

# *A Law and Economics Perspective on Judicial Risk Regulation*

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## **Abstract**

*This special issue provides several perspectives on the potential and limits of judicial risk regulation as a mechanism to redress actual and perceived regulatory failures. Central to this inquiry is the legitimacy of the court system to act as a risk regulator, specifically as compared to governmental actors. This article focuses on the question of institutional competency of juridical risk regulators from a law and economics (“L&E”) perspective. L&E scholarship will be used to help to understand the relative strengths and weaknesses of courts as risk regulators and helps us decide when courts may act as substitute risk regulators and when they are better positioned as complements.*

## I. INTRODUCTION

We live in an increasingly complicated and “risky” world. We attempt to mitigate these risks by imposing responsibilities on the actors involved in risky activities and by regulating, or prohibiting, the activities themselves. Scientific and technological advancements pose evolving challenges to the regulation of risk, as can be seen in the regulation of new technologies and of complex problems such as climate change.<sup>1</sup> Risk regulation itself has become a contested activity, raising questions regarding the nature of information, the acceptability of risk,<sup>2</sup> the distinction between perceived and actual risk,<sup>3</sup> the timespan during which risks may materialise,<sup>4</sup> and, perhaps most importantly, choice of risk regulator – a governmental agency, the judiciary, insurance companies.<sup>5</sup>

The recent *Urgenda* judgment brings many of these questions to the fore.<sup>6</sup> In *Urgenda*, the question before the The Hague District Court was whether the Dutch

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<sup>1</sup> On new versus old risks, see P Huber, “The Old-New Division in Risk Regulation” (1983) 69(6) *Virginia Law Review* 1025; on the challenges of climate change regulation see R Lazarus, “Super wicked problems and climate change: Restraining the present to liberate the future” (2009) 94 *Cornell Law Review* 1153.

<sup>2</sup> See eg P Slovic, Fischhoff and Lichtenstein, “Facts and Fears: Understanding Perceived Risk” in R Schwing and W Albers Jr. (eds), *Societal Risk Assessment: How Safe is Safe Enough?* (Springer 1980) 181.

<sup>3</sup> P Slovic, “Perception of Risk” (1983) 236 *Science* 280.

<sup>4</sup> See eg W Felstiner and P Seigelman, “Neoclassical Difficulties: Tort Deterrence for Latent Injuries” (1989) 11 *Law & Policy* 309.

<sup>5</sup> For further discussion of legal conceptions of “legitimacy”, see the contribution of M Loth in this special issue.

<sup>6</sup> Relevant facts and sections of the case will be discussed in detail in Section IV below. For a detailed discussion of the case see J van Zeben, “Establishing a Governmental Duty of Care for Climate Change Mitigation: Will *Urgenda*

government could be held liable under tort law for exposing the Dutch population to the *risk* of dangerous anthropogenic climate change.<sup>7</sup> The Court held that it could and that the existing mitigation policy was insufficient to discharge its duty of care.<sup>8</sup> While the Court's judgment was based on Dutch tort law, it relied heavily on international scientific consensus regarding the likelihood of climate change and its associated risks in determining the standard of care, as well as international obligations regarding climate change mitigation;<sup>9</sup> having identified several sources of "valid" information, the Court found the governmental actions that had been taken to prevent, or at least reduce, these risks to be unacceptable.<sup>10</sup>

The societal and academic impact of this judgment, despite coming from a district court and therefore subject to appeal, has already been profound. This article uses the *Urgenda* judgment as the backdrop for two analytical points that have thus far been undervalued in the academic debate on judicial risk regulation: firstly, it considers the institutional puzzle of courts as risk regulators from a law and economics ("L&E") perspective, focusing specifically on the relative institutional strengths of courts to efficiently and effectively regulate risk as compared to governmental agents; second, it distinguishes between different types of judicial risk regulation and shows how *Urgenda* represents a new "hybrid" form where tort law is used to judicially review governmental (in)action. L&E provides an extra-legal perspective on the value and dangers of this particular type of judicial risk regulation.

The remainder of this article is structured as follows: Section II introduces three types of judicial risk regulation. Section III shows how the extra-legal perspective offered by law and economics can play a particularly valuable role in evaluating the judicial role in risk regulation, as it helps us map the relative institutional strengths and weaknesses of courts vis-à-vis governmental actors. Section IV explores the new "hybrid" form of judicial risk regulation as exemplified by the *Urgenda* decision and how L&E insights may be used to assess judicial competence and desirability in this type of case.

## II. TYPES OF JUDICIAL RISK REGULATION

Courts act as risk regulators by assigning responsibility for certain actions, and the risks they entail, to specific actors. Judicial risk regulation most commonly takes place through tort law, aimed primarily at the behaviour of private actors, and judicial review, aimed at governmental decisions on the regulation of risk. *Urgenda* represents a case where these two types are combined: a tort action against the government, which may lead to judicial review of governmental policy.

Judicial risk regulation through tort law regulates risky activities undertaken by – primarily – private actors. In most legal systems, tort law places a duty of care on one

*(Footnote continued)*

Turn the Tide?" (2015) 4(2) *Transnational Environmental Law* 339 and K de Graaf and J Jans, "The Urgenda Decision: Netherlands Liable for Role in Causing Dangerous Global Climate Change" (2015) 27(3) *Journal of Environmental Law* 517.

<sup>7</sup> *Stichting Urgenda v Government of the Netherlands (Ministry of Infrastructure and Environment)*, ECLI:NL:RBDHA:2015:7145, Rechtbank Den Haag, C/09/456689 / HA ZA 13-1396 (*Urgenda*), para. 4.1.

<sup>8</sup> *ibid.*, para. 4.73.

<sup>9</sup> *ibid.*, paras. 4.19 and 4.71.

<sup>10</sup> *ibid.*, paras. 4.55 and 4.65.

party (the injurer), which if breached, makes the injurer liable for damages suffered by another party (the victim) as a result of that breach.<sup>11</sup> Courts play a determinative role in many steps of this process, as they must establish whether the harm suffered is legally “relevant” (harm), the actions of the injurer led to the harm suffered (causation), and whether the injurer breached her duty of care (tort/liability). The form and function of the latter assessment depends on the type of liability imposed on the injurer; in cases of strict liability, the level of care becomes immaterial – if the injurer’s behaviour caused the harm, she is liable. In cases of negligence, the court has significantly more discretion, as the level of care take by the injurer becomes decisive: the injurer will only be liable if she acted without taking sufficient care. In establishing the latter, the court has two tasks: first, it must determine which party is best placed to avoid or mitigate the potential harm resulting from a risky activity; second, it must assess what is the appropriate level of care given the costs and benefits of the activity and the potential harm.<sup>12</sup> Aside from liability under strict liability and negligence, a party might also be liable for the breach of a statutory duty. In this case, the legislator has determined the appropriate duty of care and the court is tasked with enforcing this duty of care.

In the context of judicial risk regulation, negligence-based liability is most relevant, as it empowers the court to determine the acceptable risk level of the regulated activity. The need for this independent assessment of risk lies in the possibility of the injurer to externalise her risk on other parties, which would result in inefficiently low levels of care (ie lower than would be socially optimal).<sup>13</sup> Tort law thus has a risk regulation function – measures are taken to reduce the risk that harm may materialise by forcing parties to take (additional) care – as well as a compensatory function – the victim is compensated for (some of) the harm suffered. As a remedy, tort law tends to be categorised as an *ex post* solution: the harm needs to have materialised before the court can impose a penalty. This characterisation is insufficiently precise for several reasons,<sup>14</sup> one example being that courts may also be asked to issue injunctions to prevent certain activities from taking place, or continuing, based on the associated risk and/or expected harm.<sup>15</sup>

Judicial risk regulation can also take place through the judicial review of governmental decisions. In these cases, the question before the court may not be directly related to the assessment of risk; rather, the legality of the governmental measure – broadly understood – will be the focus of the review. Depending on the scope for judicial review in the relevant jurisdiction,<sup>16</sup> the court may have more or less discretion to critique the risk assessment of the government and any subsequent action or inaction. In situations of judicial review, other constitutional principles become immediately

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<sup>11</sup> The decisions in a specific case may have a general deterrent effect. This may affect the deliberations of the court.

<sup>12</sup> S Shavell, “On Liability and Insurance” (1982) 13(1) *Bell Journal of Economics* 120.

<sup>13</sup> K Hylton, “Duty in Tort Law: An Economic Approach” (2006) 75 *Fordham Law Review* 1501.

<sup>14</sup> As will be discussed in more detail in Section IV.

<sup>15</sup> In these cases, courts may be considered risk regulators in lieu of governmental action. See also E de Jong’s contribution to this issue, on the role of civil courts in case of governmental inaction.

