online personality tests' (whatever those buzzwords mean!). The idea that an ever-more efficient software can help smooth over cultural complications is a flawed idea

indeed. In fact, tech-inertia is the reason why shifts to digital environments fail in a lot of companies and governments. In my current research, and in previous research too, I consistently see the need for the application of psychology.

Strategic interdisciplinary work

At a talk in Gothenburg, design critic Alice Rawsthorn, OBE, recognised that the technologies lending themselves to an Orwellian surveillance state were not created by interdisciplinary teams. As Alice saw it, individuals from varied backgrounds and disciplines needed to come together to create solutions, otherwise all we would be left with is one-sided solutions that lack empathy and care for the majority.

But interdisciplinary work is hard. We use

different language in our various schools of thought, and our disciplines talk and think about one another in very different ways (if only psychologists could actually read minds, as the popular stereotype goes). But there is a way to make it work. An interdisciplinary team isn't complex, it's just a number of communicative people rallying around a common goal. Not all members of an interdisciplinary team need to be 'like-minded'; on the contrary, it might be better if they had diverse viewpoints and challenged each other's ideas. What an interdisciplinary team needs are open-minded individuals, who don't mind learning new skills, and sharing their own lessons, in order to achieve *something*.

Psychology has the answers

When something goes wrong in cyber security, nine times out of ten it's likely that a human made a mistake, and not that the technology failed. There's a saying in cyber security: '*humans are the weakest link in your security*'. It's problematic, it's techno-centric, and it's probably wrong. The more I uncover what's wrong with instances of failed cyber security, the more I realise how valuable psychology is when working toward a solution. Psychologists can answer why humans take the risks they do online – posting personally identifiable information, or clicking on virus-ridden links they shouldn't, to name but two examples. Psychologists can explore why employee training programmes on cyber security aren't as effective as they should be. And psychology can tackle, and hopefully overcome, the flawed philosophy that humans are the biggest obstacles for effective cyber security.

The security of online information is important. Information is the thing that allows humans to construct themselves; the Lego pieces that we fit together to tell ourselves stories of our history, our present, and our potential future. Cyber security is working on one side of the mountain, attempting to secure that information, and

psychology is at the other side of the mountain, examining the phenomena of fake news, and how the internet is allowing echo chambers of information to proliferate more and more. Our disciplines are doing important work, and can achieve even more if we met together on one side of the mountain and traversed the summit together.

Allies for social good

However, there is good work being done! Many UK institutions offer Masters degrees in Cyberpsychology. My own institution, Royal Holloway through their Centre for Doctoral Training, offers fully-funded four-year PhDs housed in the Information Security department, and actively call for students of psychology to apply and join the interdisciplinary team we have. But we need more interdisciplinary work as a society. Psychology appreciates the agility of the human mind. Psychology researchers can inform how cyber security and digital systems should be designed to consider the cognitive processes that go in the human mind. 'User-centric' technology can be better shaped by researchers who investigate how the human brain operates best and responds most effectively – there's a reason why cognitive science is included as a desirable background in job descriptions for UX Designers.

As a global community, climate change looms over us and has been sending very apparent omens of our mortality for most of the 21st century so far. A number of people are calling for tech solutions. Though I agree this is necessary, I also hope that interdisciplinary teams can work together, highlighting why shiny new tech isn't enough, why human behaviour needs to change, and then hopefully *how* human behaviour can change.

The solution cannot be achieved by any one discipline alone. But I think there is a special relationship waiting to be forged between psychology and cyber security. We need more openness from cyber security researchers and it would be fantastic if we

had psychology researchers coming forward to offer lessons and partnerships that would benefit both disciplines as well as society at large.

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