Regulatory philosophy, theory and practice: Ka mua, ka muri

Professor Jeroen van der Heijden
School of Government
Victoria University of Wellington

State of the Art in Regulatory Governance Research Paper 2019.03

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Abstract

Regulation as a practice, profession and discipline has progressed considerably over the last 4,000 years. Modern regulation has shed its image of being a dull, rigid and highly legalistic way to achieve policy outcomes. Today, all around the world, regulators actively experiment with innovative regulatory interventions, often supported by communities and the private sector. This research paper reflects on the long and often remarkable history of regulatory reform to lay out the main regulatory challenges of today, and he explores how they can be best addressed in the future.

This research paper was, in a shorter format, delivered by Professor Jeroen van der Heijden on 22 October 2019 at the Victoria University of Wellington, Rutherford House.

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Opening words

Tēnā koutou, tēnā koutou, tēnā koutou katoa.

Mevrouw de provost, leden van het bestuur van de Victoria University of Wellington, zeer gewaardeerde toehoorders hier in de zaal en in Nederland via de livestream.

Thank you, Provost for that generous introduction. It is my pleasure to be with you all today, And a great honor to be delivering my inaugural lecture here at Victoria University.

I wish to begin with a *whakatauki,* the Maori proverb: *ka mua, ka muri*. The image of facing backward while walking into the future. This simple statement contains profound truth: By looking backward – by facing the past – we can move forward toward a better future. In other words, what lessons from the history of regulation might help us in tackling the regulatory challenges that lie ahead of us?

Introduction

While the concept of 'regulation' has various definitions across the (social) sciences, there is a broad consensus that regulation seeks to influence the behaviour of individuals and collectives in order to make social interaction and transactions predictable, and to reduce uncertainties by setting expectations (e.g. rules) and consequences for (not) meeting these (i.e. rewards and penalties). Regulation is thus vital to many areas of society—including the economy, the legal system and the political system. Regulation often allows these areas of society to perform their functions; without regulation the legal system would not see normative expectations stabilised, and the economic system would be unable to create and stabilise expectations about access to scarce resources. Without regulation the political system would not achieve collectively binding decisions.

Of course, regulation strongly depends on these functional systems. It needs the legal system for its legitimacy; it needs the political system for authority to use force, if necessary, in seeking compliance; it needs the economic system to assign value to changes in behaviour (or lack thereof) and so on. Equally important, regulation bridges ('structurally couples') the ambitions, interests and incentives in these separate parts of society (Luhmann, 1995, 2004). For example, cap-and-trade regulation to reduce the carbon emissions of buildings at the city level allows for the structural coupling of the ambitions of global environmental policy (e.g. reducing carbon emissions), international economic interests (e.g. establishing the value of carbon emissions), national law (e.g. establishing the ownership of carbon emissions), and the urban behaviour of individuals and collectives (e.g. reducing the carbon emissions of their buildings, or selling the carbon credits they own, as that comes with the highest economic gain or the lowest economic cost) (Van der Heijden, 2014).

Regulation, as an activity, is often conceptualised as a specific mode of governing behaviour; it is then understood as the purposeful controlling of an activity, product, process or behaviour, usually by means of rules, agreed upon by those regulating and those regulated, and transcending individual cases, locations and time (Lodge & Wegrich, 2012). Such a conceptualisation of regulation as an activity includes the development of rules and other forms of regulatory instruments as well as their monitoring and enforcement, including the rewards and penalties that come with compliance and violation (May, 2007). Finally, rules can be expressed explicitly, for instance written down in legal mandates, or implicitly, for instance carried out in customary practice (Baldwin, Cave, & Lodge, 2012; McCraw, 1984). (Unfortunately, in defining the terms "regulatory regime", "regulation" and "rule", some circular reasoning appears inevitable.)

In a nutshell, regulation is an essential part of the 'social glue' that keeps societies together (cf., Luetge & Mukerji, 2016). Unfortunately, regulation is often not considered in such a positive light particularly not regulation in which government is in one way or other involved. Policymakers fear backlash from their constituents when they suggest addressing harms and risks through regulation. Large and small firms consider government-involved regulations as hampering business and stifling innovation. Citizens look at government-involved regulation as another example the nanny state seeking to influence all aspects of their private lives. Often, such regulation gets a bad rap in public, private and policy debates—and so do the public servants involved in the development, implementation and

review of regulation. I would argue, however, that this is unjustified, and is often a result of a poor understanding of regulation, and of what it could be.

In this inaugural lecture, I seek to contribute to a better understanding of regulation as an essential part of our society. When I speak about regulation in this lecture, I refer to regulatory interventions in which government is, in one way or the other, involved. To this end, I first seek an answer to the question of why regulation is (or is not) essential for society as we know it. Second, I take an extensive look backward to see what we can learn from history throughout millennia of regulatory reform. Third, I will turn our gaze sideward to explore the current state of the art in regulatory reform. From there I will briefly face forward and set out how the Chair in Regulatory Practice aims to contribute to regulatory theory and regulatory practice, both in Aotearoa and elsewhere.

Why regulation is (not) essential for society as we know it

Insights from evolutionary biology, anthropology, population genetics, and so on, indicate that humans are hardwired to cooperate in social groups. The 'skills' to cooperate—predominantly reciprocal altruism and kin selection (Fukuyama, 2015)—are programmed in our genomes (Harari, 2015). Fukuyama (2012, 7) aptly summarises a large body of work on this topic: 'Human beings are rule-following animals by nature; they are born to conform to the social norms they see around them, and they entrench those rules with often-transcendent meaning and value.' Yet, to be able to operate in large social groups beyond band-level societies, we humans had to overcome the limits of our in-built regulatory hardwiring to allow for social organisation beyond what we are, strictly speaking, biologically capable of (Clutton-Brock, 1974; Clutton-Brock, West, Ratnieks, & Foley, 2009; Eisenberg, Muckenhim, & Rudran, 1972).

Regulation—and particularly regulatory regimes—are a main part of humans' overcoming of biological limitations to achieve social cooperation. Regulatory regimes are here understood as institutional structures that allow for and assign responsibilities for carrying out regulatory actions. To recap, regulation seeks to shape the behaviour of individuals and collectives, reduce uncertainties, and make interactions and transactions predictable. Like money and writing, regulation and regulatory regimes had to be invented in order to allow or ease certain forms of cooperation in social groups. And once they were invented, their further development allowed or eased more complex and sophisticated forms of cooperation (B. Russell, 2004 [1946]).

How essential is regulation truly?

But how essential is regulation truly for today's societies—and given the regulatory literature I discuss in this lecture, I must qualify those societies as liberal democracies. When overviewing the literature there appear as many arguments in favour of regulation and regulatory governance as there are arguments against it. Here I explore a few of the most frequently recurring arguments.

