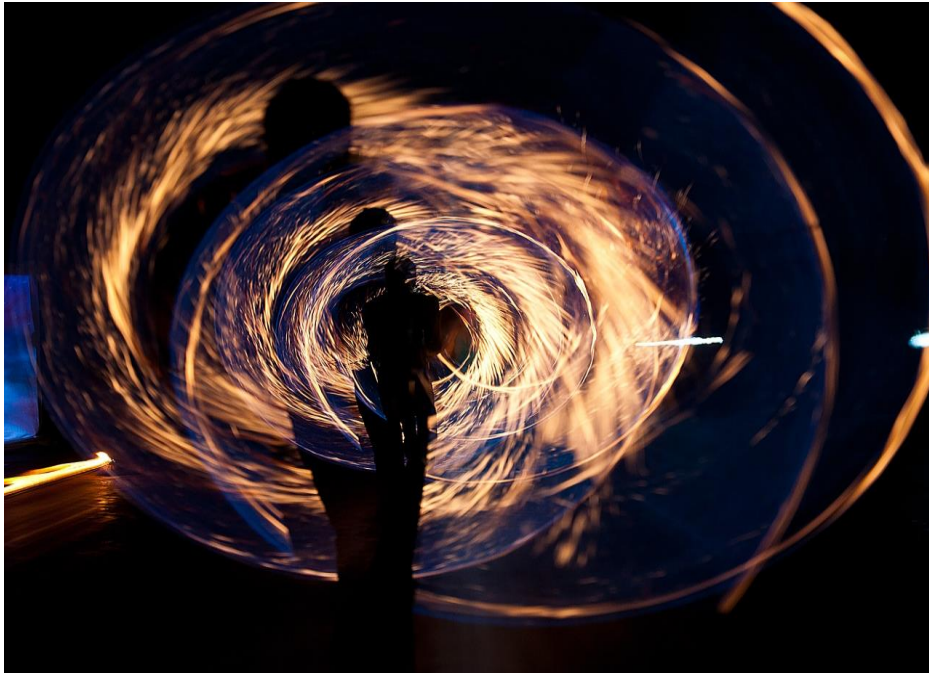


# Cyber Resilience: The Human Firewall



By Catherine Knibbs, Gary Hibberd and Anj Handa,

## Introduction

Rapid technological developments and globalisation have undoubtedly changed the way we all live our lives, both personally and professionally. Almost every aspect of modern life has been touched or affected by our increasingly digitised world. The way we get our news, how we communicate, how we travel, how we manage our lives, have all been affected.

The world in which we live is increasingly a 'digital life' and where we once 'visited' Cyberspace and 'logged off' at the end of the day, we now live there, because we no longer leave.

This journey into our digital universe has for the most part come as a complete surprise (and shock?) to all but a handful of experts. But for the last 20 years, the rest of us have been doing our best to catch-up... and we're starting to become tired! Indeed 'Cyber fatigue' is indeed a very real problem and something many are suffering from.

Most people older than the age of 30 can still remember what life was like BEFORE the internet, and many are struggling to understand their place in Cyberspace. It is having an impact on relationships, on how we interact and even on ways we see ourselves, in ways that few could have accurately predicted.

But there some who could see the way we were headed, including the former CEO of Google itself, Eric Schmidt (2001 - 2011) who stated that:

*“The Internet is the first thing that humanity has built that humanity doesn’t understand, the largest experiment in anarchy that we have ever had.”*

This is the premise upon which three people came together to share their opinions on our cyber universe, its current impact and the future effect it is going to have on us.

This brief paper then is the result of three people who are passionate about educating business leaders, educators and policymakers on the importance of building safer more secure systems which consider the impact ‘Cyber’ is having on society.

## **A Business Perspective - Gary Hibberd**

The scale of the collection and sharing of personal data has increased significantly. Technology allows both private companies and public authorities to make use of personal data on an unprecedented scale in order to pursue their activities. People increasingly make their personal information available publicly and globally.

Technology has transformed both the economy and social life, and should further facilitate the free flow of personal data within the Union and the transfer to third countries and international organisations, while ensuring a high level of the protection of personal data.

Those developments require a strong and more coherent data protection framework in the Union, backed by strong enforcement, given the importance of creating the trust that will allow the digital economy to develop across the internal market. Natural persons should have control of their own personal data. Legal and practical certainty for natural persons, economic operators and public authorities should be enhanced.

The English Oxford Dictionary defines ‘Resilience’ as *“The capacity to recover quickly from difficulties”* and *“The ability of a substance or object to spring back into shape”*. In an ever-changing, volatile world many organisations are fighting to become more ‘resilient.’

