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Katalin Sulyok, Science and Judicial Reasoning. The Legitimacy of International Environmental Adjudication (Book Review)

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Lukasz Gruszczynski[*]

In 2012 Australia was the first country in the world to introduce a new law (dubbed a 'plain packaging law') which set certain restrictions on the color, size and format of the packaging of tobacco products and established rules applicable to the appearance of brand, company and variant names on packages. It also prohibited the use of any trademarks or other marks on retail packaging except for the brand and business or company name, which however could only be placed in a specific area and be displayed in a standardized font. In addition, the size of the health warning was increased to 75% of the front and 100% of a back surface of the package.[1] The law was clearly of an experimental character and was aimed at minimizing the attractiveness of packaging in order to reduce the prevalence of tobacco use among Australians. Since then, similar regulations have been adopted in other countries. Not surprisingly, the Australian measure was contested in the different legal venues. One of the proceedings was instituted in the World Trade Organization (WTO), where several Members claimed that the plain packaging law violated various provisions of the TRIPS Agreement: a treaty that sets minimum standards for the protection of intellectual property rights. In this context, they argued in particular that the law constituted an unjustifiable restriction on the use of the trademark (in this case, that of tobacco companies) in the context of trade.

One of the issues that the WTO panel, and later the Appellate Body,[2] had to decide was whether there was sufficient justification behind the Australian measure (in essence this was a mixed question of law and fact). In the course of the proceeding, the panel therefore had to deal with very complex scientific issues relating to the effectiveness of the plain packaging requirement. It was clear to everyone involved that that the outcome of the dispute depended on how the

* Lukasz Gruszczynski: associate professor of law, Kozminski University, Warsaw; research fellow, Centre for Social Sciences, Institute for Legal Studies, Budapest.

1 Tobacco Plain Packaging Act 2011, No. 148, 2011, An Act to discourage the use of tobacco products, and for related purposes.

2 *See e.g.* Appellate Body Reports, *Australia — Certain Measures Concerning Trademarks, Geographical Indications and Other Plain Packaging Requirements Applicable to Tobacco Products and Packaging*, WT/DS435/AB/R WT/DS441/AB/R, 9 June 2020. Note that technically speaking the dispute was decided by the several panels, each of them dealing with the complaints of specific WTO Member.

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panel would assess this aspect. Should it perform a *de novo* review of the scientific basis behind the national measure? Or perhaps grant the defendant a certain level of deference? Did it need to consult scientific experts? If so, how should the questions be formulated? And how 'binding' are the experts' opinions?

The book by Katalin Sulyok is precisely about these kinds of dilemmas. The author is a senior lecturer at the Department of International law at ELTE Law School, Budapest. Although she works as a legal researcher, she also has a background in biology (BA), a fact which proved to be very helpful in writing her interdisciplinary monograph. The book as such is a revised version of the doctoral dissertation she defended in 2018 at ELTE Law School. It is worth noting that her thesis was awarded the prestigious 2019 Henry Wheaton Prize[3] as a part of the J.B. Scott competition organized by *Institut de Droit international*.

The book itself is a dense 398-page text, composed of 11 chapters which are grouped into three Parts. The first Part introduces the Readers to the subject, by generally discussing three challenges that emerge when judges engage with science in international environmental adjudications. These include in particular: epistemic (*i.e.* competing cognitive authorities of science and law), doctrinal (*i.e.* structural differences between law and natural sciences), and legitimacy challenges (stemming from the complex relationship between scientific expertise and judicial decisions which can be regarded as legitimate).

Against this background, the second Part identifies four different techniques used by international courts and tribunals for engaging with science (*i.e.* ways in which scientific arguments are handled in the judicial processes) and analyses their use before the selected judicial fora. In particular, the author distinguishes between: *(i)* framing science-intensive disputes and adjusting the level of science entering the judicial inquiry; *(ii)* scientific fact-finding, in particular through the use of experts and expert opinions; *(iii)* causal inquiries; and *(iv)* the standard of review applied to scientific claims. Each chapter in this part is dedicated to one specific court or a group of similar courts/tribunals, and each examines the relevant practice against the above-mentioned taxonomy of judicial techniques. The courts/tribunals analyzed in the book include the ICJ; tribunals in inter-state environmental arbitration; regional human rights courts (such as the ECtHR and IACtHR); WTO panels and the Appellate Body; international investment tribunals; and the ITLOS.