The first argument is that regulation is required for economic efficiency and consumer choice. These arguments can be traced back to mercantilist national economic policies of European governments from the 16th to 18th centuries. Under mercantilism, governments seek to maximise exports and minimise imports, and to achieve this end they go to extreme lengths to regulate the quality of finished goods, workmanship and materials (Brue & Grant, 2013). Much later, from the early 20th century onwards, economic regulation was seen as necessary in preventing monopolies, setting market entry controls and price controls as a means to ensure that consumers have sufficient access to good quality and affordable goods and services (Ogus, 2004). The typical counter-argument is that government should leave the market to itself because market forces are better in efficiently allocating scarce resources—'laissez-faire, laissez-passer' (Gide & Rist, 1901). Competition between producers is then expected to improve the quality of products and services, and bring down their prices, and the profitability of a market segment is expected to attract new suppliers which will naturally break situations of (near) monopoly (Smith, 2003 [1776]; Stigler, 1971).

A second recurring argument is that regulation is required in order to address market failures—mainly information asymmetries and negative externalities (Backhouse, 2002; Pigou, 2013 [1920]).

Information asymmetries put consumers in a subordinate position on the market because they will never have as much information about the price-quality relationship as producers have. Negative externalities are the costs of production that affect parties who did not choose to incur that cost—for example air pollution from traffic. Private law, criminal law and tort law are considered too limited to address these failures. Often it is very difficult for the (individual) victim to evidence that the behaviour of the alleged offender is the cause of the (individual) harm. In addition, these forms of justice operate *ex-post,* meaning that harm will only be remedied after it has occurred (Gerhart, 2010; Wildavsky, 1988). The latter is particularly problematic when the harm cannot be (easily) undone, such as fatalities or climate change. The typical counter-arguments relate to those mentioned before: market failures are expected to reduce over time when consumers move to producers who provide better information, are more efficient (i.e. cause less externalities) in their production processes—or both (Edwards, 1998; Friedman, 1992).[1]

A third recurring argument is that regulation is required in order to achieve social solidarity and security. It builds on principles of equal opportunity and equal distribution of wealth, a moral responsibility of humans to support others in securing the minimal provisions for a good life, and the expectation that reducing poverty will reduce the engagement of those in need in criminal activities in order to access wealth. These arguments recur in many religious and spiritual texts (that were at the base of early day regulation) and form the basis of much early-day moral and political philosophy (Durkheim, 2014 [1893]; Scruton, 1994). Government regulation is seen here as required, because many who have wealth will not voluntarily give this up to those who do not have it; checks and balances need to be in place to ensure that wealth is distributed justly (de Vries & Boeckhout, 2011; Rothstein, 1998). The typical counter-arguments are that (redistributive) welfare regulation provides disincentives to contribute to society and unjustly taxes those who create added value to society, and that market-based alternatives to social security yield more efficient outcomes (Pierson & Casteles, 2006; D. Shapiro, 2007).

A fourth recurring argument is that regulation is required to, on the one hand, unburden the justice system and, on the other hand, strengthen the constitutional separation of powers. If every breach of law had to be processed by the justice system, it would be unnecessarily burdened. Regulation (regulatory law, administrative law) allows for dealing with minor and regular offences in a more efficient administrative manner—de facto, regulation gives alleged offenders an opportunity to discharge liability without having to go through the justice system (Dudley & Brito, 2012; Ogus, 2004). In addition, some argue, the broadening of (semi-independent) regulatory agencies and organisations adds additional checks and balances to the constitutional solution of separating powers between the executive, legislature, and judiciary (Scott, 2012). The typical counter-argument is that regulation puts too much power in the hands of appointed, rather than elected, individuals. Regulators, after all, often contribute to the legislature through rule-making, to the judiciary through adjudication, and to the

[1] Another way of thinking about economic regulation is that it has gone through different waves. The first wave is 'traditional' economic regulation that seeks to prevent situations of monopoly, sets entry barriers, caps prices, seeks to prevent information asymmetries, and so on, to achieve allocative and productive efficiency (Decker, 2015). The second wave is 'modern' economic regulation that seeks to address (the negative) externalities that come from production, industrialisation and globalisation (Edwards, 1998). The third wave is 'reformist' economic regulation that followed from the liberalisation and privatisation of public service delivery, and market restructuring and deregulation in the 1980s and 1990 (Majone, 1996).

executive through monitoring and enforcement (Edwards, 1998). Another typical counter-argument is that regulators are highly susceptible to being captured by special interest groups, just as legislators are (Carpenter & Moss, 2013; Croley, 2011).

A fifth, and for here final, recurring argument is that some regulatory interventions and limitations of people's liberty are for their own good. These arguments can be traced back to European Enlightenment scholars who were interested in the question as to whether people choose what is best for them, and, if not, whether it is justified that someone else makes choices on their behalf (Dworking, 1988; Mill, 1982 [1859]). Whilst humans have for long been 'modelled' as rational, utility-maximizing entities in economics and policymaking (Barbera, Hammond, & Seidl, 1999), ongoing research has indicated that often we do not make choices in our own best interest because we lack the information to do so, the capacity or time to process this information, or else we are simply biased towards a specific choice (Kahneman, 2011; Simon, 1945). Regulation may help to prevent people from making choices that harm themselves and guide them towards the choice that is in their own best interest, or it may prevent poor choices by excluding or prohibiting all suboptimal options (Coons & Weber, 2013; Hanna, 2018). The typical counter-argument against such paternalistic regulation is that the freedom to err is an essential part of liberty, and that without making mistakes we will not be able to learn and grow (Abdukadirov, 2016; Bubb & Pildes, 2014).

Summing up

In short, over the years a variety of economic, social, institutional, and behavioural arguments have been brought to the fore in support of, or against, regulatory interventions that in one way or the other involve government. All these arguments have been in a state of conflict, or at least anxious co-existence for more than two centuries now (Backhouse, 2002; Brue & Grant, 2013; Elias, 2000 [1939]; Fukuyama, 2015; B. Russell, 2004 [1946]; Scruton, 1994). Finding a middle ground is often not possible in the regulatory domain because both ends of the sliding scales that these arguments represent express virtues, ideals and outcomes that are difficult to dilute for those who adhere to them (Coglianese, 2017). In addition, normative arguments for or against government involvement in governance are often conflated with instrumental arguments for or against steering society through regulation. Regulation and regulatory reform are as much a discussion about policy and political preferences for or against government involvement as they stimulate a discussion about the pros and cons of the technical-rationality that regulation brings as a mode of governance (Windholz, 2018). In particular, commentators who lean towards the right side of the political spectrum often consider a (quantitative) expansion of regulation a shift towards ideologies that are normally associated with the left-side of the political spectrum. Research has indicated, however, that initiatives such as market liberalisation and the contracting out of public service delivery, typical for the right side of the political spectrum, have resulted in more, rather than less, regulation (Levi-Faur, 2013; Vogel, 1996).

