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Reassembling the legal: the wonders of modern science in court-related proceedings

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Abstract

The article analyses the ways in which technology and law disperse, channel and reassemble agency in ICT-enabled legal proceedings. It works from case studies of online civil claims in England and Italy, and the automatically issued speed camera fine process in Australia. Information and communication technologies affect legal procedures in three dimensions: legitimacy, efficacy and performativity. The law can legitimate ensembles of technological and performative procedures, but it cannot construct them by regulation. Technology is a distinct regulative regime that opens some channels of communication while closing others. Machines and software codes identify and admit participants and direct human activity. The focus on the performative explores the requirements of sense-making, by which participants recognise the context and the legal consequences of ICT-enabled procedures. The interfaces of law and technology rely on the interpretive context in which messages are understood as well as the legal forms in which they are transmitted. Each of these elements is essential to the circulation of agency between people and things that reassembles and constitutes legal and social relationships.

Keywords

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REASSEMBLING THE LEGAL

'The Wonders of Modern Science' in Court-Related Proceedings

*Richard Mohr and Francesco Contini**

The article analyses the ways in which technology and law disperse, channel and reassemble agency in ICT-enabled legal proceedings. It works from case studies of online civil claims in England and Italy, and the automatically issued speed camera fine process in Australia. Information and communication technologies affect legal procedures in three dimensions: legitimacy, efficacy and performativity. The law can legitimate ensembles of technological and performative procedures, but it cannot construct them by regulation. Technology is a distinct regulative regime that opens some channels of communication while closing others. Machines and software codes identify and admit participants and direct human activity. The focus on the performative explores the requirements of sense-making, by which participants recognise the context and the legal consequences of ICT-enabled procedures. The interfaces of law and technology rely on the interpretive context in which messages are understood as well as the legal forms in which they are transmitted. Each of these elements is essential to the circulation of agency between people and things that reassembles and constitutes legal and social relationships.

Focus: Technology and the Performance of Law

Law, Technology and Courts

Law has always worked with technology, even if it was not called by that name. If we think of technology as those things that people use to achieve a desired effect,¹ then the technology of law has encompassed documents,

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¹ Latour (2005) considers this and other relations between people and technology in his *Reassembling the Social*, to which our title alludes. Our subtitle quotes Justice Hayne from the transcript of video linked proceedings before the High Court in an urgent hearing

signatures and files.² The courtroom is a technology of the law, providing a place for the parties and the judge to come together and communicate, for witnesses to be sworn and to give evidence, and for judges to pronounce binding decisions. The bench, with its raised position, facilitates the judge's surveillance and control of the court, as well as framing (below the insignia of a coat of arms or other symbol of authority) the legal pronouncement of a sentence or interlocutory orders.³ This well-known ensemble of people in specific roles, and things that set the scene of their roles and record the statements they make, has accompanied and developed with the law over many centuries.⁴ Some of the interactions between the law, people and things have been written into procedural law and court rules while others, gradually established by convention and habitus, remain unwritten.

Over the past 20 years, information and communication technology (ICT) has burst into this peaceful scene. The dominant role of oral communication and paper records has increasingly been supplemented, usurped or duplicated by computerised functions. This process has usually been promoted by enthusiastic bureaucrats, and implemented by software companies and hardware sales reps, while often being resisted by reluctant judges. Visions of 'courts of the future' and 'paperless courts' have been held up as a utopia for technology and law to enter, hand in hand.⁵ Borrowing terms from ICT, these courts would be user-friendly, open 24/7, with data entered and available in real time. The new bureaucratic specialisations of quality assurance and new public management announced that these science fiction courts would be efficient, accessible and timely.⁶

Even if the courts still use paper, and the future is yet to come, a growing number of tasks previously accomplished by humans working with paper have been delegated to or inscribed onto machines. One of the outcomes is that 'judicial and legal procedures, together with the agencies that come with them, are inscribed, although not entirely, into technical procedures and objects'.⁷ The effort has not been just technological but also legal and regulatory, since the placement of technologies into highly regulated court environments has required new sets of formal rules. Indeed,

of an application to prevent the deportation of asylum seekers from Australia to Malaysia, in which the Commonwealth Solicitor-General, in Canberra, was delayed in sending a crucial affidavit to the plaintiffs in Melbourne. When it was received by counsel in Melbourne, 'electronically, unsworn, and no exhibits', Justice Hayne responded, with irony: 'The wonders of modern science. What are we going to do, Mr Solicitor?' See *Shah & Ors v Minister for Immigration and Citizenship & Anor* [2011] HCA Transcript 196 (8 August 2011), www.austlii.edu.au/au/other/HCATrans/2011/196.html.

² Vismann (2008).

³ Mohr (2000).

⁴ Garapon (1995); Jacob (1995–96).

⁵ Abdulaziz and Druke (2003); Nicholson (2002).

⁶ Contini and Mohr (2007); Contini and Mohr (2008).

⁷ Lanzara (2009), p 13.

court technology too must be regulated, regularised or legitimised to allow its operations within the legal domain of the courts.

The rapid introduction of ICT, the degree of formality of its software codes, and its relative distance from the courts (through out-sourcing and other forms of public-private partnerships) have all highlighted the degree of competition and potential conflict between the laws of technology and the technology of law. In our contribution to the themes of this issue, we consider the interactions between the legal frameworks that regulate the technologies used by the courts and the codes that specify how the technology is to be operated. As will be seen, this interaction is unstable and liable to lead to unanticipated consequences.

We begin, in the following two sub-sections, by introducing the key concepts of our inquiry: regulation and performativity. First we consider the different ways in which law and technology regulate human agency. Then we identify certain essential functions that must be performed in constituting and implementing a legal order. This study focuses on the identification of parties and on the legal, public and lasting changes of status required in court-related proceedings.

Having established the conceptual tools of our analysis, we introduce three case studies. Two involve money claims, where parties establish whether they owe or are owed money. The third involves traffic infringements, where cameras have identified a speeding vehicle, and the responsible driver must then be brought to justice. The case studies involve various technological processes, and range across the jurisdictions of England and Wales, Italy and of certain Australian states and territories.

In the third and final part of the article, we draw a number of conclusions about the relations between law, technology and the people who use them. None of these elements works in isolation. Instead, we understand them as shifting assemblages that bring together rules, objects and actors to carry out particular functions. This perspective clarifies the roles of law as a legitimating device, of technology as enabling functions and of people as actors who need to know the implications and consequences of their performances. Our conclusions address both principles and practices.

