Risk Regulation: Hic et Ubique

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I. My past research on risk regulation

My first encounter with risk regulation occurred through my LLM and PhD research at NYU School of Law. I had had an interest in the balancing of trade liberalization and social regulatory objectives already during my undergraduate studies at the LSE where I had the privilege of studying European Union law with Damian Chalmers. During my LLM, I wrote a term paper on the WTO Appellate Body's *EC-Hormones* decision. This dispute was the first to be adjudicated under the WTO's Agreement on Sanitary and Phytosanitary Measures by a young Appellate Body. The SPS Agreement requires WTO members which do not use international standards for their domestic regulation to justify their higher levels of protection with scientific evidence.[1] I quickly realised that the decision raised important questions about the extent to which law or judges can set sensible threshold levels of scientific proof and that the decision how stringently to regulate inevitably requires political judgment that is difficult to review judicially.

As I had been engrossed by the report and relevant literature, I decided to make the regulation of risk through the WTO's Sanitary and Phytosanitary Agreement the topic of my PhD. At the suggestion of my then supervisor Philippe Sands, I refined my research topic to focus on the regulation of agricultural biotechnology through WTO law. This subject not only raised the above questions in a general manner but also a set of unique questions about the proper method to assess the risks of genetically modified organisms (GMO),[2] a question of consumer sovereignty to choose GM-free products despite potential benefits of GMOs, including for developing countries, and the question whether the irreversibility of release into the environment of GMOs calls for special precautions. I understood that the production of epistemologically valid scientific evidence requires a certain detachment from real world conditions, which limits its analytical usefulness for real world problems. Science is also fallible and what scientific evidence is produced hinges on framings, conventions and financial rewards for research. As a result of its necessary inferences, potential for error and social bias, I argued epistemological standards can only ever provide a partial justification for regulatory action and need supplementary justification on the basis of genuine normative argument about what is reciprocally acceptable.[3]

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[1] SPS Agreement, Arts. 2.2, 3.1, 3.3, 5.1, 5.2 and 5.7.

[2] At that time, the "substantial equivalence" approach was scientifically debated. According to this approach, a GMO is like its conventional counterpart but for the trait for which the newly-inserted gene codes and which therefore only requires assessment together with the technique used to transfer the new gene.

[3] Alexia Herwig, "Whither Science in WTO Dispute Settlement?" (2008) *Leiden Journal of International Law* 823, 842–43.

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The notion of risk regulation opened up for me a specific analytical toolbox for understanding the conflict between trade liberalization and social regulation. During a research stay at the EUI and a post-doctoral position at the University of Bremen, I became well-acquainted with the nuanced work of Christian Joerges on the subject. He argues that provision of scientific evidence can make states accountable for the extraterritorial impacts of their social regulation on interests located abroad. Joerges suggests that scientific evidence has this potential as a universally intelligible analysis free from parochialism.[4] Following scientific methods ensures that risk regulation based on it is free from manipulation of facts and yet allows for multiple scientific findings and tolerance levels of risk. In this manner, key precepts of a Habermasian discourse theory requiring honest other-regarding propositions can be realised. The multiple normative evaluations of costs and benefits allowed are in keeping with the richness of lifeworld discourses and the European motto of unity in diversity. However, Joerges is keenly aware of the dangerous temptation of transnational law and its judges to decide disputes by pushing science to its limits. Like Luhmann, he recognises that asking ever more detailed questions of science only exposes greater uncertainties and epistemological guess-work due to the complexity of issues and multiple disciplines needed in their assessment, which will de-legitimise science and law based on science.[5]

In the years following my post-doctoral position, my research interests diversified to include WTO law and human rights, the democratic legitimacy of international law and Kantian and Rawslian approaches to the justification of international law. This reignited my passion for foundational reflection on legal and political philosophy I had had as an undergraduate student majoring in law and political theory. With the benefit of this foray into philosophical analysis, I now realise that risk regulation has a much more intimate connection with law than merely being a set of conceptual tools for understanding isolated problems of regulation.

II. A Definition of Risk Regulation

In risk regulation, a tension between facticity and normativity manifests itself, which mirrors the constant tension between the positivity and normative justification in accounting for legal authority. Scientific facts enjoy normativity because scientific methods of analysis treat legal subjects equally in a factual epistemological and thus normative sense[6] and should thus be reasonably willed by equally autonomous legal subjects as the basis for legal regulation. Nevertheless, the inherent limitations of science alluded to above make it necessary to be cautious about attributing determinative normativity to scientific facts. A similar dynamic is at play concerning the authority of law. On the one hand, justified legal authority derives from the fact of public endorsement of an enactment by a

[4] Christian Joerges and Christine Godt, "Free Trade: The Erosion of National and the Birth of Transnational Governance" in Michael Zürn and Stephan Leibfried (eds), *Transformation of the State* (2005) 93, 111.

[5] N Luhmann, "Risiko und Gefahr" in N Luhmann, *Soziologische Aufklärung 5 Konstruktivistische Perspektiven* (2005) 138–39, 148, 155.

[6] Alexia Herwig, "Health Risks, Experts and Decision-Making within the SPS Agreement and the Codex Alimentarius" in Monika Ambrus et al., *The Role of "Experts" in International and European Decision-Making Processes* (2014) 194.