A brief history of pre-modern regulation[2]

It is from the viewpoints of these oft-conflicting arguments that the history of regulatory governance needs to be understood. The exact history of the evolution of early regulatory regimes is unclear. For a long time there was no specific distinction between law and regulation (as these terms are understood now). Various civilizations have, at different points of pre-modernity, developed concepts of property, possession, contracts, obligations and retaliation of capital and non-capital crimes (Fukuyama, 2012; Toynbee, 1987 [1946]). Throughout history, ever-more-complex societies have been in need for ever-more-complex forms of law and regulation: 'Legal forms correspond at all times to the structure of society. (…) The chains mediating the legal structure have … grown longer, in keeping with the greater complexity of society' (Elias, 2000 [1939], 233). These ever-more-complex forms of law and regulation allowed societies to increase in complexity, which then asked for more sophisticated forms of law and regulation—ad infinitum.

Of particular interest within this brief history is that the delivery of pre-modern regulation and the means by which it sought to achieve its aims have gone through separate stages. Many tribal societies had in place regimes of blood money to 'pay off' the harm done by one party to another. For example, the first known compilation of Anglo-Saxon tribal law, the Law of Ethelbert (7th century), lays down a series of 'weregeld' (monetary) penalties for specific injuries caused (Orth, 1991). For example, if one would strike off the ear of someone else, the compensation was 12 shillings. Piercing the ear was 3 shillings, but causing deafness could cost the perpetrator 25 shillings. The penalty for gauging out an eye was 50 shillings, unless it was the eye of a servant, in which case the perpetrator would have to pay the servant's owner the full worth of the servant (Oliver, 2012).

Similar regimes of blood money have been found in tribal societies around the globe, dating back to well before the first major religions began to emerge (Contini, 1971; Parisi, 2001). They are still found in place in some tribal communities, such as the Somali customary law *Xeer* (Schlee, 2013). When exactly such customary regimes of restorative blood money evolved to more complex and uniform regulatory regimes remains in question. Yet, by the time King Hammurabi came to power as supreme ruler of Babylon, around 1800 BC, this transition had been made. The Codex Hammurabi is one of the oldest preserved sets of laws and comprises an extensive set of 'fitting' punishments for a variety of harms: 'lex talionis' (Fish, 2008; Hefferman, 2019). For example, Hammurabi stated that if a house built by a builder collapses and kills its owner, the builder shall be put to death. But, if the house collapses and kills the slave of its owner, the builder's slave shall be put to death (King, 2004).

There are two major differences between these tribal regulatory regimes and regulatory regimes such as Hammurabi's. The first is that blood money seeks to *restore* harm done, whereas the retributory regime seeks to *retaliate* for harm done. The second is that in many tribal societies there is often no sovereign who yields enough power to execute enforcement of legal decisions, which leaves it to the litigant to do so (Fukuyama, 2012). With the rise of sovereign rulers, the power to enforce rules became vested in them. And with sovereigns ruling ever larger territories, ongoing harmonisation and specialisation of regulatory regimes was often necessary. The Codex Justiniani is an illustrative

[2] In what follows, I predominantly focus on the development of regulation in supporting the legal system and the function of law.

example. When Justinian became the Roman emperor in 527 AD, he began to reform and repair the empire's legal regime in order to eliminate conflicts that had arisen over the years. The Codex is an elaborate regime covering private law, criminal law, administrative law and the duties of higher offices; it applied to the whole of the Roman empire (Johnston, 2015; Wolff, 1976). Another example is the Decretum Gratiani from around 1150 AD, a synthesis of thousands of canon laws that established a hierarchy among divine, natural, positive and customary law (Winroth, 2000).

Two remaining shortfalls

This transition from local (and often non-binding) restorative regulatory regimes to uniform retaliative regulatory regimes (enforced by a sovereign or its representatives) allowed, in theory, for treating those regulated equally and consistently under the law across time and space, and for seeing enforcement executed. This made social life more predictable, which is an essential requirement for the development of societies (Scruton, 1994). This transition fell short in achieving prevention of harm in the first place and to shape desirable behaviour in citizens.

Under Fajia ('Legalism') in ancient China (which emerged ca. 400 BC), and across Europe in the Middle Ages (ca. 600–1600 AD) regulatory regimes evolved further to address the first shortfall—preventing crime. Regulatory regimes became more and more *deterrence*-oriented (Foucault, 1995 [1975]; Luhmann, 2004). Rather than retaliating for harm once done, the aim was to deter the act of causing harm through terror. This terror often implied a set of severe corporal punishments for offences, major *and* minor, often carried out in public. Such deterrence served multiple purposes. It showed the public the (severe) consequences of rule violation (if discovered), hoping this would instil fear in would-be violators and keep them from committing crimes. The general public was shown that rule violation was punished, underpinning the notion that the sovereign weeds out crime. And, spectacles of corporate punishment stressed that the social norm was rule compliance, not rule violation—after all, there would always be more spectators than criminals punished.

Under Confucianism in ancient China (which experienced a revival from ca. 600 AD), and across Europe during the Enlightenment (the late 17th and early 18th century) regulatory regimes underwent a transition in order to address the second shortfall—shaping the 'good' citizen. The notion of shaping good citizens can be found across a range of political philosophies. Aristotle, for example, holds that the state is tasked with making citizens good by forming good habits, and not with preventing crime or regulating trade and property (Aristotle, 2014 [ca. 350 BC]). In a related vein, Jean-Jaques Rousseau stated some 2000 years later: 'In a well-governed state there are few punishments, not because many pardons are granted, but because there are few criminals; the multitude of crimes ensures impunity when the state is decaying' (Rousseau, 1998 [1762], 36).

The deterrence-oriented regulatory regime, arguably, worked well in shaping the behaviour of rule-compliant citizens, but not that of rule violators. Confucianist and Enlightenment scholars alike called for regulatory intervention that sought to re-educate rule violators and change their behaviour to allow them to enter back into society as well-behaved citizens. These scholars also considered penalties such as imprisonment and re-equipment of individuals through *corrective* regulatory regimes as more humane than inflicting severe bodily or even capital punishment (Hobbes, 1985 [1651]; Rousseau, 1998 [1762]).

Summing up

In sum, in pre-historic times, regulatory regimes emerged to ease social cooperation. From then onward, they evolved from largely restorative-oriented regulatory regimes, via retaliative and deterrence-oriented ones, to correction-oriented regulatory regimes. The exact demarcation between these orientations is not easy to draw. Each more-sophisticated orientation holds in it the elements of earlier ones, and they may exist side by side. Also, more likely than not, the various evolutions described above occurred in an unplanned and haphazard manner rather than intentionally (Drolet, 2004; Foucault, 2004 [1998]). Whether a state embraced a state religion, how quick it was in developing a rational-technocratic bureaucracy, or whether it embraced a regime of property rights are all but a few of the relevant conditions that have affected the evolution of regulatory regimes around the globe (Toynbee, 1987 [1946]).