Regulation of Technology and Technology as Regulative Regime

Technology entered into the courts and into the public sector also with the aim of reducing bureaucratisation.⁸ The effect, however, has been quite different. Technology brings into play a new, thick layer of regulations,⁹ which may be clearly seen in the fields we are considering. Technical norms proliferate in order to specify how technological artefacts must (or are supposed to) operate. They are particularly visible from a system development perspective, since at this level rules (and behaviours) have to be inscribed into the machine. Technology regulation can be considered as 'a

⁸ Cordella and Willcocks (2009); Velicogna (2008).

⁹ Lessig (2007).

particular mode of institutionalisation' through which norms are inscribed 'onto tangible technical installations and apparatus'.¹⁰ In this way, action is directly delegated to the machines that do (or that automate) what humans were doing. Just as procedural norms are part of the institutional structure of any judicial system, 'technical norms are the institutional structure of machinery'.¹¹

In the courts landscape, we can observe rules prescribing which technology can be used to perform specific functions (such as proof of identity); norms indicating the technical features of the technology (such as the protocols to be used to secure data interchanges); norms indicating machine behaviour ('the printer must use A4 pages', 'data are exchanged through an HTTPS protocol')¹² and also norms indicating how one must behave *vis-à-vis* a machine (such as to log in before being enabled to do a particular operation). The first obvious consequence is that instead of reducing bureaucracy and regulation, the massive deployment of ICT often requires a massive deployment of regulation.

From another angle, the machine (technically regulated) guides or even dictates human behaviour, as with speed bumps regulating traffic¹³ or web-based home banking or e-justice procedures. Some technological applications are self-enforcing, since if humans do not entirely and precisely follow the instructions provided by the system, the whole procedure is stopped or, as in the case of speed bumps, undesirable consequences follow. Technology therefore has its own 'normativity' – that is, the capacity to 'actually constrain human actions, inviting or enforcing, inhibiting or prohibiting types of behaviour'.¹⁴ It can direct human behaviour by means of an 'invisible hand', often made of software codes, in a much more compelling manner than can traditional regulation.¹⁵

The power of technology to regulate such a range of activities has led Kallinikos to argue that technology may be seen as 'a major *regulative regime*', which he defines as:

a technical, social and institutional system of forces that shape human agency both in the direct way of embodying functionalities that engrave particular courses of action and in the rather unobtrusive fashion of shaping perceptions and preferences, forming skills and professional rules.¹⁶

¹⁰ Czarniawska and Joerges (1998), p 372.

¹¹ Czarniawska and Joerges (1998), p 378.

¹² Each of these regulations is linked to other regulations and standards developed in various technological sectors, such as the A4 page (International Standard ISO 216) or the https protocol (combining http and ssl technical standards).

¹³ Latour (1999), p 186.

¹⁴ Hildebrandt (2008), p 5.

¹⁵ Lessig (2007).

¹⁶ Kallinikos (2009a), p 70.

From this perspective, formal laws (including procedural codes) and technology (together with its own codes and regulating impulses) constitute different regulative regimes. Both engage 'normativity', but they constitute distinct modes of regulation, and operate in different ways.¹⁷

Technology is outcome oriented: it works – which is to say that it produces the expected outcomes – or it does not work.¹⁸ It is judged teleologically. A given e-filing application is good from a technological point of view if it allows users to send online files to the court. But the effective electronic delivery of such files may not be sufficient to constitute a valid filing of the case from a legal perspective. Formal regulations are judged deontologically: they separate the legal from the illegal. What works from a technological perspective is not necessarily legal. A case may be filed via an online system approved by the court and not by other means; identity may be ascertained online by using a given technology (such as a security protocol), but not using any other, and so on. In many courts, it is not possible to file a case by using regular email. Legal changes can outlaw technology even though it may have been used effectively for some time. When a new privacy law entered into force in Italy in 2003, the courts' web services providing case-related information, including names of individuals and companies involved, suddenly became illegal.¹⁹ Therefore, even when the information provided by such web services was in high demand, they were nonetheless shut down.²⁰ At the same time there are many technologies that are legal, since some authority endorsed their use, but are failures from a technological point of view, since they do not produce the expected outcomes – or, simply speaking, do not work.²¹ Any legal process, whatever technologies it uses, must be judged both teleologically, for its effect, and deontologically, for its legitimacy. Kelsen said as much.²² In the following section, and in conclusion, we draw on linguistic and semiotic approaches to examine the nexus between the technical and legal systems and their operation in a social and institutional context.

Performing the Legal

The following case studies have been selected for the light they can cast on the interaction of intersecting regulative regimes. We analyse the entanglements between technology and formal rules in the operations of online civil claims and automatically generated traffic infringements. Our focus is narrowed further in terms of the *functions* of courts and related legal processes. Courts resolve disputes, provide a forum for testing legal issues of public interest, pronounce decisions favouring one party or another, and

¹⁷ Hildebrandt (2008).

¹⁸ Weick (1990), pp 3–5.

¹⁹ DL n. 196/2003.

²⁰ Velicogna and Ng (2006).

²¹ Fabri (2008).

²² Kelsen (1967), pp 211–12.

determine penalties – all of which must be verified and recorded. To maintain a clear direction for this research, we must clarify *which of these myriad functions are to be analysed*. Even in the relatively simple transactions that we have chosen, the law and the technology interact in carrying out numerous functions: inputting data, generating process, communicating with respondents, identifying parties, recording and communicating judgments or outcomes, acknowledging receipt, and so on. Any of these processes could be studied using various methods: user surveys, phenomenological studies or minute descriptions of procedure and computer functions. Here we turn to aspects of linguistic theory for help.

Law iterates and reiterates a legal order.²³ The legal order may be seen as a key guarantee of the social order, and indeed unless law is to be a formalistic end in itself, it must serve such broader social ends. A key element of law's iteration of the legal order is to manage and record the status of people, including the legal obligations between them and their relationships to certain material assets.²⁴ Law does not only *record*, but also *confers* changes of status. One cannot make a transition from single to married, from free to detained, from debtor to bankrupt, unless the proper legal forms are followed.²⁵

Legal processes and the utterances that constitute them are made up of performatives, intended to institute specific changes to the social order and to re-establish relations between citizens within a legal order. All courts and other binding legal procedures must have the capacity to pronounce these decisions in a legitimate and effective way. Even before arriving at the final decision, law and the courts deal with performative utterances in numerous ways. These include undertakings made by the parties, either in court proceedings or in antecedent contractual or administrative arrangements, statements made under oath, and the oath itself.²⁶

These performative utterances are essential to the operation of law, and they must be carried out in new, electronic forms as well as in the traditional legal setting. So the focus of our analysis is on the forms and conditions of successful performatives found in our case studies, for comparison with the baseline conditions found in the face-to-face and paper-based forms found in traditional courts.

Successful performatives underlie each of the many functions of courts and their electronic counterparts. For the purposes of this study, we limit our focus to specific crucial moments, or functions, which are fundamental to any proceedings: *identifying* the parties and *recording* their statements and

²³ Butler (1997), pp 33–40.