The last Part of the book provides a comparative analysis of these judicial practices. In this context, the author examines the existing differences and similarities in the treatment of science and scientific evidence in the adjudicatory processes, and assesses the advantages and trade-offs connected with each of the four techniques identified above.

The scope of the book has been well thought out. Sulyok correctly limits her analysis to legal adjudication and excludes various diplomatic forms of dispute settlement. This limitation is not only justified (*e.g.* because of the differences

3 Gabriella Szamek, 'The 2019 Henry Wheaton Prize. An Introduction to Katalin Sulyok's Award-Winning PhD Dissertation', *Hungarian Yearbook of International Law and European Law*, Vol. 8, 2020, pp. 412-416.

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that exist between these two types of mechanisms) but also desirable as it allows for creating a common platform that can subsequently be used to compare the relevant judicial practices. By the same token, domestic courts are excluded from the scope of the examination. Although they also deal with similar problems [think *e.g.* about the US Supreme Court in the famous *Stenberg v Carhart (Carhart I)*[4] and *Gonzales v Carhart* (*Carhart II*) cases[5]], such courts operate in the specific legal frameworks established under the respective national legal systems, which are very different from international legal settings. The same reason stands behind the omission of the CJEU.[6] It is true that the CJEU is frequently confronted with science-intensive disputes. At the same time however, one has to recognize that it is a unique institution that is located somewhere between the domestic and international levels. The institutional and legal structure in which the CJEU operates has a profound impact on its approach and makes it an uneasy point of reference for comparison with traditional international courts and tribunals.[7]

Despite the title of the book, its scope is not strictly limited to environmental cases. Actually, this category is understood by the author broadly and includes all disputes with an environmental component, as well as those which relate to public health.[8] Such an approach allows the author to look at a diverse (yet sufficiently similar) catalogue of cases that come from different fields of international law (*e.g.* human rights, international trade, investment protection), and draw parallels and identify existing differences. The inclusion of health-related disputes should also be welcomed. In practice, international courts and tribunals rarely distinguish between these two categories of cases and uniformly apply the same judicial techniques to science and scientific evidence (*e.g.* by framing disputes in specific ways, applying a deferential standard of review, using external experts, *etc.*). Ignoring this jurisprudence only because it relates to public health rather than the environment as narrowly conceptualized would definitely be a mistake.

The book fits well in the literature on the subject. While the topic of the interaction between science and law (including adjudication) is not new,[9] Sulyok skillfully builds on the existing scholarship, ultimately producing an original account of the various practices developed by international courts/tribunals.

4 *Stenberg v Carhart*, 530 U.S. 914 (2000).

5 *Gonzales v Carhart*, 550 U.S. 124 (2007).

6 Katalin Sulyok, *Science and Judicial Reasoning. The Legitimacy of International Environmental Adjudication*, Cambridge University Press, Cambridge, 2020, p. 17.

7 For details *see* Patrycja Dąbrowska-Kłosińska, 'Risk, Precaution and Scientific Complexity before the Court of Justice of the European Union', *in* Lukasz Gruszczynski & Wouter W. Werner (eds.), *Deference in International Courts and Tribunals: Standard of Review and Margin of Appreciation*, Oxford University Press, Oxford, 2014, pp. 192-208.

8 Sulyok, 2020, p. 16.

9 *See e.g.* Sheila Jasanoff, *The Fifth Branch. Science Advisers as Policymakers*, Harvard University Press, New Haven, 1998; Kenneth R. Foster & Peter W. Huber, *Judging Science. Scientific Knowledge and the Federal Courts*, MIT Press, Cambridge, MA, 1999; Stephen Breyer, 'Science in the Courtroom', *Issues in Science and Technology*, Vol. 16, Issue 4, 2000, pp. 52-56; Robin Feldman, *The Role of Science in Law*, Oxford University Press, Oxford, 2009.

