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The 2003-06 WTO GMO dispute: Implications for the SPS Agreement

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Introduction

In recent decades, global flows – whether of goods, services, capital, pests, chemicals or greenhouse gases – have expanded together with new technologies, norms and institutions that govern these flows. Several processes tend to denationalize what had been constructed as national in the modern era – policies, markets, capital, culture, and etc. – and to establish new global powers.

The World Trade Organisation (WTO), which superseded the General Agreement on Tariffs and Trade (GATT) in 1995, is a central node of this newly emerging global order. Established to police trade barriers for compliance with internationally agreed rules, it also sets global norms, such as standards of intellectual property and risk assessment for health and environmental issues. An agile institution, the WTO Secretariat is a relatively small bureaucracy linking hundreds of country representatives in Geneva.

While many international institutions have suffered a significant reduction in budget and political power in recent decades, the WTO has exerted a growing influence on nations throughout the world. Unlike most UN institutions and conventions, the WTO has a stringent enforcement capacity with efficient, fast dispute settlement procedures (Yerxa and Wilson, 2005). The WTO's dispute resolution mechanism was employed over 400 times in its first 15 years of existence, as compared to the mere 300 disputes settled over the 45+ years of the GATT era. While only one GATT dispute settlement drew upon scientific experts, more than a dozen trade disputes did so in the early years of WTO (Pauwelyn, 2002).

Globalization has prompted new means of knowledge production, validation and appropriation alongside the burgeoning of new technologies. Conversely, science and technology craft and legitimize the new global arrangements. Under the WTO trade regime, science and law are articulated in specific powerful ways, expanding the scientific-expert authority to scrutinize any domestic regulations that impose trade barriers. The WTO's basic assumption is that free trade is good for the world, so no product ought to be excluded from free circulation unless proven dangerous through a risk assessment with scientific evidence. Hence trade disputes constitute a key arena for analysing how the WTO jointly establishes global legal norms and what counts as relevant knowledge.

To understand how the WTO co-produces global norms and authoritative knowledge in practice, this essay examines the mobilization of scientific expertise in the dispute over genetically-modified organisms (GMO). A complaint was filed in 2003 by the USA, Canada and Argentina against the European Communities (EC) for operating a *de facto* 'illegal moratorium' since 1999. The WTO Dispute Settlement Panel reached its findings on that complaint in 2006, largely supporting the plaintiffs' accusations against the EU.

This essay asks the following questions: How were particular forms of legal reasoning were elaborated through the judicial procedure? How does this matter for understanding the expanding power of WTO discipline over health and environmental policy-making in the world? What are implications for future trade disputes involving issues of human health and environmental protection? To answer those questions, the essay draws upon interviews with staff from the WTO Secretariat, parties to the dispute, as well as scientific experts; also publicly available documents and unpublished correspondence between the Secretariat, the Panel and parties.

Putting the dispute into the SPS

After inconclusive attempts at diplomatic negotiation, in September 2003 the WTO's Dispute Settlement Board appointed a Dispute Settlement Panel to review the case. WTO Panels are composed of three 'judges', who are economists or trade lawyers by profession. The procedure is usually as follows: the Panel issues a report of findings, which parties can appeal; then the appeal is heard by the Appellate Body, consisting of seven judges, which also files a report. This process is supposed to last no more than fifteen months. However, in the GMO case, that process extended to almost three years, even without an appeal.

From the start of the dispute, the parties disagreed over its nature, its legal basis and the relevance of science. The US Trade Representative (USTR) emphasized that European measures contradict the SPS Agreement's requirement that procedures should be completed 'without undue delay', thus posing unjustified trade barriers (USTR, 2004a: 5). The European Commission Legal Services justified regulatory delays by mentioning scientific uncertainty about environmental and health risks. To avoid the narrower SPS disciplines, which would limit any precautionary approach, the Commission argued that the WTO Agreement on Technical Barriers to Trade (TBT) and the Cartagena Protocol on Biosafety also should be reference points for judging EC regulatory procedures. As early as 2004, however, the Panel had decided to frame the GMO dispute within the SPS Agreement alone, thus rejecting the EC's broader framing (Peel, 2006).

To fit the entire dispute into the SPS, the Secretariat and the Panel redefined the ontology of GM crops within a relevant risk category. Originally the SPS Agreement targeted epizootic and epiphytic diseases – which were seen as risks to 'human, animal and plant life or health' – that may justify national measures limiting trade. As its first move, the Panel classified any environmental harm, including threats to biodiversity, under the SPS category of risks to 'animal and plant life or health' (WTO, 2006: paragraph 7.219). Secondly, the Panel cast GMOs as SPS agents: GM crops were redefined as 'pests' (*transgene* escape hence becoming a 'pest effect') or as 'invasive species'. Transgenes were recast as 'food additives'. GM pollen became a kind of 'animal feed' because it could be ingested by bees (WTO, 2006: paragraphs 7.225-7.299). Within the latter move, EC regulations on GMOs become SPS measures applied to protect human life or health from risks arising indirectly from the entry, establishment or spread of weeds *qua* 'pests' (WTO, 2006: para 7.360).

With those two ontological moves, the Panel established a particular link between GMOs' biological identity as ecological agents and GMOs' legal identity as subjects of SPS rules. Some of these new constructs contradicted definitions from the very international expert bodies that the SPS Agreement itself had designated as global benchmarks for regulatory standards. For instance, the Panel's framing of transgenes as 'food additives' diverged from Codex Alimentarius' definition of 'food additives' as additions made 'in the manufacture' stage of food production. Nevertheless, the Panel argued that,

> in the special case of 'plant production', substances intentionally added at the stage of seed development and production could be reasonably considered to be substances added in the manufacture of the food plant, if the substances are present in the harvested plant as a component or affect the characteristics of the harvested plant (WTO, 2006: 7.299)

The Panel hence created new legal ontologies for GMOs and related ecological effects to make them amenable to SPS disciplines. This SPS plot, in turn, constrained how scientific advice would be mobilized and performed in the dispute settlement procedure.