²⁴ As seen in more detail below, legal pronouncements underpin “the force of law” that supports human societies, [through] linguistic enunciations that stably obligate living beings’: Agamben (2011), p 70.

²⁵ Austin (1980); Benveniste (1966), p 269.

²⁶ The expression ‘oath’ here covers both the religious form of swearing by God, and the secular form, generally called the ‘affirmation’ in Australia. The legal effect is equivalent. Statements made under oath are admitted to the legal realm.

legally relevant acts, including outcomes leading to changes of legal status. We consider these functions before returning to a more detailed discussion of our approach to the performative mechanisms by which they are achieved.

The proper identification of parties and any related actors is crucial to the performative work of the law.²⁷ Latour found the identification of the *énonciateur*, the author of the statement, to be central to the operations of the senior French administrative court, the *Conseil d'état*. 'The whole of law can be grasped as an obsessional effort to make the enunciation assignable (*rendre l'énonciation assignable*).' The parties must be known, the author of the statement acknowledged. Latour identified 'the signature, the archive, the text, the file' as 'the perilous tracks' by which the law seeks to reattach the statements to their speakers (*'les énoncés à leurs énonciateurs'*).²⁸

We are not dealing with a court as lofty as the *Conseil d'état*, but with prosaic mechanisms for claiming money and issuing speeding fines. Yet the same 'obsessional efforts' must be made: the parties must be identified; their statements must be assignable; their oath must be binding. They must be recognised for who they are, what they have said and what their obligations are. The tracks must be preserved so there is a record for future reference and for publicity.

Identification in legal proceedings is usually achieved by performative, not descriptive means. A descriptive statement is judged by its veracity – that is, its correspondence with some independent state of affairs – so that it is an accurate representation. Courts and other legal processes normally spend little effort in empirically discovering the identity of a party. In most proceedings, it is enough that I sign my name (perhaps before a witness or a justice of the peace), or swear my name and address under oath. I declare my identity and I am recognised. Forensic proceedings may seek to identify bodies unable to swear or suspects unwilling to admit their identity, but these are of little relevance in the proceedings considered here (or even in the *Conseil d'état*). In most legal proceedings, we are identified by our oath or signature: performative events that are definitive in the legal world, *creating or instituting* a state of affairs by being uttered.

Successful performatives, including both the undertakings of parties and the decisions of the court, rely on written and oral language. Austin's theory of the performative showed that language did not simply communicate information, but effected transitions in social relations.²⁹ These can only be instituted by invoking the power of the performative, which relies on certain conditions for this efficacy. These include:

²⁷ Recognising the parties for who they are is not simply a formal legal requirement, but goes to the heart of political and moral life. Honneth (1995) and Ricoeur (2004) have placed the relationship of recognition at the very foundation of the polity and of social life respectively. Here we focus simply on its role in legal proceedings.

²⁸ Latour (2002), pp 295, 297.

²⁹ Austin (1980).

- a reference to memory or records, so that the performative is on the public record (orally, in writing, or by means of some material marker)³⁰
- a unique yet repeatable formula, which relies on both words and context.³¹

The context includes the material setting of the utterance as well as the institutional context within which it is performed. The material setting may include certain actions that must accompany the words or particular architectures within which it is set.³² The broader institutional context involves the legal and cultural actions that authorise the setting and the various actors within it. The introduction of ICT into courts changes both the material and institutional settings of judicial proceedings.

Once the entire context – social, spatial and temporal – is admitted to the proactive landscape of the affirmation of the social (and not just legal) order, then new actors are recognised: not just the judge, but all the interlocutors; not just the bench, but all the furniture, equipment and architecture that frames and authorises the enunciation; not just the signature, but the bodily gesture that enacts it, and the context in which the commitment is made.

In summary, our study examines the role of performative utterances in identification and status change to bind the *telos* of technology to the *deon* of law. Legal discourse has consequences. To make admissions, to accept responsibility, to blame or to deny culpability are all means by which we and our actions are recognised. There must be records of those transactions (now rarely oral, usually written, increasingly digital) if their effects are to be lasting and not simply ephemeral. The law courts have long managed those processes of performance, enunciation and recording. As we come to recognise the fuller social context of the courts and related procedures, it is no longer possible to isolate their discourse within the exclusive ‘system’ of law and legal formalism. The collective assemblages³³ that confer authority and recognition include the various files, databases and communication channels through which the parties interact and in which their statements – including oaths, commitments, admissions and denials – are recorded.

A number of questions flow from this focus. How is performative efficacy maintained in, or changed by, a radically different physical and informational architecture? How do the components of oath, identity and recording respond to the different technological environments? How are gestures, words, signatures and evidence reassembled by digital technologies outside the rigid traditional setting of the courtroom?

³⁰ Vismann (2008).

³¹ Foucault (2002), p 31; Derrida (1988), p 18.

³² Austin (1980), p 8.

³³ Giovan Francesco Lanzara has helpfully pointed out, in commenting on earlier versions of this work, that ‘assemblage’ in this context is more closely related to the French ‘*agencement*’, a richer and more precise term that refers to the social circulation of agency, in space and time, through persons and objects, than the French ‘*assemblage*’.

Identification and Status Change in Three ICT-Enabled Legal Processes

Approach to the Research

While keeping the conventional courtroom and associated judicial proceedings as the baseline point of reference, we will extend our discussion with three diverse examples illustrating different approaches using ICT to enable identification and management of changes of status: Money Claim Online, handling small claims in England and Wales, Civil Trial Online (*Processo Civile Telematico*), an ambitious project developed by the Italian Ministry of Justice to digitise the entire civil procedure, and the ubiquitous speed cameras associated with automatic infringement notices, specifically those used in certain Australian jurisdictions. Such diverse sources can offer a robust field within which to examine the role of different technologies, the interplay between law and technology, and how the new technology-mediated context affects performative utterances.

There are strict limitations on who may be admitted to judicial or other legal proceedings. One must have standing, a recognised role in the process. In the simple matters we are considering – small claims and speeding fines – this involves no great legal disputes, but it must begin with the identification of the parties. This must be ascertained in a formally appropriate manner. In conventional legal practices, identity is ascertained with a set of well-established practices endorsed by formal regulations, such as a signature on a document, or certain statements under oath.

The question of online legal identity, on the other hand, is still problematic. Indeed, while many technologies can provide more or less robust technical solutions, such solutions are not necessarily acceptable from a legal point of view. Electronic identity cards are not widely used. Simple systems based on user names and passwords, accepted in so many areas of online transactions, are not accepted by either of the money claim systems we consider (though one is much simpler than the other). The question of digital identity remains a quintessential case of the difficult mediations between technology and the law. Speed cameras, and the procedures they use to fine those who have exceeded the speed limits, involve different issues of identification. These are both technological (whether the picture is clear enough to read the licence plate) and legal (how to identify the driver).