<sup>16</sup> The limits of judicial review vary between jurisdictions – on the UK, see M Fordham, *Judicial Review Handbook* (Hart Publishing 2012); on the US, see KL Hall, *Judicial Review and Judicial Power in the Supreme Court: The Supreme Court in American Society* (Routledge 2014). On the practice and scope of such review in the EU, see C Anderson, “Contrasting models of EU administration in judicial review of risk regulation” (2014) 51 *Common Market Law Review* 425.

relevant, such as the separation of powers doctrine. This doctrine tends to empower the judiciary to provide a check on the executive and/or legislature but also looks to ensure the judiciary does not take the place of the legislature and/or one of its agencies.<sup>17</sup>

The *Urgenda* case introduced a third form of judicial risk assessment, which combines, intentionally or unintentionally, these two forms of judicial risk regulation. The *Urgenda* decision was founded in Dutch tort law and centred on the establishment of a duty of care for the Dutch government regarding the mitigation of the risks associated with anthropogenic climate change. The Court established the existence of such a duty of care and clarified that the current governmental policy was insufficient to discharge of this duty.<sup>18</sup>

However, the injurer in *Urgenda* differs from a private tortfeasor in important ways. Governments can only “externalise” costs in limited ways: to different societal groups, to actors outside of its jurisdiction or to future generations that do not currently have a vote. The dynamics between the political actors involved and the different parties affected have been studied as part of Public Choice theory,<sup>19</sup> which demonstrates that political actors are susceptible to pressure by small interest groups which may result in socially sub-optimal outcomes. This undermines the government’s position as regulator.<sup>20</sup> However, it is very difficult to empirically separate regulations that improve the public interest and those that only serve the interests of certain governmental agents.<sup>21</sup> Therefore, while the types of choices regarding risk distribution are imperfect and at times controversial, many continue to consider the government best placed to make such an assessment.<sup>22</sup>

In addition, one could argue that in determining the standard of care, a species of judicial review took place; the Court considered evidence on the risk of climate change and its consequences in order to determine the appropriate standard of care. Based on its own assessment of this evidence, it decided that the government’s assessment of similar evidence, and its subsequent policies, were insufficient to fulfil the duty of care. This can be distinguished from a situation where the Court had followed the government’s assessment of the risk and had based the level of care needed on that assessment. In traditional judicial review the courts are not empowered to replace the government’s decision with their own, rather they force the government to retake its decision.<sup>23</sup>

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<sup>17</sup> See eg A Kavanagh, “The Constitutional Separation of Powers” in D Dyzenhaus and M Thorburn, *Philosophical Foundations of Constitutional Law* (Oxford University Press 2016).

<sup>18</sup> *Urgenda*, supra, note 7, para. 4.84.

<sup>19</sup> For an overview, see C Rowley and F Schneider (eds.), *The Encyclopedia of Public Choice* (Springer 2004).

<sup>20</sup> See eg R Cass, “The Meaning of Liberty: Notes on Problems Within the Fraternity” (1985) 1 *Notre Dame Journal of Law, Ethics and Public Policy* 777, at 790 (“Take almost any government program at random, and a ‘special interest’ counter-majoritarian explanation can be found that is more plausible than the public interest justification given for it”).

<sup>21</sup> See J Macey, “Transaction Costs and the Normative Element of the Public Choice Model: An Application to Constitutional Theory” (1988) 74 *Virginia Law Review* 471.

<sup>22</sup> Especially when compared to eg the market. See C Hood, H Rothstein and R Baldwin, *The Government of Risk: Understanding Risk Regulation Regimes* (Oxford University Press 2001) 90 et sqq. See also P Kahn, “The politics of unregulation: Public choice and limits on government” (1990) 75(2) *Cornell Law Review* 280 (arguing that the influence of interest groups does not necessarily speak against governmental regulation, but rather for the regulation of interest group behaviour).

<sup>23</sup> The extent to which the court can provide the parameters of what would constitute an acceptable decision varies between legal systems. For example, in the UK, deference plays a key role in judicial review, severely limiting the space for acceptable guidance. A Kavanagh, “Defending deference in public law and constitutional theory” (2010) *Law Quarterly Review* 222; J Rivers, “Proportionality and variable intensity of review” (2006) *Cambridge Law Journal* 174.

Each of the types of judicial risk regulation set out above draws on different strengths of the courts vis-à-vis other risk regulators, including the government and private actors. Depending on the perspective adopted (eg a legal or L&E perspective) certain strengths will weigh more heavily, and will be measured differently, than others. The L&E perspective – and the types of questions it would pose with respect to each form of judicial risk regulation – will be set out in detail in the next section.

### III. A LAW AND ECONOMICS PERSPECTIVE ON JUDICIAL RISK REGULATION

L&E scholarship provides us with tools for the choice between the government – or another type of social planner – and the court as risk regulator.<sup>24</sup> This section outlines the L&E lessons as to which institution can set optimal rules, involving lowest total (ie private and social) cost. Before doing so, the first sub-section will briefly discuss how L&E views risk and the aims of risk regulation. As will become clear from our discussion, these aims are not necessarily shared with legal scholars, which may explain for some of the difference between these two approaches. The second and third sub-sections will set out the main lessons of L&E scholarship regarding this issue and the implications of these findings regarding our questions on the judicial competence to act as risk regulators and the desirability for them to do so.

#### 1. Defining risk and risk regulation

Risk can be viewed in two interrelated ways:<sup>25</sup> first, risks can be conceptualised as potential harms arising from an activity. Typically, but not necessarily, these harms affect third parties: someone other than the person undertaking the risky activity.<sup>26</sup> When risk is viewed as the potential for harm, risk regulation, or rather management, then refers to methods aimed at preventing, distributing and/or compensating potential harms. This goes back to tort law as a form of judicial risk regulation: by imposing a duty of care, or strict liability, on the potential injurer, she can no longer externalise potential harms on third parties.<sup>27</sup>

A second way to conceive of risk is as a situation of imperfect information.<sup>28</sup> Risk analysis, the three-step process used by most leading jurisdictions, tends to be broken down in risk assessment, risk management and risk communication.<sup>29</sup> *Risk assessment* involves assessing and quantifying the probabilities and magnitudes of hazards associated with particular behaviours and policies. *Risk management*, in contrast, involves policy-based decisions about which, and how, risks will be reduced or tolerated. The latter tends to be viewed as more political than the former, even though this position

<sup>24</sup> As will be discussed later in this section, courts were primarily viewed as substitutes rather than complements, but this changed over time.

<sup>25</sup> While analytically distinct, these two conceptions of risk are often interrelated, as we tend to be imperfectly informed about the risks involved in a certain activity.

<sup>26</sup> Shavell, *supra*, note 12.

<sup>27</sup> See eg I Gilead, “Tort Law and Internalization: The Gap Between Private Loss and Social Cost” (1997) 17(4) *International Review of Law and Economics* 589.

<sup>28</sup> M Flearbaey, “In defence of the ex-post evaluation of risk” (2010) 3, available at <[www.law.upenn.edu/institutes/ceerl/conferences/prioritarianism\\_papers/AdditionalPapers/FleurbayNotesAdler.pdf](http://www.law.upenn.edu/institutes/ceerl/conferences/prioritarianism_papers/AdditionalPapers/FleurbayNotesAdler.pdf)>.

<sup>29</sup> See eg European Commission, *Communication on the Precautionary Principle*, Com (2000).

becomes less defensible in situations of scientific uncertainty,<sup>30</sup> and “politicised science”.<sup>31</sup> Nevertheless, the division of labour between governmental actors continues to reflect this assumption: risk assessment is typically done by specialist agencies whereas decisions regarding risk management are often in the hands of the legislature.<sup>32</sup>

Information is particularly vital in the risk assessment stage, as our ability to assess the level of risk, and/or the likelihood of harm, varies between activities.<sup>33</sup> This will also put additional burden on the risk management part of the process as the decision-maker will have to rely more heavily on her discretion. Risk assessment could be seen an exercise in gathering as much valid information as possible so as to take informed decisions.<sup>34</sup> However, gathering information is costly.<sup>35</sup> From an L&E perspective, being optimally informed may therefore mean being imperfectly informed.<sup>36</sup>

Our conceptualisation of risk, at least partially, informs which of the institutions we consider best placed to regulated risks. For example, we tend to have more information about the risk once the harm has materialised.<sup>37</sup> While it can then no longer be prevented, the question of compensation may be answered more accurately than if such an assessment had been made *ex ante*.<sup>38</sup> Relatedly, many risky activities result in benefits as well as costs, but not necessarily for the same (group of) people. The distributional consequences of such risks tend to be left to governmental agents, which have a more inclusive view of the situation than a court faced with two parties in one case.<sup>39</sup>

Both legal and L&E scholars recognise these two conceptualisations of risk. However, the emphasis placed on each differs depending on our perspective, as do the strategies connected to them. On questions of distribution, the legal perspective prioritises justice concerns,<sup>40</sup>

<sup>30</sup> See eg O Renn, *Risk Governance: Coping with Uncertainty in a Complex World* (Earthscan 2008); M Granger Morgan and M Henrion, *Uncertainty* (Cambridge University Press 1990); A Giddens, “Risk and Responsibility” (1999) 62 *Modern Law Review* 1.