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There are at least three aspects that distinguish this title from other works currently available on the market. First, the taxonomy of the judicial techniques plausibly arranges the different approaches used to interact with the scientific aspects of a dispute, providing at the same time an analytical framework against which the practices of the various courts/tribunals can be assessed.[10] While specific techniques have been already discussed in the literature, to my knowledge Sulyok is the first to arrange them systematically and explain their mutual relationship. Second, the book genuinely compares different judicial practices. This analysis exposes the considerable differences that exist between courts/tribunals, with some of them embracing science and others limiting the scope of their examination to judicial issues. Sulyok also enquires into the reasons behind these differences and investigates whether there is a process of cross-learning between the different tribunals.[11] This is a very laborious task; one that is avoided by most researchers as it requires a minute examination of the vast case-law scattered across different fields of international law. A typical research approach in the field is most often to concentrate on one specific aspect[12] or to discuss one of the techniques.[13] Probably the two books that are the most similar to Sulyok's work are the monographs by Jacqueline Peel and Caroline Foster.[14] Of course, an obvious element that distinguishes her book is that it's more up-to-date. This is important, for the last decade has been very rich in science-intensive legal disputes decided in different fora.[15] Peel and Foster were therefore forced to make certain predictions, while Sulyok was able to verify them by looking at actual judicial practices. But the reviewed monograph is also broader in its scope and takes a different perspective. Rather than choosing landmark decisions as case studies (Peel & Foster) or discussing international risk regulation in general (Peel), Sulyok undertakes a systematic review of the entire relevant jurisprudence

10 *See* Sulyok, 2020, pp. 43-63.

11 Id., particularly Chapter 9.

12 *See e.g.* Lukasz Gruszczynski, *Regulating Health and Environmental Risks Under WTO Law: A Critical Analysis of the SPS Agreement*, Oxford University Press, Oxford, 2010; Valentina Vadi, *Public Health in International Investment Law and Arbitration*, Routledge, Abingdon, 2013; Malgosia Fitzmaurice, *Whaling and International Law*, Cambridge University Press, Cambridge, 2015.

13 *See e.g.* Andrew Legg, *The Margin of Appreciation in International Human Rights Law: Deference and Proportionality*, Oxford University Press, Oxford, 2012; Gruszczynski & Werner (eds.) 2014; Mónika Ambrus *et al.*, *The Role of 'Experts' in International and European Decision-Making Processes. Advisors, Decision Makers or Irrelevant Actors?*, Cambridge University Press, Cambridge, 2014.

14 Jacqueline Peel, *Science and Risk Regulation in International Law*, Cambridge University Press, Cambridge, 2010; Caroline E. Foster, *Science and the Precautionary Principle in International Courts and Tribunals. Expert Evidence, Burden of Proof and Finality*, Cambridge University Press, Cambridge, 2011.

15 *See e.g.* ICJ, *Whaling in the Antarctica (Australia v Japan: New Zealand intervening)*, Judgment, 31 March 2014, ICJ Reports 226; ITLOS, *Request for an advisory opinion submitted by the Sub-Regional Fisheries Commission (SRCF), Advisory Opinion*, Case No. 21, 2 April 2015; *Philip Morris Brands Sarl, Philip Morris Products SA and Abal Hermanos SA v Oriental Republic of Uruguay*, ICSID Case No. ARB/10/7, Award, 8 July 2016; Panel Reports, *Australia – Certain Measures Concerning Trademarks, Geographical Indications and Other Plain Packaging Requirements Applicable to Tobacco Products and Packaging*, WT/DS435/R, WTDS441/R, WT/DS458/R, WT/DS467/R, 28 June 2018; ECtHR, *Cordella and Other v Italy*, Nos. 54414/13, and 54264/15, 24 January 2019.

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(also in the area of human rights law), which makes it possible to present a more complete picture of the relevant developments in field of international law. Third, Sulyok's book includes insightful postulates as to the ways in which scientifically untrained judges can craft persuasive reasoning to justify their choices between competing, and often ambiguous, scientific or science-based arguments offered by the parties or experts in environmental disputes. This also guarantees that the book will remain relevant in the years to come.

I have no doubt that this is a must read for anyone interested in the multifaceted interactions between law and science, and the legal mechanisms used to adjudicate complex disputes with scientific or technological elements.

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