Identification is just the first step to performing changes of status. Indeed, any institution charged with legal changes of status must go through a number of necessary steps, while the detail varies between the instances we are considering. Once the parties have been identified and admitted into the proceedings, the institution needs to *gather information* on claims, liability and any areas of agreement or disagreement between the parties. Since the institution does not carry out its own fact-finding (beyond verifying that the parties are who they say they are), this information must be *provided by the parties*. Once the information is coded, as noted above, into a form that is able to be stored and utilised by the institution, it forms the basis of a decision-making process that follows rules to reach a public

pronouncement. That is to be announced in a prescribed form so that all interested parties are aware of it, while *being recorded* in a permanent form for future legal reference to the party's status or obligations. This section discusses each of these issues for the three cases we are considering.

Money Claim Online (England and Wales)

Money Claim Online (MCOL) is a web-based service for issuing money claims and resolving fixed money disputes introduced by the Department of Constitutional Affairs (DCA) of England and Wales since 2002. Following the findings and criticisms of Lord Woolf's report on civil justice,³⁴ the goal was to improve access to justice by opening new 'modern' channels for dispute-resolution and reducing the cost of money claims.³⁵ The system was rapidly developed and deployed, taking advantage of pre-existing technological components, to the extent that it became the largest 'English court' in terms of number of users and cases handled. One of the reasons for its great success is the way in which it has solved the question of users' identification. During the development of MCOL, the first idea was to identify users through the 'Government Gateway', a common point of entry to e-government services. But since the Gateway was not yet fully functional,³⁶ the DCA preferred to use a ready-made component provided by a private company, integrated with a payment system engine based on credit and debit cards.³⁷

To enrol into MCOL, the plaintiff has to provide personal data and specify a customer ID and input a password into the MCOL website (developed and run by a private company). Once logged into MCOL, the 'customer' can file a new case. This is done by filling out some web forms made available by the system to provide a description of the claim and to state the sum of money owed. At the end of this procedure, plaintiffs first write their name to sign the 'statement of truth', and then pay the court fees with their own debit or credit card. The name provided during the customer enrolment and used to sign the statement of truth must correspond to the name of the owner of the card used to pay the court fee. The analogy between this procedure and those commonly used in e-commerce is apparent. The citizen's identity is established digitally as their 'customer ID', and the typing of one's name substitutes for the handwritten signature. The claim is then processed by a centralised unit (County Court Bulk Centre under the supervision of the Northampton County Court) and sent electronically to a printing and posting facility (also provided by a private company). This unit prints the claim, prepares the 'claim pack' and sends it to the defendant by regular mail. The defendant, having received the claim

³⁴ Woolf (1996).

³⁵ Timms et al (2003).

³⁶ MCOL switched to the Government Gateway in 2010, eight years after the launch of the system.

³⁷ Kallinikos (2009b).

pack, may choose from several possible responses: ignore it, pay the amount claimed, acknowledge the service, make an admission (partial or full) or file a counter-claim. The defendant's replies can be managed online using MCOL, since the user name and password of the defendant are generated by the system and printed on the front of the claim form. But the defendant can also use the paper forms (provided with the claim pack) and send them to the Bulk Centre through the post.³⁸ In this latter case, MCOL staff enter the data into the system. Therefore the procedure selected by the defendant can be either online or offline. The Bulk Centre processes the reply that is then sent to the plaintiff. The procedure varies, depending on the type of reply made by the defendant. It can be handled by the MCOL system up to the judgment order or warrant of execution, except in case of a defence or counter-claim. In that case, it is sent directly to the court with the proper territorial jurisdiction, since a disputed claim requires the intervention of a judge.

The approach of the DCA has been designed to increase users' access to justice by taking advantage of technologies already deployed by the courts (like the Bulk Centre systems) and those familiar to potential users (like debit and credit card payment). This allowed the use of the same standard components already adopted for e-commerce to allow identification, and hence access to MCOL, to all English and Welsh 'consumers' owning a credit or debit card.

Once the system had been developed and tested, the DCA mandated the legality of filing and handling a well-defined set of civil suits. This was done through Practice Direction 7E which regulates the terms of use and the procedure to be followed when using the system, but not its technical features. Article 1.1 states that:

This practice direction provides for a scheme in which, in the circumstances set out in this practice direction, a request for a claim form to be issued and other specified documents may be filed electronically. ('Money Claim Online')

Article 1.2 simply enables claimants 'to start certain types of County Court claims by requesting the issue of a claim form electronically via Her Majesty's Courts Service website' without even specifying the basic features of that site. Finally, Article 10 states that: 'Any provision of the Civil procedure rules which requires a document to be signed by any person is satisfied by that person entering their name on an online form.' This reduces to a minimum the functional and technical requirements of the signature.

Trial Online (Italy)

Trial Online (TOL) is an ambitious project launched in 2000 by the Italian Ministry of Justice to fully digitise all civil proceedings and achieve a

³⁸ If the defendant ignores the claim, a judgment by default will be issued by the Court of Northampton.

paperless court.³⁹ The development of TOL was driven first by formal rules, approved several years before the first running applications.⁴⁰

Italian rules determined that the digital signature, based on EU regulation, was the only technology capable of properly identifying users and signing documents, and ensuring security and non-repudiation of communications. The Ministry of Justice, acting as rule maker and system developer, mandated a public key infrastructure (PKI) and digital signature for all procedures requiring identification and signature. These means were assumed to be the keys to reaching a paperless utopia that would bring with it huge increases in timeliness, efficiency and effectiveness of judicial proceedings. Less demanding technological solutions, such as those adopted for MCOL or in other e-justice applications, were not considered to be sufficient to meet the legal requirements of security, confidentiality and non-repudiation.⁴¹ This led to the need to develop a large number of hardware and software components from scratch for both courts and lawyers. As a consequence, the development phase was long and expensive. It was only after six years, at the end of 2006, that the court of Milan became the first in Italy to begin using the system, and then only for money claims and not for any other procedures.

As distinct from MCOL, *pro se* litigation is generally not admitted in the Italian case, therefore only lawyers can file a case in court.⁴² For Italian lawyers to file a case electronically, they must first buy a smart card with digital signature usually provided by their local lawyers' association. Only then may they connect to the systems of the Ministry of Justice and of the courts. To file a money claim, the plaintiff lawyer must scan the mandate of the client, any evidence (such as contracts and invoices) and the proof that the court fee has been paid at a post office. Then the lawyer must draft the petition using a specific software application developed by private companies. The application requires data to be entered in structured forms, to create a standardised digital document. Everything is signed with the lawyer's digital signature, and attached together inside a digital envelope. Only at this stage can the lawyer, using the smart card, connect to the access point provided by the lawyers' association, and send the application and attachments to the court system via the central system of the Ministry of Justice.⁴³ Having received this digital package, the court registry prints the plaintiff's application to create a paper case file for the archive. At the same time, the judge, using ad hoc software, analyses the case, prepares and

³⁹ Carnevali (2010), p 124.