There is even a British Standard which is dedicated to ‘Organisational Resilience’ (BS65000:2014). This standard defines Organisational Resilience as the *“ability of an organisation to anticipate, prepare for, and respond and adapt to incremental change and sudden disruptions in order to survive and prosper.”*

When businesses think about 'Resilience' they do so with a keen eye on processes, systems and even the economy. Whilst this is understandable, there is one dimension which many fail to consider, and that is the resilience of its more important asset; People.

In a time where few things stay the same for long, 'Human Resilience' has become both increasingly important and difficult to maintain. In 2016, the research company 'Excelacom' stated for every 60 seconds spent online 150 million emails are sent, 701,389 FaceBooks logins occur and there are over 2.4 million search queries made.

With this volume of information, it is easy to understand why many people are reporting feeling overwhelmed and suffering from 'cyber-fatigue' as we are increasingly bombarded with digital 'noise'.

To put it simply, we are suffering from 'Information Obesity' and as the speed and weight of our digital world increases, our ability to be 'resilient' is being pushed to the limit. But we are not helping ourselves.

Nobody told us that they had to replace our alarm clocks, but they have. Now, as we sleep with our phones beside us, the first thing that most people do when they wake is check social media or look at emails.

Our mood seems to be set before we place our feet on the bedroom floor as emails 'demand' to be answered and social media posts beckon us to 'Like' them. If the volume of information is deafening, then the cornucopia of social media sites, technology and digital devices is leaving us bewildered and confused.

Being resilient, and having the capacity to recovery quickly requires us to have *time* to recover, but we are not leaving ourselves with much time to do this as we rush from one email-emergency to the next Facebook frenzy.

So what must we do? To be resilient, we need to be better prepared for the changes that are happening all around us. I believe the first step is to recognise that we cannot control everything, and that 'letting go' is no bad thing.

This is not simply about ignoring those emails and social media calls for attention, it is about recognising the control that they have over us and then consciously deciding NOT to be controlled by them.

This includes committing not to check emails before a certain time in the morning, or after a certain time at night – after all, if it's truly urgent that person would call you, and just how important is it that you 'like' your friends latest gym update?

Being Resilient requires us to have the *capacity* to recover quickly from difficulties. The key word is 'capacity'. If we are 'always on', and always running at full speed, we have no capacity to recover.

Each of us must therefore take time to build in that capacity, because if we don't, then just like a vehicle which is constantly running at full speed, something will break and something is going to go wrong. This is in relation to the things we have control over, emails, checking social media etc, but what happens when the control is taken out of our hands?

## The Human Firewall – Catherine Knibbs

If my brain had a firewall I would be able to filter out images, thoughts and feelings that I considered toxic. I could programme the filters to scan these before I processed them.

Unfortunately, brains don't work like that. They are simplistically out like a two-storey house with an upstairs and downstairs. The downstairs bit is non-verbal and is reactive to the environment and the upstairs is half a second behind. The firewall is essentially slower than the processing section (CPU). In the computer industry, this would not work.

Why do brains work like this? Well, they are very similar in architecture to the Neanderthal brain and are wired to pay attention to 'things in the environment' that are a threat to the self (this includes internal threats such as poisoning, which is why we vomit when food is off).

So why is this about the human (brain) firewall in regards to the internet? How about I change it to Human choice? The very fact I can choose (mostly) what I watch or click on allows me to build my own firewall to threatening content that my lower (downstairs) brain will 'react to' before I could process it with my thinking (upstairs brain).

Why does this even matter? If you allow me for a moment to explain that your lower brain prioritises survival and needs to do this before you can think about it, you can see that if you were to see something that your brain (not you) considered a threat then your firewall would not have time to rationalise and suppress this process.

Hence, when we see an image/video that is about danger/threat/horror it reacts and begins a process that involves the production of lots of stress chemicals. Even if you were to realise 0.5 seconds later that this was only a video or photograph, it's almost too late as the brain and body have prepared you for a fight/flight response.

So what! If I have stress chemicals in my brain and body I can tell myself to relax and it will all be fine. Perhaps this is a view that you feel comfortable with and I respect that, however I would like to impart one last piece of information.

A build-up of stress chemicals can actually 'kill off' healthy cells in your brain and body over time. It's almost like a slow a poison to your system that you could avoid by not clicking, through choice to watch images that are traumatic.

This is not meant to be a criticism of Facebook, but with over 1.83bn active accounts on this platform, we have to look closely at how invasive it is, and what these 'features' are giving and taking from us.

Facebook and other social media sites are intended to create connections, and there is no better way to do this than to create an emotional connection. But what happens when the connection is one to a painful past, or difficult time in ones life? What happens when the Facebook takes your memories and doesn't give you a choice to remember or forget?

What follows is a personal account of how Facebook affected one person, in relation to a personal loss. This story, whilst being a very personal one, is unfortunately not unique.

### Nevertheless, she persisted - Anj Handa

Facebook... a blessing and a curse when it comes to trauma. In 2012, I lost a close friend to suicide. He was found by a friend, who called me for solace. We spent the next 48 hours in 'control and command' mode, parking our own grief to inform as many friends as possible before the news leaked onto Facebook. Bad news travels fast, especially on social media.