A brief history of modern regulation

A new type of long-term social and economic colonisation ('state building') of large parts of the world by European countries starting in the 18th century, and the advent of the first and second industrial revolutions at around the same time trigged two further important developments in the evolution of regulatory regimes. First, a specific approach to regulatory governance, the European Enlightenment inspired orientation, came to dominate regulatory regimes globally. Second, the detrimental social and environmental consequences of the first and second industrial revolutions made it clear that this orientation has it limits. The first development de facto only meant a quantitative increase of a specific type of regulatory regime ('regulatory globalisation'); the second implied a qualitative change in it—and is the more interesting of the two to explore further.

Towards the regulatory state

Served by advancements in systemic data collection at the population level, and ongoing developments in probability theory and mathematics, a new insight emerged about how regulatory governance could be used as a means of state building and managing. On the individual level, people are often unable to control the harms to which they are subject, but, at the aggregate level, these harms can be controlled, either by pooling them through public insurance and state-organised welfare or by minimising them through modifying and deterring it in its origins. The idea arose: 'state policy should be shaped by administrative and arithmetic knowledge of the population' (Doron, 2016, 21). In other words, the normative image of regulatory governance performed through the 'rational' calculation of probability emerged, which partly explains the move of from night-watchman states to welfare states in the late 19th and early 20th centuries (de Vries & Boeckhout, 2011; Moran, 2002).

At the same time, the first and second industrial revolutions brought about a range of changes that were unprecedented—if not in terms of substance, then at least in terms of scale. People were no longer merely subject to harms in their day-to-day interactions with others, but also to large-scale industrial risks. Industrialisation also led to a novel distribution of harms and risks through rapid urbanisation, negative externalities, and the working and living conditions in which large groups of working-class people suddenly found themselves. It became obvious that many of the new harms and risks were too complex to be addressed through a traditional understanding of the law (Steele, 2004). In mainland Europe in particular, these insights led to a growth of harm and risk-pooling initiatives, such as public pensions, unemployment insurance, and public health schemes—all examples in which harm and risk is an object of regulatory governance (Alemanno, 2016; Huber, 2010; Pierson & Casteles, 2006).

On the other side of the Atlantic, the regime of tort law in the United States, in which the evidentiary burden is on the plaintiff, turned out to be unable to deal with many of the indirect or slow-to-materialise risks that arose from industrialisation. By the second half of the 20th century, the United States Congress determined that the tort regime 'was incapable of providing an effective response to the increasing threats to the public health and safety and the environment attributable to new technologies and development' (S. A. Shapiro & Glicksman, 2003, 3). Between the 1960s and the 1990s, this led to a move in the United States away from minimal federal regulation towards an approach to risk governance in which the government often took action to regulate anticipated health,

safety and environmental harms. Risk technologies (particularly risk estimation) were seen as a way of providing public security (Dudley & Brito, 2012).

Regulation thus moved further away from restoring harm done in the past towards preventing harm from occurring in the first place. It also moved further away from considering harm done as a situation between two directly interacting natural persons and opened up to a broader range of harms and risks as objects of regulatory governance. Countries elsewhere, particularly in Europe and the Asian Tigers (Singapore, Hong Kong, Taiwan and South Korea), followed suit, and, around the world it was accepted that managing these new harms and risks as well as public safety had become a task for government—the seeds for the 'regulatory state' had been planted (Hood, Rothstein, & Baldwin, 2001; Majone, 2016).

Finetuning regulatory regimes

In a nutshell, from the time before King Hammurabi (ca. 1800 BC) until roughly the 1950s regulatory regimes had evolved as government-led, top-down, intrusive interventions based on deterrence and correction, aiming to control activities, products, processes or behaviours of individuals and groups, as they sought to achieve desirable societal goals. This form of regulatory governance is often referred to as command-and-control (Kagan, 1984; Latin, 1985). In its various guises, command-and-control has provided humanity with a mechanism to collaborate in ever-larger and ever-more-complex social groups. Yet, from the 1950s onward it faced more and more criticism.

Critics of the command-and-control strategy state that it is ineffective and expensive. It brings about problems with enforcement and it aims too much at end-of-pipe solutions (Fairman & Yapp, 2005). The strategy is said to be prone to regulatory capture when the relationship between the regulator and the regulatee becomes too close (Van der Heijden, 2017). Furthermore, it might be subject to legalism when the proliferation of rules leads to over-regulation which may strangle competition and entrepreneurship in the market (Bardach & Kagan, 1982). Subsequently, the setting of standards is difficult since public goals are often not expressed in technical standards, and the enforcement of regulations might be difficult or expensive due to over-complexity of these rules, as is evidencing compliance for those subject to it (Baldwin et al., 2012).

Understanding the shortcomings of command-and-control and responding to societies' calls for regulatory reform, governments around the globe have been actively innovating with regulatory regimes since the 1950s. The innovations that are undertaken show a shift away from the traditional top-down, intrusive and government-led command-and-control strategy. Yet, none of the innovations to date has substantially changed that strategy. Innovations are often layered onto it, not so much to replace existing regulatory regimes but to fine-tune them. Overviewing the regulatory literature, the following four innovations stand out[3]:

[3] By no means is this overview exhaustive. Other innovations that have emerged since the 1950s are a move towards dynamic regulatory regimes that include sun-set clauses and formalised forms of experimentation (Ranchordas, 2015; Sabel & Zeitlin, 2011), increasing use of regulatory impact assessment and benefit-cost analyses in the development and evaluation of regulatory governance (Kirkpatrick & Parker, 2007; S. A. Shapiro & Glicksman, 2003), the move from prescriptive towards performance-based and goal-oriented regulation (May, 2003; Mumfort, 2011), and the reliance of governments on various forms of self-regulation by—or co-regulation with—the regulated industry (Gunningham & Rees, 1997; Rouvière & Caswell, 2012).

- An embracing of nuanced, mixed regulatory regimes that combine deterrence-oriented and compliance-oriented regulation. From the 1960s onwards, evidence began to accumulate showing that many people comply with regulations not because they fear the consequences of non-compliance, but because they feel a moral duty to obey (Andrews & Bonta, 2010; Tyler, 1990). Building on these insights, governments introduced compliance-oriented regulations that encourage features that bring about spontaneous obedience, and that weaken features which bring about non-compliance, for instance rewarding desired behaviour with positive incentives such as grants or subsidies (Kagan, 1994; Parker, 2000). Solely relying on compliance-oriented regulation was quickly found to have its own shortcomings. For example, positive incentives work indirectly and might react too late; it is difficult to measure their actual effects on compliance; and public concern may arise about why some harmful behaviour is nevertheless being accepted (Baldwin et al., 2012).

  Combined insights about the strengths and weaknesses of deterrence-oriented and compliance-oriented regulation led to a ground-breaking strategy: *responsive regulation* (Ayres & Braithwaite, 1992). It builds on the notion that rejecting deterrence-oriented regulation is naïve, although total commitment to it might lead to unnecessary employment of means. It promotes the use of less punitive and less restrictive regulation and preferably a mix of them: 'the trick of successful regulation is to establish a synergy between punishment and persuasion' (Ayres & Braithwaite, 1992, 25). The relation between regulator and those subject to regulation—the regulator's ability to choose between certain sanctions and rewards—is regarded as the strength of this model (Braithwaite, 2002, 2011).