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specific institution treated as enjoying law-making authority because law is a system of *public* rules governing conduct. Law is precisely unlike individual moral judgment which resides in each of us and can be changed through simple reflection. On the other hand, the positivity of law alone is insufficient to justify its authority because law must give us a reason allowing ourselves to see us as its joint authors.[7] When our substantive judgment diverges strongly from the publicly endorsed or enacted legal act, law fails to offer such reason because it must take seriously the autonomous moral judgment of the legal subjects from whose equal protection it can in principle derive its authority.[8] This tension between facts and norms ramifies in the tension between formalism and anti-formalism in legal interpretation. It is no surprise that the ambivalent relation of law to facts resurfaces when a specific set of facts – scientific evidence – is enlisted in the justification of legal regulation of risk.

But risk regulation is illuminating for legal theory in another way. Risk expresses the probability of a hazard occurring. When an issue gets framed as one of risk, it is potentially worthy of legal attention as a harm to serious interests. When the relation between the hazard and its occurrence can be expressed as a risk, a possible causal connection between a prior state of affairs and an outcome and a possible triggering event is expressed. When this possible causal connection involves elements of social interactions, a *pro tanto* demand for legal regulation is engaged because law's domain is the regulation of freedom-affecting social interation. The analytical frame of risk regulation therefore helps to establish what matters law should regulate.

Research on risk perception has long dwelled on the difference in perception between lay persons and experts. Whereas experts consider harm regardless of the way it occurred to be the same and thereby make it numerically comparable, laypersons attribute higher weight to dread risks such as plane crashes than to constant risks such as car accidents.[9] Aggregative regulatory cost-benefit analysis suggested as a tool of reasonable regulation departs from a similar basis as the expert framing of risk because it considers end results of harms to be comparable. Where regulatory resources for prevention are scarce or prevention results in risk-risk trade-offs, aggregative cost-benefit analysis suggests accepting a numerically lesser evil for the sake of saving greater numbers. Philosophers have criticised such utilitarianism and aggregative cost-benefit analysis as not giving us a reason to accept the outcome, because sacrificing an individual for the sake of saving a greater number of individuals fails to recognise the individual moral worth of each person.[10] Lay risk perceptions tally with this deontological rejection of utilitarianism because they consider circumstances of risk imposition, which casts criticisms of technocratic risk governance through cost-benefit analysis in a different light.

Another difference in lay and expert perceptions of risk is illuminating for fundamental issues of responsibility and law. Laypersons regard self-imposed risks as

[7] Jürgen Habermas, *Between Facts and Norms. Contributions to a Discourse Theory of Law and Democracy* (MIT Press 1996) 104.

[8] The insight that the law must take seriously the capacity to reason of legal subjects because it is supposed to protect the autonomy of equal moral agents was articulated by George Pavlakos, "Constitutional Rights, Balancing and the Structure of Autonomy" (2011) 24 *Canadian Journal of Law and Jurisprudence* 129, 148–51.

[9] Paul Slovic *The Perception of Risk* (2000), and "Perception of Risk" (1987) 236 *Science* 280.

[10] Aaron James, "Contractualism's (Not So) Slippery Slope" (2012) 18 *Legal Theory* 262, 280.

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less serious than externally created risks. In philosophical research on collective versus individual responsibility, the extent of control an agent has over the occurrence of adverse consequences determines whether the collective or the agent should be held responsible.[11] Research on risk perception but also on specific forms of risk regulation thus implicates fundamental questions in law about human agency. The specific permutations of regulatory approaches to risk, like command and control, ex post liability, market instruments or nudge can all be studied for how well they correspond with that which is normatively distinctive about agency in a particular situation.

What I thus suggest is this: risk regulation engages with and reflects the same fundamental aspirations of law, which it must take seriously in order to ground its own authority. It is intimately connected with the function of law. My suggested definition for risk regulation therefore is this: a specific vocabulary that helps us make sense of the fundamental ambitions and authority of the law.

III. The Future of Risk Regulation

Research on risk regulation has a bright future, for risk regulation is ubiquitous whenever legal authority is deployed or we have reason to ask for legal authority to be deployed in response to specific problems. Exciting research on risk regulation is merited whenever law tackles newly-defined problems (like obesity, climate change or cybercrime), expands its reach into time and space (such as anti-microbial resistance or regulation of transnational financial crises) or adopts new forms of regulation (like nudge or megaregional regulatory cooperation). They all reconfigure social and individual responsibility and some define new fields of knowledge like climate science: the birth of facts out of norms as it were! Advances in scientific knowledge likewise call for investigation by risk regulation research. Worth investigating are research results on epigenetics, which suggest that social influences create long-term modifications in our genome, and research suggesting that mind and personality are the results of complex interaction between the brain and different bodily systems such as the digestive tract and its microbiome. Why are they so important? Because the former casts legal subjecthood in a radically different light, since our genetic makeup no longer is purely accidental but for a part socially determined. If this is so, society ought to assume some responsibility for the genetic imprint it leaves in people. The latter 'in contrast' suggests that our mental disposition and personality traits are within human control for as much as we can influence those sub-systems. These scientific findings suggest new classes of hazards and new conceptions of human responsibility and a shift in the ever fluid understanding of facticity and normativity to which insights from research on risk regulation can usefully contribute.

[11] Iris M Young, "Responsibility and Global Labour Justice" (2004) *The Journal of Political Philosophy* 365, 368, 375.

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