⁴⁰ Law no. 59 of 1997 established the legal value of digital documents and digital signature based on PKI standard (L n 59/1997), and the Presidential Decree no 123 of 2001 endorsed Trial Online based on that law (DPR n 123/2001).

⁴¹ Fabri (2009).

⁴² The only exception to this rule is for cases up to 500 Euros dealt with by a Justice of the Peace.

⁴³ Ministero della Giustizia, 'Processo Civile Telematico', www.processotelematico.giustizia.it.

digitally signs the order, and sends it to the registry of the court. The registry prints the order, which is then placed in the case file and made available to the plaintiff, who may check the order and go to the court to get a paper copy of it. At this stage, the plaintiff's lawyer can serve the order on the defendant using the services provided by the bailiffs' office. The defendant, having received the money claim, can pay the sum or appoint a defence lawyer. Any defence is filed in the traditional paper-based way.

As noted, TOL was developed starting from formal rules. In contrast to MCOL, the Italian authorities attempted to regulate the technical features of the software and hardware application with 'technical rules'. After the publication of the framework regulation,⁴⁴ the Ministry of Justice had to approve an incredible number of technical regulations defining, from a legal perspective, every single detail of the technological components. The system development had to follow the specification of the formal regulation enacted to clarify the features of the applications, how the technology was to operate, and how users were to act *vis-à-vis* the technological applications.⁴⁵

It took almost three years just to draft and enact the regulations required to develop the systems of the Ministry of Justice and of the courts.⁴⁶ Then it was necessary to draft technical regulations for the applications to be developed by the lawyers' associations, since nothing had yet been developed in this second area (also due to the lack of technical specification). Digital signature was the EU legal standard, and represented the best possible option from a legal point of view. The attempt at regulating *ex ante* the technological apparatus was a way to reaffirm the full control of the legislator, of the Ministry of Justice and of the judges over the technical features of the tools. But what was simple and rational from a purely legal perspective has been almost impossible to develop from a technological perspective.

Speed Cameras (Australia)

In Australian jurisdictions, cameras photograph the registration plates of vehicles exceeding the speed limit and going through red lights. We deal here with 'speed cameras', which are intended to reduce road accidents by discouraging drivers from speeding. The rationale for and locations of speed cameras are controversial, being widely regarded as revenue-raising devices rather than road safety measures.⁴⁷

Speed cameras consist of movement-detection devices embedded in the road surface, linked to speed measurement technology and cameras that photograph the registration number plate of any vehicle exceeding the speed

⁴⁴ D.P.R. n. 123/2001.

⁴⁵ Fabri (2009), p 130.

⁴⁶ Decree of the Ministry of Justice n. 264 of 2000, Ministerial decree of 27 March 2000 (D.M. n. 264/2000), followed by other regulations.

⁴⁷ Auditor-General (NSW) (2011).

limit in the location of the movement sensor.⁴⁸ The images are stored electronically on a 'Write Once Read Many' (WORM) disk and a security indicator is produced simultaneously, which records any attempt to alter the image or associated data. Each electronic transfer of the image and associated data (such as time, date and location) is encrypted. The person named on the penalty notice may view the image online or purchase a copy of it. Those images are 'office copies' only, and cannot be relied on as evidence, while the original images may be tendered in any court proceedings together with expert evidentiary certificates.⁴⁹

The image captured at the time of the offence shows the vehicle and its registration number, while authorities point out that it does not record a photo of the driver. The number is linked to the state's record of registered vehicles and their owners. A notice is sent to the registered owner at their postal address giving the place, time and date of the recording of the offence and the speed recorded. The registered number of the vehicle is given, together with the penalty payable and the demerit points incurred.⁵⁰ This notice has the appearance and (up to a point) the function of an invoice or bill requiring money to be paid.

The owner must respond within 28 days by doing one of five things: pay the penalty, request more time to pay, dispute liability (or ask for an extension of time to dispute liability) or complete a statutory declaration. These options are followed by five 'payment options', to which we return in the following section. Here we note that the camera has naturally identified a

⁴⁸ In the ACT, approved devices are listed in the *Road Transport (Safety and Traffic Management) Regulation 2000* (ACT), s 102, with approved testing authorities at s 103. In New South Wales, approved devices for measuring speed and recording images are defined as those devices approved by the Governor (for measuring speed) or other approval authority (in the case of cameras) and listed in the New South Wales *Government Gazette (Road Transport (Safety and Traffic Management) Act 1999* (NSW), ss 44-45). Devices are typically described in these regulations and Gazettes by brand and model – for example, 'Laser Technology Inc. LTI 20-20 Marksman' (*Road Transport (Safety and Traffic Management) Regulation 2000* (ACT), s 102). The use of delegated legislation enables the relevant government authorities to add new devices easily. In New South Wales, testing of the devices is to be carried out in accordance with Australian Standard AS 2898.1-2003, *Radar Speed Detection – Functional Requirements and Definitions* (*Road Transport (Safety and Traffic Management) Regulation 1999* (NSW), s 156).

⁴⁹ *Road Transport (Safety and Traffic Management) Regulation 2000* (ACT), s 103; NSW Roads and Traffic Authority, 'Speeding', www.rta.nsw.gov.au/roadsafety/speedandspeedcameras; State Debt Recovery Office, 'Camera Detected Speeding Offences', www.sdro.nsw.gov.au/lib/docs/forms/sfs_cdpn.pdf.

⁵⁰ The following data were obtained from original research inadvertently carried out by one of the authors between 12:02:12 pm on 13 July 2010 and 19 August 2010. The infringement was committed in the jurisdiction of the ACT, while the vehicle was registered in the state of New South Wales (to a person other than the driver). The driver was licensed in that state, and demerit points were transferred to that jurisdiction.

vehicle, but the notice is sent to a person. The fine print following the 'Complete a Statutory Declaration' option states:

(You must complete a declaration if you were not the driver at the time of the offence or the infringement notice is served on a corporation.) IMPORTANT – Do not send payment with declaration. A new infringement notice will be served on the driver of the vehicle.