- An embracing of risk management strategies to prioritise regulatory actions, and to allocate limited regulatory resources in a rational, transparent and accountable manner. In the 1980s, there was a call on government departments to become more cost-effective and efficient—the turn to new public management (Hood, 1995; McLaughlin, Osborne, & Ferlie, 2002). Inspired by risk assessment and risk management tools in the business sector, government departments began to embrace these tools too. It allowed them to follow a utilitarian approach in order to 'allocate regulatory resources in proportion to the risks and interventions they require' (Davies et al., 2010, 963) and 'explicitly explain their selective decisions based on the assessment of the risk that the regulated actors (companies or individuals) present' (Macenaite, 2017, 512).

  In risk-based regulation, the focus is on the allocation of resources based on risk levels (Macenaite, 2017). Risk is often estimated by combining the chance of harm occurring and the impact of that harm. There are many methods to such estimation, and governments around the globe apply individual approaches with varying levels of success (van der Heijden, 2019b). Essential to the regulatory governance of risk, and to risk-based regulation is that risk is used as a decision-making resource that allows for a reasoned response to a possible harm or gain when there is a lack of knowledge in qualitative or quantitative terms (Steele, 2004). Risk-based regulation is 'an evidence-based means of targeting the use of resources and of

prioritizing attention to the highest risks in accordance with a transparent, systematic, and defensible framework' (Black & Baldwin, 2010, 181).

- An embracing of non-state actors in regulatory governance. In the 1980s and 1990s, the growth of command-and-control type regulation was assumed to have burdened the market, and governments were often considered less effective and efficient in the delivery of services such as regulatory governance market actors (Gunningham & Grabosky, 1998; Wilson, 1989). These critiques led to a range of initiatives to contract out or delegate regulatory tasks to private sector agents, or even to privatise these tasks fully (Hodge, 2000; Osborne & Gaebler, 1992). In addition, because governmental regulators often lack capacity and expertise they had to turn to external, often non-government 'regulatory intermediaries' for rule development, the setting of standards, rule-monitoring, and enforcement (Abbott, Levi-Faur, & Snidal, 2017; Grabosky, 2013).

  By the 1990s, regulation had become an industry in itself, in which many regulatory intermediaries undertake business activities. The notion of 'regulatory capitalism' (Levi-Faur, 2005) best captures this emergence, but the ongoing specialisation and professionalisation of the regulatory industry also fits the broader trend of the manufacturing economies transforming into service economies (Buera & Kaboski, 2012). Seeking partly to follow changes in regulatory practice and partly to influence them, research institutes dedicated to studying regulation have emerged. Educators now provide degrees in regulation, and consultancy firms have branches dedicated to providing advice in regulatory matters, and so on. There seems to be no way of stopping the growth of the regulatory industry (Van der Heijden, 2017).

- An embracing of a more realistic, 'less rational' human behaviour model. Regulatory governance, like many areas of policymaking and implementation, has long been built on rational choice theory (Adorno & Horkheimer, 1997 [1944]; Bernstein, 1996)—and often still is. Rational choice theory is an analytical framework in neoclassical economics for understanding and modelling the social and economic behaviour of groups of people—for example, the population of a country. A central aspect of this theory is that people are rational beings who have 'stable, coherent and well-defined preferences rooted in self-interest and utility maximisation that are revealed through their choices' (McMahon, 2015, 141). When they can choose from a variety of alternatives, they are expected to choose the one that has the highest worth or value to them. In technical terms, this would be called 'utility maximisation'.

  Insights from behavioural economics, cognitive sciences, and psychology have, however, pointed out that humans often deviate from this utility model, simply because they are less rational in making choices under uncertainty than is predicted by neoclassical economics (Kahneman, 2011; Simon, 1945; Thaler & Sunstein, 2009). Following these insights, since the early 2000s, governments around the world have begun to embrace a more realistic human behaviour model through regulatory interventions informed by behavioural insights (van der Heijden, 2019a). These seek to address people's heuristics and biases, such as hyperbolic discounting (when faced with a choice between two possible occasions for receiving a payoff stronger weight is given to the one that will be received sooner even if that one is relatively

less profitable) and status quo bias (a preference for the current state of affairs) (Halpern, 2019; OECD, 2017, 2018a).

Summing up

In sum, rapid industrialisation, awareness of the rising costs of traditional regulatory regimes, and globalisation pointed out the limitations of the traditional command-and-control regulatory strategies at the start of the 20th century. However, rather than a full overhaul of this strategy, governments around the globe have, since the 1950s, turned to a variety of 'patches' that apply insights from (i) psychology, the behavioural sciences and criminology about compliance motivations (a behavioural turn in regulation); (ii) insights from economics and risk studies about how to best allocate limited regulatory resources to achieve the greatest net-effect (a utilitarian turn); and (iii) the involvement of non-government individuals and organisation in the development, implementation and enforcement of regulation (a collaborative turn).

A more critical reading of this period is provided by 'governmentality' scholars (Foucault, 2009). They argue that the new forms of regulatory governance are ever more intrusive. More so than in the past, they argue, of interest to those in power are the underlying practices that lead to uncertainty and harm. The focus of regulatory governance has become 'how to most effectively [shape] the conduct and actions of populations to minimise identified [uncertainty and harm]' (Edge & Eyles, 2015, 189). Under risk governance, for example, not only are individuals responsible for *causing* harm, but also for engaging in activities and behaviours that *may* cause harm. To these critics, regulating behaviours such as driving when over the limit for alcohol, smoking in public places, or consuming fatty foodstuffs because they *may* cause harm, particularly at the aggregate level of society as a whole, allows governments to limit individual freedom even more than they have before (Dean, 2009). The new forms of regulatory governance have moved further away from addressing substance and matter, towards shaping human conduct by imposing on—and internalising in—people norms of 'accepted' behaviour. In this reading, regulatory governance can be said to have moved from its former behaviour correction orientation to a behaviour formation orientation.

The next frontiers in regulatory reform?

Regulation as a philosophy, theory and practice has seen considerable developments over the last few millennia. The conceptual understanding of regulation has expanded dramatically, and regulatory regimes in many countries around the globe have become increasingly specialised and fragmented (Hutter & Lloyd-Bostock, 2017; Lodge & Wegrich, 2012). In broad terms, 'regulation' now includes rules backed by law as well as non-legal forms of regulation and supra-national regulation: the inclusion of non-state and beyond-the-state regulators in the regulatory landscape, and a reliance on regulatory tools and strategies that have their origins in behavioural, utilitarian and collaborative understandings of what makes for 'good' regulatory governance (Hodge, Maynard, & Bowman, 2014).[4]

A series of both major and smaller regulatory crises indicate that despite all regulatory evolution, societies remain exposed to harms and risks. Examples include the Chernobyl nuclear disaster in 1986, the BSE (bovine spongiform encephalopathy) crisis in the 1990s, the global financial crisis in the 2000s, the Deepwater Horizon oil spill in 2010, and the global climate crisis. Arguably, most of the changes made to regulation and the way we think about it are patches rather than sweeping reforms. Perhaps we have reached the limits of what can be achieved with further (incremental) improvements to the structural aspects of regulation (its tools and instruments, its compliance orientations, its enforcement processes and strategies, and so on). What, then, are the next frontiers in regulatory reform to respond to today's pressing harms and risks when keeping in mind four millennia of regulatory history?