It has created a public forum where people can express grief in a way that wouldn't have happened in the past. Pre-social media, grieving was done in private, with people that personally knew the deceased.

In my own experience and having observed how people respond to bereavement online, I have noticed that some people inflate the extent of their relationship with the deceased person.

I'm unsure why this is: nostalgia; to gain some form of significance or attention through the connection. We should avoid passing judgement, since they could be veiling other emotions which are not necessarily connected to that loss. It could be a cry for compassion and support in other areas of their life.

Your Facebook page now serves as a kind of memory sharing bank for family and friends. It can be a comforting place. Sharing experiences can bring people together and enable them to collectively work through their emotions, particularly in cases where there has been no closure.

My friend's Facebook page provides a space for those who want to remain connected in that way to share photographs on milestones such as his birthday and share memories with friends.

Yet at other times it's too sad to bear. Facebook's 'On this Day' memory feature can be a lovely, nostalgic thing; on the other hand, old posts that you would rather remain hidden sometimes pop up.

When people are working through their feelings, they may use social media to express themselves without considering the impact on others, and inadvertently trigger painful emotions and memories.

The challenge is that social media often requires tidy endings, but grief can be raw and messy. It's an internal emotional experience which is by no means linear. In short, there's no right or wrong way of grieving. If sharing your feelings online helps you, continue to do so. You may wish to consider restricting the privacy settings so that only a select group of people see your posts.

If you feel ready, please seek professional counselling from charities such as The Samaritans (call 24 hours a day on 116 123 in the UK) or Cruse (Monday-Friday 9.30-5pm, excluding bank holidays, and extended to 8 pm Tuesday, Wednesday and Thursday evenings on 0808 808 1677).

## In Conclusion

Our world is in a state of constant change, and whilst our Cyber universe is expanding at an exponential rate our capacity to understand what this is doing to us is not evolving at the same rate.

It has been suggested that the Internet is the biggest unregulated experiment in human history, and few could argue against this. It will be full generation from now before we understand what impact our dependency on and reliance in Cyber has had on us.

As business leaders, we must take accountability. As policy makers we must develop opportunities to bridge the gaps between academia, business, government and law enforcement. As a society, we must start paying attention.

This short paper is not meant to deliver the perfect solution, rather it is the intention of the contributors to catalogue a number of thoughts they had related to Cyber, which whilst coming from different points of view all congregated and led to the same conclusion:

We need a 'foot on the ball' moment. To stop the action, look up and see where we are headed. If we don't, we will continue to see problems and these problems will begin to expand at the same rate as our Cyber universe.

## About the Authors

### Catherine Knibbs

Catherine Knibbs is an Engineer by trade (Elec/Mech/Electronic) and was the first woman to complete her trade in the Armed Forces. She has taught Karate and Football to children for over 25 years. Catherine is an Author, Researcher and trauma therapist completing a Dual MSc in Child and Adult Integrative Psychotherapy at Newman University graduating 2017.

Catherine has a BSc (Hons.) in Psychology and PG Dip in Psychotherapy. She is a Child trauma Psychotherapist, Clinical Supervisor and is accredited and registered with BACP and UKCP.

She is CEO and Director of PEER Support Yorkshire CIC and is the only Cyber-trauma researcher, consultant and public speaker in the United Kingdom. Catherine has interests in the phenomena of cyber-related compassion as an antithesis to cyber trauma, such as the phenomena of cyberbullying.

### Gary Hibberd

Gary Hibberd is the Managing Director of Leeds-based Cyber Security firm, Agenci. Gary's passion for all things cyber was sparked in 1985 when he began his as a programmer.

As a result of that passion, he went on to become a renowned expert on ISO 27001 and GDPR. Today, Gary is a passionate practitioner and regular speaker on cyber security. He has authored books on cyber security and business continuity, and has contributed to government initiatives on cyber security and counter terrorism.

Gary speaks across the globe to both large and small business as well as private and public organisations. He loves to engage the next generation of cyber experts speaking in schools, colleges and universities.

## Anj Handa

Anj Handa is a speaker, coach, Non-Executive Director and Equality specialist. She is the Founder of Inspiring Women Changemakers, a dynamic network of women leaders who come together to create positive social impact.

She writes for The Yorkshire Times as their Social Affairs Correspondent and has also spoken at venues as diverse as the House of Commons and the Palace in Brussels. She is regularly featured in the media for her equality and inclusion expertise and award-winning campaigning work.

Anj is trained in Mental Health First Aid and Neuro-Linguistic Programming. Her interest in the suicide prevention agenda arose following the suicide of a second male friend aged under 30. Anj was recently invited to write the foreword for [Public Health England guidance](#) on the local commissioning of suicide prevention services.

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