The onus is thus on the owner to identify the driver.⁵¹ The statutory declaration form that is sent with the infringement notice requires the owner to state whether the vehicle was stolen, sold or driven by a 'known user', giving that person's name, address, date of birth and licence number. This elaborate exercise in identification of a *person*, after the technology has identified the *vehicle* using a camera and a database, relies on a different set of inputs and techniques: the memory of the owner, their relationship with and knowledge of the driver, and their honesty. Penalties for dishonesty are severe, as was seen in the celebrated case of the former judge Marcus Einfeld, who was sentenced to three years' imprisonment for falsely identifying a deceased person as the driver of his car in order to avoid a AU\$77 speeding fine.⁵²

Payment of the fine constitutes admission of the offence, so that once the payment is made, the identity or liability of the owner may no longer be disputed. This is the reason for the importance attached to not sending payment with a statutory declaration. The technology readily recognises the motor vehicle and its registration number. The need to identify a person and issue process to the offender is a mark of the law. Despite the fact that the notice looks much like any other bill, and the major impact of the infringement is the payment of a fine, this is not to be treated like any other debt incurred. It must not be paid (even by the driver) until the law has named and blamed them. The practical consequence is that the demerit points must be deducted from the record of the correct licensed driver. If the owner, or driver, pays the fine before the infringement is issued to the driver, then the owner incurs the loss of points. Compare the payment of motorway tolls: the vehicle incurs the cost, and the authority collecting the toll money cares only that the payment is received. Like an electricity bill, there is no issue about who pays. In the case of camera-detected offences, though, even though the motor vehicle is likewise the object by which the obligation is incurred, and the offender is identified and processed, the law insists that this process be slowed down, that the offender be called before the law.

Conclusions: Legalise, Reassemble, Signify

The three case studies exhibit many differences: they are taken from countries with different legal traditions and they have been developed to pursue different goals. But there are also some similarities that make for

⁵¹ *Road Transport (General) Act 1999* (ACT), s 42.

⁵² *Sydney Morning Herald* (2009).

useful comparisons. To conclude, we now draw out a number of principles and practical implications for reassembling the legal, technological and social in legal proceedings. These fall under four main headings:

- First, we consider the ways law and technology may work together in valid and effective identification of parties. This introduces general issues regarding the interaction between people, rules and things. Excessive legal regulation magnifies complexity, while simplicity needs to be complemented with adequate markers of the legality of the proceedings.
- Second, we see that interactions between law and technology need to be developed together. We point to the dangers of trying to design technology using legal rules. Law can legitimise processes, but it cannot construct machines. Law needs to comprehend new assemblages of actors and objects, rather than trying to regulate every tool or keystroke.
- Third, we point out that processes rarely stay on one technological track: instead, they switch between electronic, paper and oral modes of communication. Each of these domains regulates activities in its own way, through its own gatekeepers and agents. As the technology and the actors proliferate so too does complexity and risk.
- Finally, we step outside the close law–technology coupling to consider their broader social context. Diverse technologies, familiar from different aspects of daily life, come with various assumed meaning frameworks. Performativity relies on context both for its efficacy and its comprehension. We consider the difficulties that may arise when legal summonses look like bills, and oaths look like passwords.

Identity and Agency

It has been seen that the question of digital identity is one of the most complicated issues to be dealt with in the three case studies. Looking behind the very different flow of actions and procedures, and the specific technology involved in establishing identity, we see several similarities. All the systems of digital identification are based on common elements: a piece of hardware (TOL's smart card, MCOL's debit or credit card and the car number plate for the speed cameras), associated with some digital records. To allow digital identification, some paper-based procedure must be followed. A contract must be signed to buy a smart card; application forms lodged with a bank to issue a credit card; registration forms for a motor vehicle. In the three systems considered, a computerised system automatically cross-checks and couples some data embedded in the piece of hardware (the car registration number or some codes linked to the cards) with the data recorded in a data base (of the motor vehicle registry, the banks or the PKI), and some data provided by the subject to assist their identification.

In MCOL and TOL, the user provides the credit card numbers or the PKI password during the identification process. The case of speed cameras requires more steps. The system of penalty notices assumes that the owner of

the car has incurred the penalty, *as if* they were the holder of any other form of identification. Yet the owner can at this point enter into the legal ritual of identification by filing a statutory declaration identifying a different driver. At this stage, the identification of the driver becomes performative. Even though the process of identification is first handled in the digital domain, it is supported by other media (paper) and alternative procedures. Different tracks are available to reassemble the components required for identification. Agency is circulated through different domains.

The case studies also demonstrate different mediations between legal frameworks and technological alternatives that impact on the complexity of the architecture, on the development process and on the values promoted and protected by the system. In TOL, the decision to use the PKI infrastructure and digital signature was considered the best techno-legal solution to guarantee the identity of the parties. Lawyers and their associations strongly supported this solution.⁵³ What was not clear initially was the complexity that decision introduced into the system architecture and procedures. Indeed, the information infrastructure required for the PKI was not in place, and such information infrastructures are not simple, self-contained tools that can be developed easily. Their development is not controlled by a central authority, but it has its own rules depending also on the availability of a critical mass of users, on the presence of companies providing the service (for lawyers and lawyers associations), on the cost of the services they provide, and on the willingness of users to buy the services and use them to exchange data.⁵⁴ In simple terms, PKI appeared to the ministry and the lawyers to be an easy fix – it met high techno-legal standards – but its deployment has been almost impossible. Not being available and shared by potential users, being expensive and difficult to develop, it took more than six years to get a court and its bar ready to use the system. With PKI, digital access to justice was not just closed to citizens, but was almost impossible for lawyers too.⁵⁵

On the other hand, the case of MCOL is a story of ICT being used effectively to increase access to justice. Indeed, MCOL was developed very quickly (it was online in six months), taking advantage of technological components – online use of bank cards – that were already in place. The fact that key components of the information infrastructure were shared by a large number of potential users is one of the reasons for the fast development and rapid deployment of MCOL to many users, and its success in the number of cases processed.⁵⁶ We can see, therefore, that apparently small differences in the technologies used may have profound consequences in terms of complexity, cost and access to technology and to justice alike.

The use of speed cameras and automatically issued infringement notices in Australia illustrates a converse issue in access to justice. If the Italian

⁵³ Jacchia (2000).

⁵⁴ Hanseth and Lyytinen (2010).

⁵⁵ Fabri (2009).

⁵⁶ Kallinikos (2009b).

TOL system was almost impossible to use, the speeding penalty notice is almost too easy. The user gains access to justice without perhaps recognising that they have entered into the juridical domain.⁵⁷ The appearance of being in a bill-paying environment masks the presence of the law and of legal consequences. An owner paying a fine without naming the actual driver accrues demerit points to their own licence, while feeling that a financial obligation was discharged. At the same time, the appearance of the bill-paying environment may contribute to the widespread public perception that speed cameras are a revenue-raising device, rather than a road safety or law-enforcement device.