<sup>31</sup> R Redding, “Politicized Science” (2013) 50 *Society* 439.

<sup>32</sup> See eg E Beecher-Monas, “The Heuristics of Intellectual Due Process: A Primer for Triers of Science” (2000) 75 *New York University Law Review* 1563; for a European perspective, see A Alemanno, “The shaping of the precautionary principle by European courts from scientific uncertainty to legal certainty” in L Cuocolo and L Luparia (eds), *Valori costituzionali e nuove politiche del diritto - Scritti raccolti in occasione del decennale della rivista* (Cahiers Européens Halley 2007).

<sup>33</sup> See Huber, *supra*, note 1.

<sup>34</sup> This can also be viewed as a type of risk regulation if the risk itself is caused by the lack of information.

<sup>35</sup> Information costs are a species of transaction costs which can complicate decision-making and lead to an inefficient distribution of resources, see R Coase, “The Problem of Social Costs” (1960) 3 *Journal of Law and Economics* 1. For an early application to political decision-making, see D North, “A Transaction Cost Theory of Politics” (1990) 2(4) *Journal of Theoretical Politics* 355.

<sup>36</sup> For an example of this from the field of environmental regulation, see E Kwerel, “To Tell the Truth: Imperfect Information and Optimal Pollution Control” (1977) 44(3) *The Review of Economic Studies* 595. This also depends on the types of information that the decision-maker has access to (see S Morris and H Song Shin, “Social Value of Public Information” (2002) 92(5) *The American Economic Review* 1521).

<sup>37</sup> Also, here the choice of regulator matters, especially when faced with “new” harms, which may be catastrophic or it is unclear who will be affected. The consensus has been that *ex ante* regulation tends to be more equitable, see Flearbaey, *supra*, note 28.

<sup>38</sup> *ibid.*

<sup>39</sup> *ibid.*

<sup>40</sup> See generally C Foreman, *The Promise and Peril of Environmental Justice* (Brookings Institution 1998). See also V Been, “What’s Fairness Got to Do With It? Environmental Justice and the Siting of Locally Undesirable Land Uses” (1993) 78(6) *Cornell Law Review* 1001.

although controversial and hard to quantify,<sup>41</sup> over efficiency or social welfare criteria as prioritised by L&E scholarship.<sup>42</sup> Similarly, legal reasoning relies heavily on legal principles that can be traced back to specific constitutional and jurisdictional contexts. For example, in the environmental context, the precautionary principle is meant to guide courts and regulators in determining acceptable levels of risk and activity.<sup>43</sup> This may not always result in the most efficient regulation of risk, which would be prioritised by L&E scholars. Even in situations where both perspectives reach the same conclusions as to the nature of the risk, consequent conclusions regarding the type of regulation or regulator can easily diverge depending on our view on the *aim* of risk regulation.

L&E scholarship focuses on non-system specific rules that look to optimise rules and institutions in order to achieve efficiency.<sup>44</sup> In the context of risk regulation, this can be summarised as: adopting those rules that ensure optimal internalisation of potential harm, leading to optimal levels of precaution and/or activity.<sup>45</sup> In order to achieve this aim, the parties involved in risky behaviour – the “injurer” and the “victim” – have to be incentivised to “optimise” their behaviour.<sup>46</sup> This optimisation aims to ensure that social costs of the activity are minimised and that the costs of reducing risks are incurred by the person best placed to affect them – typically the potential injurer.<sup>47</sup>

The aim of risk regulation can also be tailored to the informational conceptualisation of risk. From an L&E perspective, information can play a number of roles in risk regulation: (lack of) information can create transaction costs, especially if information is asymmetric between parties.<sup>48</sup> The locus of information is vital, both with respect to the information (made) available to the regulator and the information that actors have regarding their own behaviour. Increased levels of information lead to more accurate risk assessment and an increased ability to optimise behaviour. When information is imperfect or asymmetrical, optimal risk regulation is less likely. Risk regulation can therefore also aim at optimising information as a precursor to optimising behaviour, distribution or compensation decisions. Conversely, the type of regulation or regulator

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<sup>41</sup> See R Bass, “Evaluating Environmental Justice under the National Environmental Policy Act” (1998) 18(1) Environmental Impact Assessment Review 83.

<sup>42</sup> See generally C Kolstad, T Ulen and G Johnson, “Ex Post Liability for Harm vs. Ex Ante Safety Regulation: Substitutes or Complements?” (1990) 80(4) The American Economic Review 888. While L&E’s normative focus relates primarily to optimisation in terms of costs and benefits of risky activities, this does not necessarily exclude other considerations, such as equity concerns, see eg Flearbaey, *supra*, note 28.

<sup>43</sup> See eg V Heyvaert, “Facing the Consequences of the Precautionary Principle in European Community Law” (2006) 31 European Law Review 185; E Fisher, “Is the Precautionary Principle Justiciable?” (2001) 13 Journal of Environmental Law 315. While these principles tend to be referenced across jurisdictions, they are not necessarily applied or interpreted in the same way.

<sup>44</sup> The traditional lack of regard for institutional specifics in L&E scholarship has been widely criticised and recent scholarship is paying increasing attention to these features. While of crucial importance, the incorporation of such institutional specifics must be distinguished from the role of constitutional context in legal scholarship as the underlying principles do not change between systems. For legal scholarship, the aims of risk regulation depend almost entirely on institutional context, see eg difference with precautionary *approach* in the US, as compared to the EU’s precautionary principle. See J Wiener and M Rogers, “Comparing precaution in the United States and Europe” (2002) 5(4) Journal of Risk Research 317.

<sup>45</sup> See Kolstad, Ulen and Johnson, *supra*, note 42.

<sup>46</sup> *Ibid.* See also S Shavell, “Liability for Harm Versus Regulation of Safety” (1984) 13 Journal of Legal Studies 357.

<sup>47</sup> Shavell, *supra*, note 46 and note 12.

<sup>48</sup> See R Coase, “The Nature of the Firm” (1937) 4 *Economica* 386.

can also influence the amount of information available. Information can thus be considered as endogenous *or* exogenous to the type of risk regulator/regulation.<sup>49</sup>

## 2. Judicial versus governmental risk regulation

L&E scholarship typically portrays the choice between governmental and judicial risk regulation as a choice between an *ex ante* regulatory regime or *ex post* liability regime.<sup>50</sup> A judicially-enforced liability regime is characterised as “*ex post*” as it imposes liability for manifested harms and thereby ensures compensation of parties that have suffered harm due to materialised risks.<sup>51</sup> Conversely, governmental regulation is aimed at minimising the costs related to risky activities through the *ex ante* regulation of risks,<sup>52</sup> for example through the imposition of standards or requirements on those involved in risky activities. The relative strengths of courts and governmental actors in administering these systems depend on the type of risk and harm being regulated, and the characteristics of the regulators. We will start by focusing on the former.

Generally speaking, *ex post* compensation will only be effective in cases where we can be certain that the threat of *ex post* liability will result in preventative action, ie deterrence.<sup>53</sup> In situations of complex, geographically and/or temporally dispersed harm, *ex ante* regulation of the risk may be preferable over the imposition of *ex post* liability for several reasons:<sup>54</sup> firstly, there can be procedural difficulties, such as having to prove causation – a key requirement in most legal systems for establishing liability.<sup>55</sup> This may be impossible for certain (groups of) victims, precluding compensation and any specific or general deterrent effect created by the imposition of liability. Dispersed harm similarly tests the limits of *ex post* regimes, as it may be difficult to identify victims and/or injurers to which to award compensation/ assign liability. Secondly, *ex ante* regulation may be more effective for injurers with certain characteristics – particularly so-called “litigation proof” injurers.<sup>56</sup> The imposition

<sup>49</sup> See G Dari-Mattiacci and J van Zeven, “The Transaction Costs of Legal Remedies” (draft, on file with author).

<sup>50</sup> While this implies that these two mechanisms act as substitutes, or alternates, rather than compliments, this is seldom the case. Most systems employ a combination of these mechanisms as will be discussed in more detail below.

