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**Computer Law
&
Security Review**

Identity crisis: Global challenges of identity protection in a networked world¹



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ABSTRACT

Keywords:

Digital identity
Identity crime
Identity management
Big data
Profiling
Mobile identity
Automated identification
Identity surveillance
Biometrics

Modern identity is valuable, multi-functional and complex. Today we typically manage multiple versions of self, made visible in digital trails distributed widely across offline and online spaces. Yet, technology-mediated identity leads us into crisis. Enduring accessibility to greater and growing personal details online, alongside increases in both computing power and data linkage techniques, fuel fears of identity exploitation. Will it be stolen? Who controls it? Are others aggregating or analysing our identities to infer new data about us without our knowledge or consent? New challenges present themselves globally around these fears, as manifested by concerns over massive online data breaches and automated identification technologies, which also highlight the conundrum faced by governments about how to safeguard individuals' interests on the Web while striking a fair balance with wider public interests. This paper reflects upon some of these problems as part of the interdisciplinary, transatlantic 'SuperIdentity' project investigating links between cyber and real-world identifiers. To meet the crisis, we explore the relationship between identity and digitisation from the perspective of policy and law. We conclude that traditional models of identity protection need supplementing with new ways of thinking, including pioneering 'technical-legal' initiatives that are sensitive to the different risks that threaten our digital identity integrity. Only by re-conceiving identity dynamically to appreciate the increasing capabilities for connectivity between different aspects of our identity across the cyber and the physical domains, will policy and law be able to keep up with and address the challenges that lie ahead in our progressively networked world.

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¹ An abbreviated version of this paper was presented at the 2013 IAITL Legal Conference Series (8th International Conference on Legal, Security and Privacy Issues in IT Law) held in Bangkok, Thailand and published in the conference proceedings as: Saxby, Steve and Knight, Alison (2013) 'Identity crisis: global challenges of identity protection in a networked world'. In: Kierkegaard, Sylvia (ed.) *Law & Practice: Critical Analysis and Legal Reasoning*. Copenhagen, DK: International Association of IT Lawyers, p. 13. This paper follows in the footsteps of 'FIDIS' (The Future of Identity in the Information Society), an EU-funded network of excellence from 2004 to 2009 that provided an integrated inter-disciplinary approach to an identity research agenda, by offering a broad overview for possible reflection on how future legal research around digital identity might progress.

<http://dx.doi.org/10.1016/j.clsr.2014.09.001>

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1. What does 'identity' mean today?

Identity refers to 'who I am'. Extrapolating beyond this basic definition presents us with a choice of intellectual routes. At a descriptive level, identity is a physical fact inseparable from and often unique to us (such as our fingerprints and DNA profile). Surpassing our biological self, it incorporates biographical characteristics that others attribute to us or that we acquire during our lives (such as our birth name, date of birth, nationality or employment history). Combinations of identity attributes may also include personality traits, our interests, our habits and other behavioural characteristics.

Identity becomes even more intricate when we drill down further. It is a concept shaped by context and circumstance. Who I am now depends upon a host of factors. For example, how we present ourselves in our daily lives depends on where we are, who we are with and what roles we are fulfilling. Indeed, we have wider scope nowadays than generations previously for constructing alternate identities for different purposes. Consider someone who is a parent, a lawyer, a diabetic, a keen gardener and a Manchester United football supporter. While the projection of each aspect of 'self' may correctly come to the fore under particular circumstances, a person can be all of these personae simultaneously and much more. Each one displays only a part of what makes up an individual. Our self-presentation ('impression management') may also change over time as we respond to the norms and expectations of others, and as we mature in 'our-selves'. The advance of the online world enhances this trend.

Identity conception is also pragmatic: it is that which represents and makes us identifiable within a set of people. Social identity, for example, typically refers to identification in a group or belonging to a class. In this context, your race, gender and sexual orientation are constituents of identity, albeit that they may not be obvious to a bystander or necessarily clear-cut. Closely associated is the phrase 'cultural identity' suggesting association with a specific ethnicity, or other tradition-based social grouping such as religious affiliation, which may be manifest through a particular choice of lifestyle.

Law, by contrast, customarily conceives of citizens as having only one, panoptic identity to which legal rights and responsibilities affix.² Nevertheless, even fairly stable civic 'identifiers' (those proxies by which we are recognisable), such as full name, nationality and gender, can alter over a lifetime, with changes typically subject to legal recognition and ratification. In combination with the fact that many of the formal identifiers used by a State may be associated with more than one individual within it, the conception of a fixed, single

identity becomes legal fiction, together with the notion of a fool-proof guarantee of its assurance. For example, although possession of physical tokens (such as birth certificates) may suggest that a recognised authority has provided them to us, they do not connect intrinsically to us. The same is true for information knowledge chosen by us (such as passwords). Individuals only connect with identifiers with very high certainty in the case of certain biometrics (such as DNA). Such obstacles are surmountable at an everyday practical level because the means for formal identification required by law is variable depending upon the perspective of the one doing the identifying, alongside the degree of certainty required in the ultimate identity decision.

Given that identity reveals itself in digital as well as physical contexts, an additional consideration in determining what identity means today is the impact of modern technology. Technology influences how we present ourselves and how others identify us. The importance of identification grew as electronic technologies replaced paper documents, generating personal data for storage and automatic processing into usable information. Copying, searching, storing and sharing personal details takes even less time and expense since the arrival of the Internet and 'datification' (the ability to quantify all sorts of information into machine-readable data format).³

Therefore, the notion of identity is multi-faceted and evokes complex arrays of sub-themes. It distinguishes one individual from another, while also connoting qualities of sameness over time. Identity is a sum of different attributes by which we, and others, recognise our individuality and shared commonalities within sets of people. Furthermore, it combines multi-disciplinary perspectives of psychology, physiology and philosophy, amongst others academic areas. While theories of identity from different disciplines persevere, technological developments, in hand with economic and societal changes, affect modern identity perceptions, its construction and presentation.

The purpose of this paper is to explore the changing nature of identity online and reflect upon some current issues of misuse giving rise to challenges worldwide of a legal and policy nature. This work is a component of an interdisciplinary project called 'SuperIdentity', which seeks to develop a model for evaluating and investigating elements of identity across both online and offline spaces, together with the direct and indirect linkages between them.⁴

The analysis develops in stages. The next section reflects upon the distributed nature of digital identity. Sections three and four explore identity misuse in its multiple forms, including the rising challenges posed by big data and profiling (where vast amounts of data are analysed extensively using

² Based on the locus of interests of the authors, this paper provides examples primarily from European law and regulation, in particular from the UK. However, it is hoped that the reader will appreciate that there are important commonalities to the challenges faced by countries all around the globe that allow generalisation to a certain degree on these issues. For an international perspective, we recommend Sullivan, C. (2010). *Digital Identity, an Emergent Legal Concept: The Role and Legal Nature of Digital Identity in Commercial Transactions*. Adelaide, Australia: University of Adelaide Press.

³ Cukier, K., & Mayer-Schoenberger, V. (2013) *Big Data. A Revolution That Will Transform How We Live, Work, and Think*. London, UK: John Murray, p. 15.

⁴ The Engineering and Physical Science Research Council (EPSRC) funds the SuperIdentity project under grant number EP/J004995/1. See 'SID: An Exploration of Super-Identity'. Retrieved 16 July 2014 from <http://gow.epsrc.ac.uk/NGBOViewGrant.aspx?GrantRef=EP/J004995/1>. See also the Website of the SuperIdentity Project. University of Southampton. Retrieved 21 September 2013 from <http://www.southampton.ac.uk/superidentity/>.

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