Making Technology Legal

It is clear now that ICT cannot be used to manage and record status changes (whether in debt or traffic infringement) without an appropriate regulation. We have, however, identified two distinct approaches. In the first one, formal (i.e. legal) regulations, drafted by lawyers and enacted by the parliament, aim to design the internal features of the technology. As in the Italian case, the legal codes come first, and try to establish the configuration of the software codes and system architecture. This approach begins from the formal rules, stating what is legal and what it is not (i.e. which kind of technology can and cannot be used), as well as how technology should operate. In this development model, first the technology appears in the official gazette, then formal prescriptions have to be transformed into running applications. As has been seen, the consequence in the case of TOL was a system architecture that was extremely complex, difficult to develop, inaccessible and very expensive.

By contrast, in the MCOL case the first step was the development of the technology by the Department and by contracted private companies. This allowed the developers to assemble a system by taking advantage of the technologies already available, and to postpone the use of systems (like the electronic Government Gateway) that were not yet ready. The law authorising the use of MCOL for handling specific types of claims was only passed once the system was running. As noted, the law did not prescribe the technological details of each component of the applications (as in TOL) but simply legalised the ensemble of technological procedures. Speed camera legislation also takes this approach. The existing regulation does not prescribe in detail (or in advance) the technical features of the system, but rather specifies the main features of the overall system and legalises its use to measure the speed of a car and identify its driver.

Divergent rules can also originate in those external organisations to which the courts outsource particular functions. This creates difficulties for the conceit of law-makers and lawyers that law is the sovereign source of all regulation. The technology of law cannot simply overturn the rule of technology. The development of large ICT-based communication systems

⁵⁷ A mistake of this sort was reported to one of the authors by a law student, resident in New South Wales, in 2008.

has its own autonomous rules.⁵⁸ As long as the courts and legislators fail to recognise that they are operating in a hybrid environment of cross-cutting regulative regimes, they will continue to be surprised and frustrated by unintended consequences, public misconceptions and failure to integrate law and technology.

There is a converse side to this argument that law does not make *all* the rules: law does not *only* make rules. Following a rule always requires communication between people and their actions which encompass corporeality and the world of objects.⁵⁹ Filing a case in a registry, giving evidence from a witness box, cross-examining from the bar table, and recording judgment in a file are the taken-for-granted practices of law that have grown with it over centuries. They are well inscribed in habitus and communication protocols, even where the formal rules are silent.

To resolve the difficulties that arise from legal misconceptions that rules can create technological solutions, one must understand the different levels of operation of legal and technological regulation. Law creates the conditions for new social facts: changes of status that are institutionally constituted. Technology manipulates information and things, 'brute facts' that enable or block actions and produce physical effects.⁶⁰ Law's role in *designing* technological solutions is necessarily very limited. Its more appropriate role is to *legitimate* already existing solutions, as in MCOL or speed cameras. Where law has been used to specify the technological conditions of particular interactions *ex ante*, as in the case of the Italian TOL, it creates unworkable monsters. Not only does the technology proliferate to the point that it is almost impossible to use; the law proliferates to the point that it is almost impossible to understand. There is a rule for every tool, every packet of data, almost every keystroke.⁶¹

This diagnosis suggests that the answer may lie in finding the correct order for regulation to take place: if not *ex ante*, then when? The opposite solution would be *post facto*: create the technology and then legitimate it. This too can create difficulties if the technology was not designed with legal requirements in mind. Law requires permanent and (to an extent) public records, unambiguous identification and solemn declarations. Ticking the box stating 'I have read and understand the terms and conditions', while it is adequate to authorise downloading a song, an application or a ticket, would be insufficiently secure and too performatively weak for legal processes that change our social or civil status. The lawyers need to communicate the security and performative needs to the technologists, but the solution can only be a joint effort. When the solution is technologically workable and legally robust, *then* the law can authorise it.

⁵⁸ Hanseth and Lyytinen (2010).

⁵⁹ Taylor (1993).

⁶⁰ Hildebrandt (2008).

⁶¹ Since 1997, the implementation of TOL has required 'a never-ending string of regulations' that Fabri describes as a 'legal soap opera'. Fabri (2009), p 130.

This raises the question of *what is it* that is authorised. Our research indicates that when law works with technology, it entangles numerous actors, techniques and regulations. Judges and court staff, lawyers, software and hardware providers all interact with the technology and the regulations (both legal and technical) to reassemble new composites of actors and techniques. As Lanzara has pointed out, these composites or assemblages 'are based as much upon communications and functional relations as upon authority and norms': they work through the social circulation of agency in space and time.⁶² They determine who is empowered to do what, which objects authorise, record and transmit agency. If law is to legitimate effective new techniques it must authorise the composite of people, regulations, tools and organisations (public and private) that make it work. Instead of legislating a tool for every rule, legislation must encompass the functional composite of actors, technologies and practices that make it work.

Pathways and the Reassembling of Agency

We now turn to look at how this entanglement of technology, law and markets affects the agency required to effect changes of status. As we have seen in the three case studies, even digital identification is also based on paper and conventional procedures. This observation can be extended to the entire process. MCOL, TOL and speed cameras all use records kept in electronic format as well as in traditional paper files. Notifications to defendants are made through conventional means (post or bailiff) and only in residual cases through the web. The final certifications of the change of status (such as injunctions or orders to pay) are recorded on paper as well as in digital systems. Far from being paperless, all these procedures continuously jump between different media: actions take place on paper (as seen in identification), in digital formats (camera image, data entered into web forms and documents) and in person, in swearing a declaration or, in residual cases, in courtrooms. The effective management of changes of status requires different things, sometimes material (computers, cameras, cards, number plates, etc) and sometimes immaterial (software codes and data). Further, it requires a web of relations between the material and the immaterial (such as the link between ownership of a vehicle and the number plate). Law regulates or legitimises the overall system, and requires the proper distribution of agency through different domains: law, technology, bureaucracy and commerce. Each of these domains tends to regulate agency and judicial procedures in different ways, introducing different requirements, incentives and constraints to action. Keeping the three domains assembled in a way that allows changes of status requires difficult mediations and courageous legal approaches.⁶³

Identifying all the actors and things that go to make legal technology work highlights another difficulty uncovered by the research. New

⁶² Lanzara (2009), p 12. See also note 33.

⁶³ Contini (2009), p 266.

technologies and architectures introduce new actors as well as new ways of working. The introduction of each new actor (eg the private sector) and technology (eg a remote server) introduces a potential new source of instability for the system. The ICT consultants who write the code for the new protocols and the companies that run the servers have their own constraints, cultures and communities. As these proliferate, so too do the risks of breakdown. Those actors and their cultures introduce their own regulatory regimes. Just as law cannot regulate their every action, nor can it afford to ignore any. Technological standards allowing the smooth functioning of ICT systems can be legislated, but if they cannot be implemented by developers or understood by users they remain just empty boxes. New instabilities are introduced to the system if the code does not work or if the server goes down because the company did not pay the maintenance contractors.