<sup>51</sup> L Kaplow and S Shavell, “Property Rules Versus Liability Rules: An Economic Analysis” (1996) 109 Harvard Law Review 713. As discussed above, the imposition of liability is not the only type of judicial risk regulation, and indeed not even the only tool available under most tort systems: courts can also issue injunctions or, as shown by the *Urgenda* case, change government policy on certain issues. The term “liability” as used here should be understood as referring to those measures available under tort law (compensation and injunction), while excluding judicial review and the new type of decisions taken in *Urgenda*.

<sup>52</sup> It should be noted that some harm is too expensive to avoid, in which case, risk regulation is geared towards the distribution of potential harm rather than towards its prevention. I am grateful to an anonymous reviewer for underlining this point, which had gone undiscussed in previous versions of this article.

<sup>53</sup> See eg M Katzman, “Pollution Liability Insurance and Catastrophic Environmental Risk” (1988) 55(1) Journal of Risk and Insurance 75; D Faber, “Tort law in the era of climate change, Katrina, and 9/11: Exploring liability for extraordinary risks” (2008) 43 Valparaiso University Law Review 1075.

<sup>54</sup> See in detail, B Galle, “In Defense of Ex Ante Regulation” (2015) 68 Vanderbilt Law Review 1715.

<sup>55</sup> See generally C Sappideen and P Vines (eds), *Fleming’s The Law of Torts* (10th edn, Thomson Reuters 2011) ch 9.

<sup>56</sup> If an injurer is labelled “litigation proof” this typically means they are insensitive to financial incentives. One could, however, also envisage a different type of litigation proof injurer, namely those actors that are not subject to the jurisdiction of (certain) courts, such as governments or governmental agents. Gillette and Krier contrast this type of situation with a situation of private risk, where the obstacles to recovery are relatively low. While the author does not agree with their characterisation of public risk, some of the obstacles identified for public “risks” are relevant in this



of ex post liability is aimed at providing incentives to potential injurers to take (optimal levels of) care, as failure to do so would result in the payment of compensation. However, if the injurer is insensitive to such penalties (is “litigation proof”), these incentives will not be effective and ex ante regulation may be preferable.<sup>57</sup> Finally, the overall cost of using the court system in terms of time and resources needed to achieve compensation (as compared to a governmental default rate, or better, prevention of the harm) continues to weigh against the judicial risk regulator in terms of cost-effectiveness. This cost is, however, difficult to quantify and given the compliance and enforcement costs involved in ex ante regulation, which tend to increase with complexity of the regulated activity, the respective costs of ex ante and ex post regulation is hard to quantify.<sup>58</sup>

There are also strengths to ex post judicial risk regulation; firstly, at the moment that the court is asked to impose liability for harm, the risk will have materialised. Courts thus tend to have more information than the social planner might have had before the risk has materialised.<sup>59</sup> This allows for greater accuracy in assessing damages, particularly for uncertain risks, and correspondingly provides more information regarding the optimal level of care by the injurer and/or victim.<sup>60</sup> It also allows for a greater level of initial flexibility and experimentation regarding risks, which can be particularly valuable for “new” risks associated with activities that may prove to be valuable for society.<sup>61</sup> This dynamic is also a closer reflection of the purpose and effect of a duty of care, which is not limited to compensation; rather, the duty of care and related compensation also aim to change future behaviour when engaging in risky activities. Second, one must consider the speed with which regulators and courts can respond to changes in information. Court-based injunctions may be used to, at least temporarily, halt activities, which prove to be more harmful than anticipated, while changing regulation may take much longer as a new regulatory standard must be set. This is not to say that the judicial process is not subject to its own limitations regarding speed of process and trial, but the ability of the judiciary to respond to changed circumstances in its rulings often allows for more dynamic changes than the legislative route.

Thus far we have focused on the type of rules that certain regulators tend to adopt and how well they may be suited for certain risks and/or parties affected by the risk. However, the *choice of regulator* has also been found to affect the behaviour of the

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(*F*note continued)

context (see C Gillette and J Krier, “Risk, Courts, and Agencies” (1990) 138 *University of Pennsylvania Law Review* 1027, 1046).

<sup>57</sup> See Shavell, *supra*, note 46; and S Shavell, *Economic Analysis of Accident Law* (Harvard University Press 1987).

<sup>58</sup> See eg R Innes, “Enforcement costs, optimal sanctions, and the choice between ex-post liability and ex-ante regulation” (2004) 24 *International Review of Law and Economics* 29 (showing that ex-ante regulation can be more efficient than imposing ex-post liability even when the government’s cost of monitoring care is significantly higher than the cost of monitoring accidents (as needed under ex-post liability)).

<sup>59</sup> See eg Flearbaey, *supra*, note 28.

<sup>60</sup> It is important to note that the ex post assessment of risky situations can result in “hindsight bias”. Psychological research has shown that ex post assessors of risk are more likely to find decisions taken by actors in foresight negligent, indicating that decisions made in foresight will almost invariably be judged harshly by those with hindsight. See K Kamin and J Rachlinski, “Ex Post ≠ Ex Ante: Determining Liability in Hindsight” (1995) 19(1) *Law and Human Behavior* 89.

<sup>61</sup> Huber, *supra*, note 1. See also C Ott and H Schäfer, “Negligence as Untaken Precaution, Limited Information, and Efficient Standard Formation in the Civil Liability System” (1997) 17 *International Review of Law and Economics* 15.

regulatee, as distinct from the choice of rule.<sup>62</sup> One explanation for this is the (perceived) imperfect assessment of care by the courts. A key determinant in assessing liability is the level of care taken by the injurer; under negligence, the injurer is only liable if her level of care falls short of the duty of care imposed by the court.<sup>63</sup> The ability of courts to observe the care taken by the injurer is typically imperfect, which can lead injurers to take excessive care, rather than optimal care, in order to avoid liability.<sup>64</sup> This can be true even when the liability rule itself is set at the optimal level.<sup>65</sup>

These respective strengths and weaknesses are based on stereotypes of ex ante and ex post regulation. In reality, the dividing line drawn between ex ante and ex post regulation is rather blurred. The traditional juxtapositioning of judicial and governmental risk regulation assumes that the two function primarily, or even exclusively, as substitutes: one either imposes a regulatory regime or a liability regime.<sup>66</sup> In practice, we tend to see a combination of these two regimes. For example, regulatory compliance does not necessarily provide a (full) defence against the ex post imposition of liability.<sup>67</sup> Early explanations given for situations where ex post and ex ante regimes act as complements rather than substitutes focus on the failings of liability as a regulatory mechanism, such as those mentioned previously: inefficiencies caused by uncertainty about the court's behaviour,<sup>68</sup> the presence of litigation proof injurers, and enforcement errors.<sup>69</sup>

Ex ante regulation is presumed to be equally inefficient for different reasons: the presumption of a single regulator standard applied to all injurers;<sup>70</sup> the "capture" of regulatory agencies by regulatees, where asymmetries in information or other power dynamics are abused so as to shape regulation in the interest of the regulated parties rather than the societal interest;<sup>71</sup> or is assumed to work perfectly.<sup>72</sup> Neither of these stereotypes accurately reflect the complex dynamic within and between these types of regulatory regimes. Specifically the role of interest groups – including regulated groups as well as groups of voters that may prefer (de)regulation – is complex and insufficiently clear in models that treats regulation and liability as alternatives; the courts can, and are, used by these interest groups in very similar ways as governmental actors, for example through strategic litigation.<sup>73</sup> The specifics of the legal system under examination

<sup>62</sup> For a broader discussion of types of ex ante regulation, see J Salzman, "Teaching Policy Instrument Choice in Environmental Law: The Five P's" (2013) 23 *Duke Environmental Law & Policy Forum* 363.

<sup>63</sup> This is different under a strict liability regime where the level of care is immaterial. See Shavell, *supra*, note 46.

<sup>64</sup> P Diamond, "Single activity accidents" (1974) 3 *Journal of Legal Studies* 107; R Craswell and J Calfee, "Deterrence and Uncertain Legal Standards" (1986) 2(2) *Journal of Law, Economics, and Organization* 279.

<sup>65</sup> *ibid.*

<sup>66</sup> Early work on this includes Shavell, *supra*, note 46 and Kolstad, Ulen and Johnson, *supra*, note 42, 888.

<sup>67</sup> A Schwartz, "Statutory interpretation, capture, and tort law: the regulatory compliance defence" (2000) 2(1) *American Law and Economics Review* 1.

<sup>68</sup> Kolstad, Ulen and Johnson, *supra*, note 42. See also C Ewerhart and P Schmitz, "Ex post liability for harm vs. ex ante safety regulation: substitutes or complements?" (1998) 88 *American Economic Review* 1027.

<sup>69</sup> Latter two points raised by Shavell, *supra*, note 46.

<sup>70</sup> *ibid.*

<sup>71</sup> See references cited in notes 19 and 20.

