Digital distortions arising when encoding regulation

The advent of digital technology revolutionised practices in a wide range of sectors, including the legal field. In recent years, some legal experts have been exploring the possibility of converting laws and regulations into computer code. These efforts aimed at encoding law and regulation are broadly referred to as digital regulation initiatives.

Digital regulation could pave the way for the development of regulatory technology (RegTech), artificial intelligence (AI) systems, and other digital tools that can inform citizens, make legal predictions, and guide legal decision-making. However, accurately converting complex regulation into computer code is far from an easy endeavour and some legal experts have expressed their concerns, suggesting that digital regulation initiatives could lead to coded misinterpretations of the law.

Professor Anna Huggins, Dr Alice Witt, Professor Mark Burdon, and their team at the School of Law at Queensland University of Technology, Australia are exploring opportunities and challenges associated with digitising regulation. Their research features.com

The conversion of law and regulation into computer code, also referred to as digital regulation, has become increasingly widespread. Professor Anna Huggins, Dr Alice Witt, Professor Mark Burdon, and their team at the School of Law at Queensland University of Technology, Australia are exploring opportunities and challenges associated with digitising regulation.

In their most recent paper, they identify and analyse misalignments between regulation and how it is encoded arising from subjective interpretations, using legal cartography concepts.

Digital distortions are challenges that can arise when digitising non-legislative regulation. The research team aimed to fill this gap in literature by exploring the opportunities and challenges associated with the digitisation of law and other types of regulation. Their most recent paper (Huggins, A, et al, 2024) explores how regulation might be distorted by coder interpretative choices when it is converted into computer code.

The researchers argue that the digitisation of regulation influenced digital distortions arising when encoding regulation the opportunities and challenges associated with the digitisation of law and other types of regulation. Their most recent paper (Huggins, A, et al, 2024) explores how regulation might be distorted by coder interpretative choices when it is converted into computer code.

**Strategies to reliably encode legislation**

In a paper published in 2022, Huggins, Witt, and Burdon set out to analyse some of the challenges associated with encoding law and regulation, informed by an analytical approach introduced by Professor Roger Brownsword. Their study emphasised the need to adopt a holistic regulatory mindset when digitising regulation, keeping fundamental constitutional values in mind.

In the same year, the researchers also introduced a methodology incorporating statutory interpretation principles that could guide digital regulation efforts, which can be applied across a wide range of contexts and jurisdictions. As part of their study, the team asked three legally trained participants to interpret parts of the Australian Copyright Act 1968 (Cth). Interestingly, they found that the coders interpreted some provisions of the legislation differently and therefore produced different encoded versions of the same statutory text. These difficulties, resulting from ambiguities in how sentences are phrased and the complex links between different parts of regulatory texts, highlight how interpretive ambiguities can influence digital regulation efforts.

**Digital distortions in the encoding of regulation**

Recent digital regulation studies have primarily investigated the extent to which legislative rules translated into computer code are aligned with constitutional values, including the ‘rule of law’.

Recent digital regulation efforts have primarily investigated the extent to which legislative rules translated into computer code align with constitutional values, including the ‘rule of law’. The ‘rule of law’ is a contested legal ideal that, in Western democratic societies, requires every citizen to be subject to the same laws.

Digital regulation initiatives, however, often reach beyond legislation, setting out to convert other rules and norms that are open to interpretation, such as regulatory guidelines, directives, policies, professional standards, or codes of conduct. In their most recent paper, the research team aimed to fill this gap in literature by exploring the challenges that can arise when digitising non-legislative regulation.

The team utilised legal cartography concepts to identify and analyse misalignments between regulation and how it is encoded arising from subjective interpretations, using legal cartography concepts.

**Framing the distortions using cartography**

The researchers argue that the digitisation of regulation influenced
by coders’ interpretative choices can be better identified using concepts rooted in cartography (i.e., the science of map drawing). The cartographic concepts that the team considered in the context of digitising regulation include scale, projection, simplification, and orientation. These are all elements of de Sousa Santos’ “symbolic cartography of law,” a theory that uses mapping concepts to outline how the law can be misread and misinterpreted.

In this context, scale consists of the regulatory instruments, bodies, and instructions considered when encoding a regulation and general rules. Projection, on the other hand, entails the unavoidable conflict between the logic rules that underpin computational processes and the interpretive logic associated with regulatory practices.

The concept of symbolisation highlights the ways in which specific coding languages could emphasise or prioritise some features of regulation over others. Finally, orientation underscores that the final encoded version of regulation is likely to reflect the purpose for which it is designed, the needs of a computational tool’s end users, and the normative stances of those who coded it.

A simple demonstration and new insight to guide digital regulation efforts
To demonstrate how the distortions outlined in their paper can arise, the team tried to convert the ePayments Code, an Australian voluntary code of conduct that applies to consumer electronic payment transactions (e.g., ATM or EFTPOS) into computer code. They found that their efforts to digitalise the ePayments Code were greatly influenced by various interpretative choices.

For instance, the team found that the encoded version of the ePayments Code they created was primarily effective for the purpose they originally intended— to inform consumers. To be deployed in other settings or for alternative purposes, it would need to be adapted to emphasise different features of the ePayments code of conduct.

Overall, their study stresses the importance of raising awareness about the interpretations and subjective choices that can influence digital regulation endeavours. The researchers showed that various subtle interpretative choices could ultimately produce different versions of code, which could be more or less effective in tackling legal problems using technology.

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