Meta-regulation: rules about rules

The discussion of the historical development of regulatory governance indicates that regulators have a wide variety of tools and strategies at their display. Yet these all come with their own logics, and may cause differing results depending on the regulatory contexts and the regime content they are implemented in, and in the way they interact with each other (Black & Baldwin, 2010; Hood et al., 2001). It is unlikely that any of the discussed regulatory tools, instruments, strategies or processes will provide a sufficient, long-term answer to a regulatory problem when implemented in an ad hoc manner (Coglianese, 2017). Rather than seeking a 'quick fix' in *response* to incidents, regulators may be better off becoming more *anticipatory*, some scholars argue, and focus on meta-regulation reform. That is, rethink the rules that specify the alteration of regulation, and the rectification of ambiguity and contradictions in regulation (Burns & Flam, 1987; Kooiman & Jentoft, 2009). Such meta-regulation is sometimes referred to as 'horizontal regulation', or a 'whole-of-government approach to regulation' (Radaelli, 2018). A focus on meta-regulation asks questions of what we consider legitimate and acceptable approaches to rule making and rule implementation.

An early example of meta-regulation is the 1946 the Administrative Procedure Act in the United States. It specifies the conditions for administrative bodies of the federal government to write and enforce regulations (Dudley & Brito, 2012; Gellhorn, 1986). In short, it sets 'the default rules that govern the federal regulatory state' (Walker, 2017, 630). The Act requires (regulatory) agencies to keep the public

[4] Scholars familiar with the broader (public) governance literature will recognise many of these trends (Bell & Hindmoor, 2009; Bevir, 2011; Chhotray & Stoker, 2010).

informed about its organisation, procedures and rules, to provide for public participation in the rule making process, to establish uniform standards for the conduct of rulemaking (and adjudication), and to define the scope of judicial review of agency action. The APA ensures protection of regulatees for both over and under-regulation, requires regulatory agencies to provide factual evidence for the introduction or change of regulation, and, to a certain extent, protects regulatory agencies from outside interferences (Morrison, 1986). The Act has seen few substantive amendments over the last 70 years (Walker, 2017), and whilst various administrations have aimed to modernise it—with the development of the draft Regulatory Accountability Act as the most recent attempt—substantial change is not expected under the current Trump Administration (Levin, 2019).

On the other side of the Atlantic, the European Union launched a comprehensive program to reform its meta-regulation in 2002. This *Better Regulation* program initially introduced a formal procedure for ex ante regulatory impact assessment and minimum criteria for stakeholder involvement in the development and implementation of regulation (Renda, 2016). 'The term 'better regulation' covers a large set of policy instruments and programmes to enhance the capacity of institutions to provide high-quality regulation' (Radaelli, 2007, 190). Better Regulation seeks to increase competitiveness and reduce regulatory burdens, as well as increase the legitimacy of regulation by requiring transparency of the processes of developing and implementing regulation (Radaelli & Meuwese, 2009). Since its introduction, the program has expanded, and now requires ex post evaluations, fitness checks, cumulative costs assessments, and retrospective reviews. The program is ambitious in that it allows policy makers to combine diverse policy objectives in different policy areas, and pays renewed attention to evidence-based policy-making (Eliantonio & Spendzharova, 2017).

From thinking about systemic harms and risks to thinking about regulatory systems

Moving up another analytical 'level', involves viewing many of today's harms and risks as systemic, meaning that they are embedded in the larger context of societal processes. 'Systemic risks have therefore a growing potential of harm since effects can be amplified or attenuated throughout the prolongation of effects based on a complex system of interdependencies' (van Asselt & Renn, 2011, 436). Interactions between multiple activities and events within complex systems may multiply risks, or trigger synergies where the total risk is larger than the sum of its individual parts (Broberg, 2017; Van Coile, 2016). In addition, the rapid emergence of new and possibly disruptive technologies (such as developments in ICT, nanotechnology, genetically modified foodstuffs and artificial intelligence) are considered to bring huge opportunities, but they come with systemic harms and risks that cannot be (objectively) estimated or foreseen yet (Florin & Bunting, 2009; Giorgi, 2013; Hodge et al., 2014). A focus on systems thinking asks questions of regulation as a function of modern societies, regulatory feedback loops, the interaction of regulatory regimes and their environments, and regulatory regularities across time, policy areas and geographies.

Systems theory points at a typical limitation of modern public bureaucracies, and public policy more generally. The increasing specialisation of public bureaucracies in dedicated government agencies, branches, units and teams has allowed for unprecedented progress in the regulation of harms and risks, by reducing, pooling, mitigating and preventing them; by shaping individual and collective behaviour; and by making social action and interaction, overall, more predictive. Yet, the often-siloed nature of modern public bureaucracies hampers collaboration and coordination across agencies, branches, units and teams in the addressing of complex and volatile harms and risks, particularly those

that cut across traditional policy areas (Tett, 2015; Wilson, 1989). Regulators are, therefore, sometimes advised to address these harms and risks at a higher, system level rather than the level that a policy area (or sub-area) encompasses (Lobel, 2004; Scott, 2004).

Yet, following this advice is all but easy. The exact definition of a system is disputed in the social sciences (e.g., Burns & Flam, 1987; Luhmann, 1995; Meadows, 2008; T. Parsons, 1951; Von Bertalanffy, 1950). Still, scholars generally agree that a system is made up of a set of interconnected elements, has an operative rather than a spatial boundary, has its own unique logic and generates its own unique behaviour often independently of its environment. It is also subject to its own unique feedback loops that affect this behaviour, and that reproduce, expand, or (ultimately) destruct the system. Changing an element or some elements in the system is unlikely to change the system's outcome. There is a risk of the behaviour of the system oscillating after making changes because of delays in the feedback loops, and challenges are to be expected where the boundaries of systems meet or even overlap. To some, systems are as broad as the 'function systems' that make society possible such as the economy, politics, and education (Luhmann, 1995).[5] To others, systems are more bounded such as commercial fisheries, nuclear power, or the housing mortgage market (Meadows, 2008).

Systematic experimentation with regulatory governance

Recent scholarship points towards a trend of *experimentation in regulatory governance* (Halpern, 2019). It indicates that many of today's regulatory challenges are too complex to address with traditional regulatory interventions and that conventional, generic, one-size-fits-all regulatory interventions easily result in under- or over-regulation. These challenges call for a careful exploration of tailored interventions that are mindful of their contexts. The observed trend of experimentation in regulatory governance fits a long tradition of experimentalism in policy design (Campbell, 1969) and evidence-based policymaking (Pawson, 2002). An ideal type of experiment is (i) a recursive process of regulatory design and implementation which is subject to constant observation and adaptation to local conditions and unexpected circumstances; with (ii) ongoing learning about the effectiveness and efficiency of the regulatory intervention which informs its further development, adaptation or abolishment; and (iii) a collaboration between the developers, administrators and those subject to the regulatory intervention (Sabel & Zeitlin, 2011).