<sup>72</sup> Kolstad, Ulen and Johnson, *supra*, note 42.

<sup>73</sup> See eg J Peel and H Osofsky, *Climate Change Litigation: Regulatory Pathways to Cleaner Energy* (Cambridge University Press 2015) at 106 (discussing the deregulatory litigation efforts of industry in Australia and the US regarding pollution control).

determine whether the courts are more or less protected than governmental actors against such pressures.<sup>74</sup>

Depending on the identified drivers for the complementarity of judicial and governmental risk regulation, different conclusions can be drawn regarding the impact of this complementarity on the respective mechanisms. For example, Kolstad et al found that it may be inefficient to set the ex ante regulatory standards at the socially optimal level if there is also an ex post liability scheme in place.<sup>75</sup> Later work, which has relaxed the assumption that enforcement under liability schemes is subject to persistent errors, found that regulation and liability can only be optimally combined when faced with injurers that have varying levels of wealth.<sup>76</sup> Rather than providing conclusive answers to the best combined use of ex post and ex ante regulation, this body of literature highlights which factors may be considered when deciding between (stylised) types of regulatory regimes.

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The implications of L&E research regarding the strengths and weaknesses of judicial risk regulation can be summarised across three dimensions: First, the *institutional comparison* between courts and governmental agencies as risk regulators depends on the characteristics of: the risk that is regulated; the parties engaged in, or affected by, the risky activity; the type of harm; and, the availability of certain information. Second, using the judicial system for risk regulation can impose *costs* on the parties involved and the system as a whole, but these costs are not necessarily higher than the costs involved in setting, monitoring and complying with regulatory standards – much will depend on the efficiency of the rule set by either the judicial or governmental risk regulator. Third and finally, as may be expected, people's *behaviour* is affected by the choice of regulator *as well as* the type of rule. Through these tripartite insights, L&E scholarship outlines the factors that influence the relative strengths of judicial versus governmental risk regulation (as summarised in Table 1).

However, these lessons are limited in several ways. Firstly, first generation L&E scholarship was based on highly formalised assumptions regarding the characteristics of the legal system and the behaviour of the actors involved. One of these assumptions is that all actors would behave rationally – ie that they would pursue their goals in the most efficient way consistent with the information available to them.<sup>77</sup> This assumption has been taken to task by inter alia behavioural law and economics scholarship, which is starting to move past this rationality assumption in search of alternative theories. That said, a complete alternative to rational choice is yet to be provided. This research has

<sup>74</sup> See eg P Rubin, "Public choice and tort reform" in W Shughart II and R Tollison (eds), *Policy Challenges and Political Responses: Public Choice Perspectives on the Post-9/11 World* (Springer 2005) at 223 (discussing the susceptibility of lawyers to rent-seeking in the US tort system).

<sup>75</sup> Kolstad, Ulen and Johnson, *supra*, note 42, 889.

<sup>76</sup> P Schmitz, "On the joint use of liability and safety regulation" (2000) 20 *International Review of Law and Economics* 371–382. For further extensions and applications, see Y Hiriart, D Martimort and J Pouyet, "On the optimal use of ex ante regulation and ex post liability" (2004) 84 *Economics Letters* 231 (on the effect of allowing ex ante bargaining on regulatory tools); P Calcotta and S Hutton, "The choice of a liability regime when there is a regulatory gatekeeper" (2006) 51 *Journal of Environmental Economics and Management* 153 (on the role of information and regulator biases).

<sup>77</sup> D Green and J Fox, "Rational Choice Theory" in W Outhwaite and S Turner (eds), *The SAGE Handbook of Social Science Methodology* (SAGE 2007) 269.

**Table 1.** Strengths of judicial and/or governmental risk regulation

Factor	Regulator	
	Judiciary Strengths	Governmental agent Strengths
Type of risk	Private risks (where discretion is needed as to level of care) “New” risks	Uniform private risks Systemic risks
Type of harm	Concentrated Immediate Clear causality	Geographically or temporally dispersed Irreversible Latent Catastrophic
Information	Incomplete information	Full information
Type of injurer	Identifiable injurer(s) – with joint or several liability	“Litigation proof” injurers
Type of victim	Identifiable individual or group	Dispersed or disenfranchised victims

provided important lessons on the motivators of individuals and institutional actors alike, which forces us to nuance many of the findings found in the more formalistic models of first generation L&E.<sup>78</sup> Similarly, early models paid limited attention to the institutional specifics of different legal systems. New institutional work – influenced by law and society literatures – is moving beyond the generic “court” and “government” models that were used to model these scenarios, making findings both more accurate and less easily generalisable.<sup>79</sup>

Second, the dichotomy between judicial and governmental risk regulation as set out above, does not take account of the fuller range of risk regulation types that courts can engage in.<sup>80</sup> Instead, a generic ex post liability regime is used as a default. When we consider the role of courts in judicial review and/or the hybrid form of risk regulation as exemplified by the *Urgenda* case, the distinction between governmental and judicial risk regulation becomes immediately less pronounced; not least because the focus of L&E research as described above is geared towards regulating the behaviour of private actors. When we consider the courts’ ability to regulate governmental behaviour, many considerations remain constant, including the nature of the regulated risk. This would suggest that we can continue to use the insights provided by L&E based on the benchmark of relative efficiency and effectiveness, and to assess the competence and desirability of judicial risk regulation based on these two normative criteria.

<sup>78</sup> See eg R Korobkin and T Ulen, “Law and Behavioral Science: Removing the Rationality Assumption from Law and Economics” (2000) 88(4) *California Law Review* 1051; C Jolls, C Sunstein and R Thaler, “A Behavioral Approach to Law and Economics” (1998) 50(5) *Stanford Law Review* 1471; H Hovenkamp, “Rationality in Law & Economics” (1992) 60 *George Washington Law Review* 293.

<sup>79</sup> See eg U Mattei, *Comparative Law and Economics* (University of Michigan Press 1998); N Komesar, *Imperfect Alternatives: Choosing Institutions in Law, Economics, and Public Policy* (University of Chicago Press 1994); A Greif, “Historical and Comparative Institutional Analysis” (1998) 88(2) *The American Economic Review* 80. The institutional literature in the European context is particularly underdeveloped as most of this work focuses on American institutions.

<sup>80</sup> See Section III.

The next section offers some initial thoughts on how the lessons of L&E scholarship may be applied to the “hybrid” forms of judicial risk regulation as exemplified by *Urgenda*.

#### IV. L&E INSIGHTS FOR “HYBRID” JUDICIAL RISK REGULATION

This contribution categorises the approach of the Court in *Urgenda* as a hybrid form of judicial risk regulation. In *Urgenda*, the Court established tortious liability for the Dutch government,<sup>81</sup> and went on to prescribe what level of mitigation efforts would allow the government to discharge its duty of care.<sup>82</sup> In doing so, the Court replaces the government’s risk assessment with its own, thereby stretching the limits of tort law (as to the type of injurer) as well as judicial review (as to the invasiveness of review).<sup>83</sup> Whereas few have taken issue with the substantive outcome of the case – stronger measures for climate mitigation have been widely welcomed by public interest groups and even the Dutch Parliament<sup>84</sup> – many legal scholars have expressed an unease with the Court’s willingness to “correct” the government’s risk assessment regarding the desirable level of climate change mitigation efforts.<sup>85</sup>

Part of this unease may be explained by the potentially far-reaching constitutional implications of a new species of judicial risk regulation that combines tort law and judicial review functions and modalities. In most democracies, the separation of powers doctrine formalises the distinct functions of the executive, legislature and judiciary,<sup>86</sup> and determines the scope of judicial review.<sup>87</sup> With respect to risk regulation, the policy discretion enjoyed by the executive in implementing the aims set out by the legislature may be tested by the judiciary against constitutional and legal principles but is not supposed to be curtailed by the courts, or much less, be replaced by court-based

<sup>81</sup> The imposition of tort liability to governmental actions is explicitly excluded in some jurisdictions, see eg regarding the American federal government, *Price v United States*, 174 US 373 (19 S Ct 765, 43 L Ed 1011) on federal immunity. Federal sovereign immunity has been waived in only very few cases, eg under the Federal Tort Claims Act (Federal Employees).

<sup>82</sup> *Urgenda*, supra, note 7, para. 5.1.

<sup>83</sup> Other scholars have expressed concerns regarding the ability of courts to deal with any issues that do not fit easily into existing liability regimes – such as complex causation or class actions, as mentioned above – and have advocated the reform of failing regulatory regimes over the “awkward judicial hybrids”. See S Rose-Ackerman, “Regulation and the Law of Torts” (1991) 81(2) *The American Economic Review* 54, at 58; see also in more detail S Rose-Ackerman, “Tort Law in the Regulatory State” in P Schuck (ed.), *Tort Law and the Public Interest: Competition, Innovation, and Consumer Welfare* (Norton 1991).