Clearly, these risks can never be eliminated: more complexity inevitably proliferates risk.⁶⁴ We may, however, propose that the ICT enabled system be considered as just one of the channels that guarantee performative efficacy. Digital proceedings cannot eliminate conventional ones, and it may be better if the 'paperless court' were to stay in the realm of science fiction. Paper will coexist with the digital, using the strategy of 'smart redundancy'. We have already seen that MCOL retains a two-track system, both to accommodate the preferences of the parties and to ensure the availability of the systems. We can also suggest that new ways of understanding the operations of law and technology can ameliorate the problem. Again, the answer lies in the level of interactions that are encompassed by the legal system, which should not focus on authorising and maintaining a specific tool or rule. Laws and legal and managerial practices need to define the spheres of responsibility and agency appropriate to the functional ensemble of actors, rules and things. The unit of analysis, of legitimation and of accountability must be the reassembled functional composite, rather than any particular code, actor (eg a company or a judge) or machine.

Contexts of the Performative

Up to this point of our conclusions, we have been dealing with matters internal to and of major concern to the legal or judicial system: breakdowns in the interface between law and technology, challenges to legal forms, and excessively complex systems that are unworkable even for the professionals who created them. We now shift focus to the consequences for social reality outside the legal realm. When a party is identified, a statement is sworn or a legal determination is made, what impact does this have on the party, the enunciator or the subject of status change?

We have seen that it matters whether one swears an oath rather than signs a form or enters a password; whether identification relies on our

⁶⁴ Ciborra (2007).

swearing on a Bible, whether our log-in details match those of our credit or debit card, or whether we are identified as the registered owner of a vehicle. If the law legitimises these procedures, architectures and outcomes, then they may be considered to have the required legal effect. However, swearing and entering into an agreed change of status go beyond the letter of the law. Their implications extend into a wider range of social relations: whether I lose my licence or become obligated to pay a debt.

In the case of the automatic speeding infringement, we noted the consequences for the registered owner of paying the fine, of not declaring that there was some other driver, and the dominance of the 'payment options' compared with the fine print that warns the owner not to send payment with a declaration. There is a danger that the owner may treat the infringement notice as a bill to be paid, rather than a legal notice. That is certainly the simplest way to deal with a letter that looks like a bill and informs us of a financial obligation. The options for payment, beginning from the option to pay online using BPay (an online bill-paying protocol common to all Australian banks and utilities firms) are easy. Indeed, as we noted above, they are 'almost too easy', to quote from a ubiquitous advertisement for BPay.

If processes are adopted that are familiar from other social interactions – invitations to pay online, entering user names and passwords – then the source of authority and legal consequences may not be accurately signalled to the participants. Even though the signals may be there (and they are, in legal terms) the participants may misread the signals. The assignment of status change may appear to be less formal, less binding or with fewer long-term consequences than in the traditional courtroom setting.

We have pointed out that old rules inscribed into new tools can change their effect. The technology is not a neutral medium which conducts whatever is introduced at one end, spitting it out, unchanged, at the other. Latour gives the example of trying to fax a pizza: the technology just won't do it.⁶⁵ Where the automatic process server identifies the offending vehicle, mails the notice to the registered owner, and treats the fine as if it were a simple financial obligation, the element of having committed an offence is obscured. The car was correctly identified and the obligation discharged by electronic payment. But it does not end there: in paying the fine, an offence is admitted. The further implications include loss of points, with eventual loss of licence for successive offences. The technology of online bill payment does not signal the legal change of status to 'offender' in the same way a court trial does.

Drawing attention to the full technological, architectural and institutional context of the process raises a practical question for the parties. If they are excluded from or fail to recognise the context of their

⁶⁵ 'To wish to convey understanding (*connaissance*) through the channels of law amounts to trying to fax a pizza – it won't help to increase the power of the modem, it is quite simply not the right medium. Law, like religion, like politics, would be deceiving itself if it wanted to convey information.' Latour (2002), p 288.

undertakings, then there is the danger of a new type of performative failure. Austin refers to 'misfires', where the ship remains unnamed or the baby unbaptised, because of a failure of authority (eg the official was not authorised to launch the ship or to baptise babies). But the sort of failures to which we draw attention here can occur when the authority is formally in place, but the participants do not recognise the context. In this case, the performative 'fires' alright, but with consequences that may not have been recognised by the enunciator. This may be called 'friendly fire' – an apposite term since the phenomenon is often associated with efforts to make legal and judicial processes 'user-friendly', on the model of ICT. If the context of a legal commitment *appears to be* one of online bill paying, is this not equally conducive to the failure of efficacy of the performative? In these cases, the performative has been expressed within a structure of rules, but in a new context. The rules have been inscribed into a divergent technology, institutional architecture or social context.

The Italian TOL tries obsessively to ensure that there can be no doubt as to the identity of the parties, through ever more sophisticated hardware and software. It treats the technological requirements as a legal question of certainty in identification. But perhaps the question is not just how to secure the identification, but rather whether an online procedure fulfils the *performative* requirements of context.

Limiting the focus on technology to its formal legality or its technical efficacy fails to appreciate the important semiotic baggage that is carried by the context (including the technology itself). Agamben, following Lévi-Strauss, has pointed to the excessive signification in the esoteric rituals of the oath. He proposes that it is this very excess that carries with it the power to make changes to the social world.⁶⁶ The performative utterance cannot be reduced to its correspondence to the signified.⁶⁷ In order to be legally identified, we are bound to our words; our good faith is guaranteed on pain of perjury. The oath or the signature, as performative, binds the speaker to their statement, the person to the deed.

Social power and legal efficacy always go *beyond* the note in the file or the entry to the database. Those are necessary but hardly sufficient conditions to register a change of status, whether to debtor or offender. The change of status must be *recognised*, not just by the law but by the community, including the parties to an action. Any interaction between law, technology and society can only be understood as an assemblage of regulation, legitimation and the way in which people use and understand the things placed at their disposal. To the familiar categories of law's deontology and technology's teleology must be added the social efficacy of the performative. The interfaces of law and technology rely on the interpretive context in which messages are understood as well as the legal forms in which they are transmitted. Each of these elements is essential to the

⁶⁶ Agamben (2011), p 68.

⁶⁷ Supporting this assertion, Foucault points out that the performative *énoncé* is an event that cannot be exhausted by either language (*langue*) or meaning. Foucault (1969), p 40.

circulation of agency between people and things that constitutes and reassembles legal and social relationships.

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