Experimentalism should, however, not be understood in the more 'traditional' scientific sense of the word (Popper, 2002 [1935]). Experimentation in regulatory governance, as discussed in the literature, is often a highly localised process of testing, piloting or demonstrating a regulatory intervention, seeking to learn about its potential in overcoming regulatory problems (Van der Heijden, 2015). Key to experimentation in regulatory governance is the drawing of lessons about outcomes that may be expected when the experiment is formalised and included in (future) policy. Building on the literature on policy-learning (Petts, 2007; Radaelli, 2012) it can be argued that such lessons are only relevant when based on systematically collected evidence (for a critique to evidence based policy making, see W. Parsons, 2002). In more practical terms, scholars point to the relevance of a mechanism that collects and stores lessons so that they can be shared among actors, and that actively seeks to share

[5] Such function systems all have slightly differing logics. For example, the economic system *eases* transactions, the legal system *legitimises* transactions, and the regulatory system makes transactions *predictable* (or at least, *reduces uncertainty* in transactions).

lessons with a broad group of (possible) participants in the regulatory experiment and beyond (e.g., Vreugdenhil, Slinger, Thissen, & Ker Rault, 2010).

Particularly useful to those interested in experimentation in regulatory governance is the literature on randomised control trials (RCT). RCTs build on the same logic as the testing of new medications or internet-based businesses. In a nutshell, an RCT follows the following steps: (1) People or organisations participating in the experiment are randomly allocated to one or more groups that are subject to the intervention or interventions to be tested, or to a group that will not be subject to any intervention (the control group). (2) The groups are followed for a period in the same way, and the only difference between them is the intervention to which they are subject. (3) After the trial is completed, observations of the groups are compared to understand whether the behaviour of the group or groups that received the intervention is (statistically significantly) different from that of the control group (Haynes, Service, Goldacre, & Togerson, 2012).

Reforming regulatory practice

Meta-regulation reform and regulatory systems thinking move beyond specific regulatory problems and look at the general characteristics of the design and implementation of regulation across policy areas. Both seek to address systemic problems and challenges that come with regulation as a societal function. One of the issues that is (often) not addressed in meta-regulatory reform or regulatory systems thinking—and often also not in formal experimentation with regulatory governance—is the agency regulators having to act independently and exert power. Frontline regulators, ('street level bureaucrats') in particular, have considerable discretionary space in their day-to-day application of regulation (Crozier, 1964; Lipsky, 1980). The way regulators use their agency will affect the outcomes of regulation. Thus, rather than seeking reform in the machinery-of-government side of regulation, as basically all reforms up to today have done, another way forward may be to reform, or at least to rethink, the agency that regulators have. A focus on the opportunities and constraints of such agency in regulatory practice asks us to move beyond considering regulation in mechanistic terms, and to think about what we expect of those in power in designing and operating regulatory regimes.

This angle on regulatory reform also acknowledges that regulation has become a specialism. As has become clear from the earlier sections, in a relative short amount of time, regulation has undergone a process of increasing specialisation and fragmentation. In response, calls are now made to consider regulation a 'craft' that requires craftspeople for its development and implementation (Lodge & Wegrich, 2012; Sparrow, 2000). Put differently, regulation calls for regulatory professionals and regulatory professionalism to deal with quality problems in the expert work that regulation has become (Friedson, 2010). Targeted training at upper secondary and tertiary education level, ongoing professional development, and other forms of regulatory education improves the development and implementation of regulation, and provides regulators with guidelines, norms and values to operate within the discretionary space they are given (Wilson, 1989).

The Government Regulatory Practice Initiative (G-REG) in Aotearoa, New Zealand provides an illustrative example of this angle to regulatory reform. G-REG is a network of central and local government regulatory agencies, established in 2014 to lead and contribute to regulatory practice initiatives. It seeks to advance the capabilities of regulators and regulatory organisations, and to build a professional community of regulators. G-REG's primary activity to date has been the development

and delivery of a qualifications-framework for regulatory practitioners at various levels within regulatory agencies. Having a common qualification—a common knowledge base and skillset—in the public sector is intended to make it easier for regulatory agencies to work together, for individuals to move between agencies, and to nurture and unify a community of professional regulators with shared norms and values. Workshops, ongoing professional development courses, annual conferences and close collaboration with academia are other initiatives pursued by G-REG to achieve its aims.

Summing up

In sum, from the 1960s onwards we have observed major changes in the design and development of regulatory regimes (the institutional side of regulation) and regulatory tools and instruments (the instrumental side of regulation). From the early 1990s onward, we have observed a fine-tuning of these new regimes and instruments, and an ongoing mixing and matching of various regulatory philosophies and theories in the institutional and instrumental sides of regulatory governance. The current trends in regulatory reform focus on higher levels of abstraction (meta-regulation and regulatory systems thinking) as well as a more 'scientific' approach to regulatory reform (experimental regulatory governance).

An area that has had substantially less attention in regulatory reform is regulatory practice and the day-to-day choices made by regulatory frontline workers. Regulatory practice is essential for achieving the intended outcomes of regulation. It is, thus, somewhat striking to observe that after an initial surge of interest in this area following Michael Lipsky's seminal book *Street-level bureaucracy: Dilemmas of the individual in public services* (1980), no major advances have been made aside from Ian Ayres and John Braithwaite's *Responsive Regulation* (1992). That having been said, since the mid-2010s this area of research has made a comeback (e.g., Hupe, Hill, & Buffat, 2015; OECD, 2018b) and at the time of preparing this inaugural lecture some promising publications are due to appear (e.g., Hupe, 2019; G. Russell & Hodges, 2019; Sullivan & Dickinson, 2020).

Roadmap of the Chair in Regulatory Practice: A regulatory research agenda

Nearing the end of my uninterrupted speaking time, it is now near the time to move away from looking backwards and sideward and to begin looking forward. How can the knowledge we have gained in the past help to address the main regulatory challenges we face today? And more practically, what do I aim to contribute to in addressing those challenges as Chair in Regulatory Practice?

The question of today's main regulatory challenges is a topic much debated. The academic literature is highly dispersed and mainly discusses detailed challenges in specific examples of regulation. The grey literature is a little more coherent in the core regulatory challenges, but the language it uses is perhaps a little too general for my purposes here (see for example, Dellioitte, 2019; KMPG, 2019). Still, when stepping back and overviewing both literatures some key challenges stand out.