<sup>84</sup> See eg a recent petition by scientists and interest groups to the Dutch government regarding its appeal, available via <[secure.avaaz.org/act/media.php?press\\_id=665](https://secure.avaaz.org/act/media.php?press_id=665)> and the transcript of the parliamentary debate that followed the judgment, including statements of several political parties against the planned governmental appeal, available at <[www.rijksoverheid.nl/binaries/rijksoverheid/documenten/publicaties/2015/09/24/debat-over-uitspraak-urgenda/kamerstukken-debat-over-uitspraak-urgenda-1.pdf](http://www.rijksoverheid.nl/binaries/rijksoverheid/documenten/publicaties/2015/09/24/debat-over-uitspraak-urgenda/kamerstukken-debat-over-uitspraak-urgenda-1.pdf)>.

<sup>85</sup> See eg L Bergkamp, “A Dutch Court’s “Revolutionary” Climate Policy Judgment: The Perversion of Judicial Power, the State’s Duties of Care, and Science” (2015) 12(3) *Journal for European Environmental & Planning Law* 241; K Purnhagen, “Towards a Regime of Emission Litigation Based on Science” (2015) 6 *European Journal of Risk Regulation* 443.

<sup>86</sup> See N Barber, “Prelude to the Separation of Powers” (2001) 60(1) *Cambridge Law Journal* 59 (discussing the many different conceptions of the separation of powers doctrine), see also B Ackerman, “The New Separation of Powers” (2000) 113 *Harvard Law Review* 633 (trying to construct a separation of powers doctrine out of the varying approaches adopted by different jurisdictions).

<sup>87</sup> For early foundations on the separation of powers doctrine, see J Calvin, *Institutes of the Christian Religion* (translated by H Beveridge) (Calvin Translation Society 1845). Later also Montesquieu, *Spirit of the Laws* (translated by A Cohler, B Miller & H Stone) (Cambridge University Press 1989).

policy assessment.<sup>88</sup> The Court in *Urgenda* was acutely aware of this issue but summarily dismisses the claim that its order could amount to a breach of the separation of powers doctrine.<sup>89</sup>

This penultimate section complements these critiques with an extra-legal perspective on the *Urgenda* judgment that focuses on the relative strengths and weaknesses of the judiciary to engage in this specific type of risk regulation.<sup>90</sup> It does so by identifying how, if at all, the five factors identified in the previous section – the type of risk, the type of harm, information, the type of injurer, and the type of victim – were considered by the District Court, and by evaluating the Court’s evaluation of its institutional competence vis-à-vis these factors.

## 1. Judicial self-assessment: competence in hybrid judicial risk regulation

### a. Type of risk and harm

In *Urgenda*, the District Court was asked to determine “whether the existing mitigation policies [of the Dutch government] are acceptable in light of the need to prevent dangerous anthropologic climate change, given the government’s discretion in adopting said policies?”<sup>91</sup> If not, *Urgenda*’s claim that the Dutch government’s policies were negligently endangering the Dutch people in breach of its duty of care would have to be upheld.<sup>92</sup> The Court agreed with *Urgenda* finding the following: “[I]n view of risk management and from scientific considerations, there is a strong preference for the 450 scenario, as the risks [of hazardous climate change]<sup>93</sup> are much higher with a 500 scenario.”<sup>94</sup> Put differently, the Court agreed with *Urgenda* that the government’s efforts were insufficient in light of existing scientific information.<sup>95</sup> The potential harm that the Court identified was that of “hazardous” or “dangerous” climate change. The harm associated with climate change has posed challenges for tort litigation in other jurisdictions,<sup>96</sup> as the scale, scope, timeline and nature of the harms related to climate change are disputed,<sup>97</sup> and these global harms are likely to affect people beyond the jurisdiction of one specific court. The Dutch District Court did not consider these characteristics to impede its ability to judge the case.<sup>98</sup>

<sup>88</sup> This was also recognised in *Urgenda* but the court came to the conclusion that it still leaves sufficient policy discretion for the executive, see *Urgenda*, supra note 7, para. 4.94.

<sup>89</sup> *Urgenda*, supra note 7, paras. 4.94–4.102. The court’s reasoning will be discussed in detail in Section V.

<sup>90</sup> This is not to say that it would be possible, or even desirable, to replace the constitutional limits placed on judicial risk regulation with eg an efficiency standard. There may be situations where the courts would theoretically be able to “correct” prior inefficient decisions taken by the regulator, and/or be better placed to take this decision in the first place, but will continue to be constitutionally restrained from doing so.

<sup>91</sup> *Urgenda*, supra note 7, para. 4.63.

<sup>92</sup> Negligent endangerment is a tort as specified by Section 162 of Book 6 of the Dutch Civil Code. See *Urgenda*, supra note 7, paras. 4.85–4.86.

<sup>93</sup> *Urgenda*, supra note 7, para. 4.65.

<sup>94</sup> *ibid.*, para. 4.22 emphasis added (the Court based this assessment largely on the models used in the IPCC reports).

<sup>95</sup> *Urgenda*, supra note 7, para. 5.1; see also para. 4.65.

<sup>96</sup> See eg D Kysar, “What Climate Change Can Do About Tort Law” (2011) 41(1) Environmental Law 1; D Faber, “Tort Law in the Era of Climate Change, Katrina and 9/11: Exploring Liability for Extraordinary Risks” (2008) 43 Valparaiso University Law Review 1075.

<sup>97</sup> This was one of the points on which *Urgenda* had requested a declaratory judgment, which the Court refused, although it did find certain facts regarding climate change “established”, see *Urgenda*, supra note 7, para. 4.65.

<sup>98</sup> *ibid.*

### b. Information

The plaintiffs had initially requested a declaratory judgment from the Court on the veracity and validity of specific facts surrounding climate change.<sup>99</sup> The Court refused to give this declaration but did use international and national legal principles and scientific information on the risk of dangerous anthropogenic climate change to inform the duty and standard of care under Dutch tort law provisions on tortious acts.<sup>100</sup> In so doing, the Court converted some of these disputed scientific facts into “legal fact”,<sup>101</sup> even without the declaratory judgment.

### c. Type of injurer and victim

Perhaps the starkest contrast between the three forms of judicial risk regulation lies in the type of injurer targeted. As discussed previously, tort law is primarily considered a vehicle for regulating *private* behaviour. This is underlined by the fact that the legislature and executive are often immune to tort liability.<sup>102</sup> This is not the case in the Netherlands. Nevertheless, the government is treated differently from a private actor;<sup>103</sup> the Court underlined this by stressing that review of “individual cases” with wide societal impacts is possible, but only if the government’s ability to balance societal interests is treated with sufficient deference.<sup>104</sup> The government accordingly challenged the Court’s authority to award the mandatory order based on the Court’s lack of democratic legitimacy, and the impact of the judgment on the position of the Netherlands in international negotiations.<sup>105</sup> The Court did not find these arguments persuasive and held that the mandatory order was firmly within its competence;<sup>106</sup> since it did not detail the method of mitigation in its order, the Court considered the government’s discretion to be intact.<sup>107</sup>

The type of victim in the three species of judicial risk regulation does not necessarily vary: an individual could bring a tort case as well as a judicial review case. That said, the requirements for standing do differ between these types of cases and even between, for example, tort cases. It has been notoriously difficult for parties to get standing in cases concerning climate change due to questions of harm and causation.<sup>108</sup> Due to the Dutch

<sup>99</sup> *Urgenda*, supra note 7, paras. 3.1 and 4.94.

<sup>100</sup> *Urgenda*, supra note 7, para. 4.63 et sqq.

<sup>101</sup> See eg A Bora, “Scientific Norms, Legal Facts, and the Politics of Knowledge” in N Stehr and B Weiler (eds), *Who Owns Knowledge? Knowledge and the Law* (Transaction Publishers 2008) 67. See also Justice Cardozo: “Lawsuits are rare and catastrophic experiences for the vast majority of men, and even when the catastrophe ensues, the controversy relates most often not to the law, but to the *facts*” (emphasis added), as cited in R Marx, “Shall Law Schools Establish a Course on ‘Facts’?” (1953) 22 *University of Cincinnati Law Review* 281, at 282.

<sup>102</sup> See eg the US Federal Tort Statute.

<sup>103</sup> See more generally on the third party effects of tort law, M Lee, “The public interest in private nuisance: collectives and communities in tort” (2015) 74 *Cambridge Law Journal* 329.

<sup>104</sup> *Urgenda*, supra note 7, para. 4.96.

<sup>105</sup> *ibid*, para. 4.100.

<sup>106</sup> *ibid*, para. 4.74 (“Based on its statutory duty – Article 21 of the Constitution – the State has an extensive discretionary power to flesh out the climate policy. However, this discretionary power is not unlimited. If, and this is the case here, there is a high risk of dangerous climate change with severe and life-threatening consequences for man and the environment, the State has the obligation to protect its citizens from it by taking appropriate and effective measures.”) On the specific issue of the democratic mandate of the judiciary, the Court underlined the legislative foundations of its position, which themselves were the result of a democratic process, *ibid*, para. 4.97.

<sup>107</sup> *Urgenda*, supra note 7, para. 4.101.

<sup>108</sup> A comparative overview of issues in the United States and Australia can be found in J Peel and H Osofsky, *Climate Change Litigation: Regulatory Pathways to Cleaner Energy* (Cambridge University Press 2015) 269 et sqq.

laws regarding standing for NGOs, Urgenda's standing and ability to represent itself and the 886 co-plaintiffs was easily confirmed by the Court, and not challenged by the Dutch government, although its claim to also represent future generations outside of the Netherlands was rejected.<sup>109</sup>

## 2. An L&E perspective on judicial competence in hybrid cases

The Court's assessment of its ability to hear the case brought by Urgenda and its assessment of the substantive elements outlined above is based on legal reasoning. This reasoning has been critically discussed in legal scholarship, including contributions to this special issue,<sup>110</sup> raising important questions that go beyond the scope of the current inquiry, for instance regarding the interplay of European and national competence regarding climate mitigation.<sup>111</sup> This section will consider the Court's analysis regarding the factors outlined above from a law and economics perspective so as to add an extra-legal perspective and see whether different conclusions may be reached regarding the Court's competence.

### a. Type of risk and harm

The Court's assessment of the risk highlights several issues. First, the dispute concerns the level of acceptable risk. This would typically be categorised as a political question best left to the executive or legislator.<sup>112</sup> The L&E insights summarised above also suggest that this assessment should be left to the government and its agents based on, inter alia, the government's ability to consider distributional effects of policy choices and trade-offs between the restriction of different activities.<sup>113</sup> Second, the Court replaces the government's assessment of acceptable risk level with its own,<sup>114</sup> and issues a mandatory order for the reduction of Dutch GHG emissions by at least 25% compared to 1990 by 2020 – a more ambitious goal than the existing 17–20% reduction commitment.<sup>115</sup> This raises a further question as to whether there is something about the institutional position of the court that

*(F'note continued)*

For general issues see D Hodas, "Standing and Climate Change: Can Anyone Complain about the Weather?" (2000) 15(2) *Journal of Land Use & Environmental Law* 451.

<sup>109</sup> *Urgenda*, supra note 7, para. 4.5.

<sup>110</sup> See eg contribution by Maria Lee.

<sup>111</sup> Notably, the EU had set the mitigation goals for the Netherlands, leaving limited discretion to the Dutch government. See Decision 406/2009/EC on the Effort of Member States to Reduce Their Greenhouse Gas Emissions to Meet the Community's Greenhouse Gas Emission Reduction Commitments up to 2020 [2009] OJ L 140/136 (EU Effort Sharing Decision).

<sup>112</sup> This is also recognised by the Court, see eg *Urgenda*, supra note 7, para. 4.74.

<sup>113</sup> On the relative strengths of public risk regulation, see P Gillette and J Krier, "Risk, Courts and Agencies" (1990) 138(4) *University of Pennsylvania Law Review* 1027; and P Huber, "Safety and the Second Best: The Hazards of Public Risk Management in the Courts" (1985) 85 *Columbia Law Review* 277. See also P Cane, "Using Tort Law to Enforce Environmental Regulation?" (2002) 41 *Washburn Law Journal* 427.

<sup>114</sup> See also C Sunstein, "On the Costs and Benefits of Aggressive Judicial Review of Agency Action" (1989) 3 *Duke Law Journal* 522.

<sup>115</sup> *Urgenda*, supra note 7, para. 5.1. The Court also ordered the Dutch government to pay for Urgenda's costs but also rejected Urgenda's claim for an order to inform as invalid. It held the order had no basis in law and that given that it is not yet clear what action the order to act will result in, it would not be reasonable to force the Dutch government to provide any information to the public (para. 4.107). The existing Dutch reduction commitments are based on its EU obligations, which in turn are based on its international commitments under the UNFCCC and Kyoto Protocol systems.



makes it better placed than the government to digest the scientific information used to set these goals; is there something about the type of risk, and relatedly the type of information related to this risk, that suggests that the Court has more or better information than the government? This will be discussed further below in the section on *Information*.

Prima facie, L&E research suggests that courts are not comparatively better placed to deal with the types of harm associated with climate change: geographically and temporally dispersed, catastrophic harm. However, some of these characteristics also undermine the ability of governments to regulate these harms successfully. Specifically, the fact that the time horizons related to climate change are so distant as to not correspond with election cycles reduces the public's ability to "penalise" political actors for "bad" climate decisions.<sup>116</sup> Similarly, the fact that many climate harms materialise outside the jurisdictions causing the harm, ie affect non-voters, reduces the responsiveness of governments.<sup>117</sup> The judiciary is more insulated from these kinds of pressures, which reduces its comparative disadvantage in dealing with these types of harms.<sup>118</sup>

Some have argued that the result of this has been the expansion of the scope of the "public life" of tort law;<sup>119</sup> allowing tort law to add to "problem articulation, norm amplification and intergovernmental signalling".<sup>120</sup> If one accepts the potential role that courts can play in providing a forum for interests that have been ignored or underrepresented during the legislative process, then courts should embrace tort cases that call for a questioning of governmental (in)action, specifically for cases involving complex, or politically sensitive risks.<sup>121</sup> Kysar stresses that "[d]eference to the representativeness of legislatures and the expertise of agencies need not be seen as a reason for withdrawing tort law as a traditional avenue for the pursuit of civil redress. The tracks are neither 'parallel' nor redundant. They are different".<sup>122</sup> From an L&E perspective, however, the question remains whether this hybrid form of judicial risk regulation (in contrast with a pure tort law approach) is best suited for harnessing these potential public choice advantages (see below in the section *Type of injurer*).

### b. Information

Some of the commentary on *Urgenda* has been extremely critical as to the Court's ability to digest and assess scientific information, particularly information that is itself disputed or controversial.<sup>123</sup> From an L&E perspective, the institution that has access to the "best"

<sup>116</sup> See eg R Lazarus, "Super wicked problems and climate change: Restraining the present to liberate the future" (2008) 94 Cornell Law Review 1153. Even if these timing issues were absent, there is ample evidence to suggest that voters have difficulties internalising the implications and risks of (lack of) climate change (mitigation), which further reduces the likelihood of climate decisions influencing voting decisions. See R O'Connor et al, "Risk Perceptions, General Environmental Beliefs, and Willingness to Address Climate Change" (1999) 19(3) Risk Analysis 461.

<sup>117</sup> See eg A Rowell and L Wexler, "Valuing Foreign Lives" (2014) 48 Georgia Law Review 499.

<sup>118</sup> See also L Enneking and E de Jong, "Regulering van onzekere risico's via public interest litigation?" (2014) 23 Nederlands Juristenblad 1542.

<sup>119</sup> See D Kysar in this issue.

<sup>120</sup> See D Kysar in this issue. See also M Lee in this issue on a comparison between English and Dutch law in this respect and more generally on courts as norm generators in tort law, and B Ewing and D Kysar, "Prods and Pleas: Limited Government in an Era of Unlimited Harm" (2011) 121 Yale Law Journal 350.

<sup>121</sup> Kysar, *supra*, note 96.

<sup>122</sup> Kysar, *supra*, note 96.

<sup>123</sup> See Bergkamp, *supra*, note 85. See also Enneking and de Jong, *supra* note 118, 1548–49.

information would have the relative advantage. Specifically, this means that regulation is the best form of risk regulation if the government has better information than the injurer (assuming for now that all other factors are constant). Conversely, if the injurer has better information, judicial risk regulation in the form of tort law is preferable (through strict liability or negligence), as this would provide incentives to the injurer to take socially optimal care based on the information that she has regarding the activity. With respect to *Urgenda*, this raises two questions: first, which actor has better information? Second, how does the fact that the government is the defendant affect this comparison?<sup>124</sup>

As to the first question, the District Court and the Dutch government have access to much the same information – in fact, the Court takes care to reference only sources already in the public sphere and referenced by the Dutch government in its decision-making. The real issue, therefore, is the way in which this information is processed and which conclusions are drawn. There is nothing to indicate that the Court is better placed to do this, except for the fact that they may be more insulated from political pressures as highlighted above. It has been suggested that this position of relative objectivity has led judicial fact checking to become an indispensable part of judicial review, even if this replicates some of the work undertaken by the governmental actor,<sup>125</sup> and/or if the court does *not* have the same specialised knowledge that the government agent may have.<sup>126</sup> In addition, it has been suggested that this position may be harnessed by differentiating between the review of different types of administrative decisions, eg legal, scientific and political decisions (assuming such a distinction can indeed be drawn).<sup>127</sup> In this case, especially since the harm is yet to materialise, ie the risk is yet to become a reality, it cannot be maintained that the Court has “better” information than the government – only that its ability to digest this information is different, and in the view of some, better. However, in this context “better” does not (necessarily) mean “more efficiently”.