Time and again, the literature points to the challenges of growing scepticism towards regulation, and to the challenges of allocating limited regulatory resources in a transparent, just and effective manner. Challenges come with often-siloed and divergent regulatory agencies at international, national and local levels, and include regulating disruptive and fast-moving technology such as data privacy, cybersecurity, and the internet of things. There are also challenges of ethical enforcement practice and the difficulty experienced by frontline regulators in maintaining good conduct within the discretionary space they often have, and challenges of responding to regulatory failure and restoring public trust in the regulatory system. More challenges come in creating sound knowledge on regulatory models and systems, and, of course, in using regulatory governance as an approach to address climate change and to increase the resilience of communities, cities and nations.

I now focus on three of these challenges and explain how I seek to contribute to solving them through the Chair in Regulatory Practice.

A sceptical public

To turn back to one of the starting points of my lecture, regulation (with some form of government involvement) often gets a bad rap. Society at large is sceptical towards regulation, regulators and regulatory reform. Regulation is easily seen as restricting rather than broadening individual freedom, as a cost to—rather than an easing of—doing business, and as a limitation to—rather than foundation of—innovation and progress.

I can see at least two causes of this scepticism. First, regulation is often not well understood by the public at large. Here the Chair in Regulatory Practice may help by telling a more nuanced story about regulation and by increasing the regulatory literacy of the public at large. Public seminars like the one today are helpful in doing so, but other outlets are helpful too. For example, I am maintaining a blog, www.regulatoryfrontlines.blog, to highlight that regulation is not all restrictions and limitations, but has tremendous value. The blog is also an excellent outlet for sharing the best examples of easily accessible academic literature with the public at large.

Second, we have learnt from the past that regulators are in an exceptionally difficult position. Their performance is measured against two separate standards. When everything goes well, their regulation is too expensive. Think about the calls for deregulation and privatisation of regulatory tasks such as building and food inspections. When things go wrong, they have not done enough to prevent it from happening. Think about the responses after the global financial crisis and the leaky building crisis here in Aotearoa. A solution here would be better storytelling by regulators. Strategically selected and shared stories about regulatory success can have wide ripple effects (Braithwaite, 2017). Through my engagement with the regulatory community in Aotearoa, I seek to tease out these success stories and share them with the wider public.

Poor regulatory knowledge

A second main challenge that we are facing is limited and sometimes poor regulatory knowledge. Much of what we know of regulation—its development, implementation, practice and outcomes—comes from a relatively small number of real-world examples, often located in the English-speaking part of the Global North. This means we are missing the opportunity of learning from regulatory practice in 97% of the world's countries. More problematically, when overviewing the history of regulation I observe that the modest knowledge base we have often gets too much credit, and some regulatory solutions, such as risk-based regulation, have seen more following than is warranted by the evidence base we have of them.

To illustrate, I often see much confident nodding when I bring up the regulatory pyramids of John Braithwaite—particularly when I present to a regulatory practitioner audience. Few will challenge the basic assumption of the model underpinning it—that regulatory flexibility will yield better and more cost-efficient compliance outcomes than regulatory rigidity. There is great normative appeal to this assumption. But how much empirical evidence do we have that this regulatory model outperforms others? While the book *Responsive Regulation* is cited close to 5,000 times, only a handful of studies seeks to understand its performance in real-world settings. This limited empirical knowledge base is pervasive in regulatory scholarship.

The lack of sound knowledge on what works and what does not is problematic for the future of regulatory practice and regulatory scholarship. If the knowledge base is poor, how can we build strong regulatory systems on top of it? As Chair in Regulatory Practice, I have therefore begun to map, explore and interrogate the regulatory knowledge base. To this end, I carry out systematic reviews of the academic literature on key regulatory topics and ask: what do we know of this topic, how valid is that knowledge, and what are the most important lessons for regulatory practice and regulatory theory? Through a series of working papers and workshops, I communicate this knowledge with the regulatory practice community, and ultimately, I aim to bring the various findings together in a book for academia and practice.

Regulatory innovation at the frontlines

The third and, for here, final challenge I wish to touch on is regulatory innovation. The red thread that runs through the history of regulatory governance is an eagerness for regulatory innovation. Yet, to speak with the great sociologist of civilising and decivilising processes, Norbert Elias, this red thread—the orderly regulatory innovation that we have observed over time, 'is neither "rational"—if by

“rational” we mean that it has resulted intentionally from the purposive deliberation of individual people; nor “irrational”—if by “irrational” we mean that it has arisen in an incomprehensible way’ (Elias, 2000 [1939], 366).

I quote Elias here because, I think that academics and regulatory practitioners alike often read too much into the ‘deliberate’ processes of regulatory innovation and too little into the ‘non-deliberate’ day-to-day changing of regulatory practice within the discretionary space that regulators often have. The major paradigm shifts in regulatory governance—responsive regulation, risk regulation, behavioural insights, informed regulation, and so on—all appear to be the result of very gradual day-to-day change at the level of regulatory practice: the typical pragmatic solutions chosen at the regulatory frontlines. The results of these minor changes were, ultimately, recognised by academics who then, looking backward, distilled analytical models that have helped us to move forward.

With that in mind, I am not saying that we should stop our deliberate processes of regulatory innovation, such as regulatory sandboxes and randomised control trials. We may, however, wish to become a little more appreciative of what is happening at the regulatory frontlines, which are the largest regulatory action laboratory that we have. We need to systematically observe what is happening at the regulatory frontlines, see what we can learn, and then ask how we can scale the most promising practices that we observe. This is, indeed, a task that I wholeheartedly embrace as Professor of Public Governance here at the Victoria University of Wellington.

Closing remarks

Again, those are but three of the main regulatory challenges that I see for the years ahead. It is exciting to be in a country and working with a group of regulators that are eager to address these and other challenges.

Before I end, some words of thanks.

First, many thanks to the Government Regulatory Practice Initiative, the Treasury and the Victoria University of Wellington for appointing me. It is an absolute honour to be the inaugural Chair in Regulatory Practice.

Many thanks also to all colleagues past and present in Australia, particularly the School of Regulation and Global Governance (also known as RegNet), a string of institutions in the Netherlands, the Victoria Business School in Aotearoa, and a variety of academic organisations elsewhere for supporting me on the journey that has led me to where I am today.

Of them, Professor Peter May at the University of Washington, Seattle, USA, deserves special thanks. Peter, without your early and ongoing support in my academic career I would not have made it this far.

Many thanks as well for unlimited and ongoing support from my family in the Netherlands, my dad and mum and my brother, who unfortunately cannot be here today in person, but who have been present through the live stream. I am very glad they were able to share this moment with me, and I trust they will have an early morning 'borrel' when we break up for refreshments at the end.

Many thanks also to my good friends in the Netherlands—Joost, Joachiem, Meert—my friends in Australia and in Aotearoa for all the support and understanding you have given me over the last several years. Again, without all your support, I would not be here today.

Last, but certainly not least, many, many thanks to Olga for teaming up with me and joining me on this antipodean adventure. I cannot put into words how much I appreciate the enormous sacrifice you have made to make this possible.

And to you, ladies and gentlemen of the audience, thank you.

Ik heb gezegd,

Waiho ma te tangata e mihi.

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