The second, perhaps more important, question relates to the position of the government as the defendant/injurer. This is an issue in both judicial review cases and hybrid cases and highlights the somewhat narrow view of judicial risk regulation in traditional L&E scholarship, as will be discussed in more detail in the following sub-section.

### c. Type of injurer

By putting the government in the position of the defendant, judicial review and hybrid cases of judicial risk regulation do not follow the established dichotomy between regulation and tort law on which most L&E scholarship in this area is based. From a legal perspective, the key issue is a constitutional one, linked to the separation of powers.<sup>128</sup>

<sup>124</sup> With thanks to an anonymous referee for underlining this point.

<sup>125</sup> W Pedersen Jr., “Formal Records and Informal Rulemaking” (1975) 85(1) Yale Law Journal 38, 60 (arguing that this is desirable since “[c]ourts alone have the time, the influence, and the freedom from ceremonial and ‘political’ considerations that are necessary to a thorough, dispassionate and effective review of extremely complex and controversial matters”).

<sup>126</sup> R Stewart, “The Development of Administrative and Quasi-Constitutional Law in Judicial Review of Environmental Decisionmaking: Lessons from the Clean Air Act” (1977) 62 Iowa Law Review 713.

<sup>127</sup> See D Rubenstein, “‘Relative Checks’: Towards Optimal Control of Administrative Power” (2010) 51 William and Mary Law Review 2170.

<sup>128</sup> Although highlighted at several points, this constitutional issue is not the focus of this contribution. For further discussion of this issue see – in relation to *Urgenda: Urgenda*, supra note 7, para. 4.95, for legal restrictions in place in

L&E is agnostic as to these constitutional parameters, although the institutional setting in which the legislature, executive and judiciary function naturally impact on their comparative advantage regarding risk regulation. The narrower question here is: does the government represent a distinct type of injurer, and if so, what are the implications?

The L&E approach to judicial review is remarkably similar to tort cases: the assumption is that the injurer (private or governmental) is optimally informed regarding the correct level of care, and the court corrects for potentially self-serving actions and/or compensates victims. The fundamental L&E distinction between governmental and judicial risk regulation does not change. In hybrid cases, the fact that the defendant is the government similarly does not change the comparison between governmental and judicial risk regulation. However, several related circumstances in *Urgenda* should be considered: first, while the government has taken the position of the defendant, this does not automatically place her in the position of injurer. In *Urgenda*, the government became the defendant due to its ability to control the behaviour of injurers.<sup>129</sup> This is not to say that the government is vicariously liable for the actions of these injurers; the question in *Urgenda* is whether the government set the correct regulatory standards, not whether it had enforced them.<sup>130</sup> This distance between the defendant and the injurer changes the incentives given by the judicial intervention. Second, and relatedly, one may question whether the government is more or less likely to be judgment proof, as compared to a private defendant. Formally, the government could be argued to be financially judgment proof due to its powers of taxation and budgeting that could allow it to absorb any penalty imposed. However, the political impact of court rulings is considerable and much harder to set aside.<sup>131</sup> As envisaged by the checks and balances function of the separation of powers, the judiciary thus plays a vital role in reviewing decisions by the government through judicial review; a role from which the court is not disqualified based on the change in defendant.

## V. CONCLUDING OBSERVATIONS

Judicial risk regulation can take place through tort law, judicial review and a new “hybrid” form of regulation that uses tort principles to review governmental (in)action. While the latter type may be restricted to the *Urgenda* case referenced in this piece, which is moreover subject to appeal, the theoretical questions it raises are too important to be ignored. Depending on the scholarly perspective adopted, and the specificities of the risk being regulated and the system regulating it, judicial risk regulation can be considered

(*F*note continued)

the United States, Australia, Canada and the United Kingdom as discussed in van Zeben, *supra*, note 7, 354–56. More generally on American and Australian jurisprudence on climate change, see J Peel and H Osofsky, *Climate Change Litigation: Regulatory Pathways to Cleaner Energy* (Cambridge University Press 2015); comparatively: Kavanagh, *supra*, note 23; B Ackerman, “The New Separation of Powers” (2000) 113 *Harvard Law Review* 633 (advocating a model of constrained parliamentarism aimed at preserving democracy, professionalism and human rights).

<sup>129</sup> *Urgenda*, *supra* note 7, para. 4.66.

<sup>130</sup> This relates to another limit of the judicial function as highlighted in the case of *Boomer v Atlantic Cement Co* 257 NE 2d 870, 871 (NY 1970) (“the judicial establishment is neither equipped [...] nor prepared to lay down and implement an effective policy for the elimination of air pollution”).

<sup>131</sup> As demonstrated by the impact of judicial review of governmental agency action in the United States since the 1960s. See eg W Pedersen Jr., “Formal Records and Informal Rulemaking” (1975) 85(1) *Yale Law Journal* 38, L Jaffe, *Judicial Control of Administrative Action* (Little, Brown and Company 1965) and R Melnick, *Regulation and the Courts: The Case of the Clean Air Act* (Brookings Institute 1983) (on the specific case of air pollution in the US).

comparatively “better” or “worse” than governmental risk regulation. Legal and L&E scholarship adopt different normative approaches in assessing the relative competence and desirability of risk regulation by the courts. The key strength of L&E scholarship, as compared to legal work on this issue, is its ability to provide generalisable lessons that are not bound to specific jurisdictions. This strength is often presented as L&E’s key weakness: legal scholars, as well as courts and regulators, are quick to emphasise their specific jurisdictional roles, which are ignored in certain theoretical models. However, comparative L&E scholarship has found that not all differences are in fact relevant differences, ie not all jurisdictional differences result in different outcomes.<sup>132</sup> This suggests that L&E scholarship may also contribute to dispelling the perceived “particularism” that many legal scholars invoke with respect to their respective jurisdictions.<sup>133</sup>

However, as we are faced with increasingly complex risks and correspondingly complex relationships between judicial and governmental risk regulation, legal doctrines are stretched beyond their envisaged limits. L&E scholarship may provide additional positive and normative insights to fill the resulting gaps. Most importantly, the analytical approach adopted by L&E scholars forces us to explicate questions regarding types of risk, harm, information, regulatees, regulators and victims, that are often treated as secondary in constitutional discussions regarding the appropriate role of the courts and government agents in risk regulation.

The distinction made in this article between different types of judicial risk regulation nuances the L&E dichotomy between governmental and judicial risk regulation. It further erodes the credibility of these types of risk regulation acting as substitutes; in most situations, they are more accurately represented as incomplete compliments. Many of the findings regarding the type of risk, harm and information remain constant across these types (depending of course on particulars of a given case). From a legal perspective, the most significant difference – a governmental rather than private defendant – proves to be of limited relevance in an L&E analysis. While the distance between defendant and injurer may complicate enforcement and information issues, there is nothing that suggests that governmental actors are more judgment proof than private defendants. The ways in which they are judgment proof are different but this does not disqualify the complementary function of judicial risk regulation. Judicial risk regulation may therefore supplement governmental risk regulation, also regarding risks related to climate change, which have been viewed as ill-suited for judicial deliberation. The main caveat is that this process is also not immune to abuse by interest groups that may have “lost” during the political process proceeding the case. Conversely, the same may be seen as a positive, as this allows a chance for marginalised groups to be heard.

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<sup>132</sup> For an excellent overview of the development of comparative law and economics thus far, see R Michaels, “The Second Wave of Comparative Law and Economics?” (2009) 59 *University of Toronto Law Journal* 197 (see specifically the discussion on the functional equivalence of legal systems at 197–98). See also A Ogus, “Competition Between National Legal Systems: A Contribution of Economic Analysis to Comparative Law” (1999) 48(2) *International and Comparative Law Quarterly* 405. Regarding the relevance of L&E work for civil law traditions, see U Mattei and R Pardolesi, “Law and Economics in Civil Law Countries: A Comparative Approach” (1991) 11 *International Review of Law and Economics* 265. For an example in the area of economic institutions, see eg M Granovetter, “Economic Action and Social Structure: The Problem of Embeddedness” (1985) 91(3) *American Journal of Sociology* 481.

<sup>133</sup> With thanks to anonymous referee who emphasised this point during review.