Framing questions for experts

In August 2004 the Panel announced its decision to seek expert advice, as in previous disputes involving the SPS Agreement. Once the Expert Panel members were selected, they were invited to express their views on specific questions, 'solely for the purpose of assisting the Panel in its limited task of making findings of *fact* for purposes of these disputes' (Unpublished Terms of Reference, WTO Secretariat, September 2004)

During autumn 2004, the Panel and parties exchanged views on the questionnaire that would be sent to the experts. The final version included 114 questions. One quarter addressed general risk issues, such as sanitary risks related to genetic markers for antibiotic resistance, toxicity of Bt insecticidal crops for humans and non-target animals, and invasiveness of herbicide-tolerant crops. In line with the Panel's SPS framing, most questions focused on the scientific basis of the 27 regulatory delays and 11 national bans.

The US proposed to amend the initial draft questions in order to increase the burden of evidence on the Commission to demonstrate clearly that such a scientific basis existed. It also argued that:

> … even if evidence of risks exists, an SPS measure must be 'based on an assessment, as appropriate to the circumstances, of the risks.' Furthermore, evidence of 'existence' of risk is not dispositive to the application of Article 5.7. Instead, the 'relevant scientific information' with regard to the risk must be insufficient. (unpublished correspondence, USA to Panel, September 24, 2004)

For instance, the US proposed to ask the experts about all of the disputed delays or bans in which extra data had been requested from the companies on the potential risks associated with their products: 'Is there any basis to expect that [this requested data] would identify any adverse effect that had not previously been identified?' (USTR, 2004b: 59). Such questions strongly shifted the burden of evidence to the Panel to demonstrate that extra data were necessary as well as feasibly obtainable.

By contrast, the EC sought to broaden the experts' role. It posed questions highlighting uncertainties and limitations of scientific knowledge during the decade before the plaintiffs filed their complaint in 2003. The EC's strategy was thus to emphasize knowledge gaps and uncertainties within scientific knowledge – understood as evolving over time, with much dissensus among scientists. The extra questions aimed to focus the experts' attention on temporal changes. As the EC later reiterated: 'We should not forget that we are looking at the science at that time' (WTO, 2006: Annex J, paragraph 437). By engaging experts in a reflexive historicisation of scientific knowledge, the EC strategy demonstrated how science was co-evolving along with regulatory concerns.

In such ways, the Commission framed the dispute as a debate on past decisions made with knowledge at the time, which was then – but less so now – uncertain and thus insufficient for risk assessment. This historical narrative provided a way to manage the tension between the

EC's international and domestic agendas. The Commission Legal Services could defend the EC's regulatory sovereignty, while also limiting member states' scope to continue the *de facto* moratorium (Levidow and Carr, 2010: 156-159).

In the context of the dispute, the Commission's strategy also aimed to broaden the notion of risk assessment by emphasizing divergent scientific views as evidence of uncertainty. In the beef hormone dispute, the Appellate Body had stated that:

> [SPS Agreement] Article 5.1 does not require that the risk assessment must necessarily embody only the view of a majority of the relevant scientific community ... governments may act in good faith on the basis of what, at a given time, may be a divergent opinion coming from qualified and respected sources. (WTO, 1998: paragraph 194)

In this understanding of the Appellate Body, a minority scientific view can justify a precautionary measure (SPS Art. 5.7), without needing a formal 'risk assessment' required by SPS Article 5.1 (Boisson de Chazournes et al., 2009).

The final version of the questionnaire accommodated the USA's stringent view of the legitimate basis for regulators to adopt provisional measures under SPS Article 5.7. Many questions challenged the evidence for regulatory delays or bans, by asking experts: Was there enough information to make a proper risk assessment as required by Article 5.1 before taking a precautionary measure under Article 5.7? Was the additional information requested really necessary to ensure the safety of the product? Or could not a 'technical deficiency' be mitigated by providing other available safety information? Such questions pressed experts to challenge the Commission's defence arguments, thus eliciting expert opinions that could both be cast as 'scientific' and be used along SPS lines of legal reasoning.

Expert disagreements on the Panel's questions

In the dispute settlement process, science was deeply framed by the WTO setting and a narrow interpretation of the SPS Agreement as the basis for judging the defendant's regulatory practices. On the one hand, in the SPS Agreement, Article 5.1 requires that any measure restricting trade must be based on a risk assessment

> Members shall ensure that their sanitary or phytosanitary measures are based on an assessment, as appropriate to the circumstances, of the risks to human, animal or plant life or health, taking into account risk assessment techniques developed by the relevant international organizations. (WTO, 1994)

On the other hand, Article 5.7 leaves some room for precautionary measures in the face of scientific uncertainty:

> In cases where relevant scientific evidence is insufficient, a Member may provisionally adopt sanitary or phytosanitary measures on the basis of available pertinent information, including that from the relevant international organizations .... In such circumstances, Members shall seek to obtain the additional information necessary for a more objective assessment of risk and review the sanitary or phytosanitary measure accordingly within a reasonable period of time (WTO, 1994).

The Panel's questions directed the experts to scrutinize EC regulatory practices, especially in relation to the above criteria in the SPS Agreement. Scientific experts sometimes expressed divergent views, especially on the state of scientific knowledge and its adequacy for risk assessment. As in the case of molecular characterization mentioned above, for each risk issue, some members declared that the available knowledge was already sufficient for a favourable

risk assessment. According to more cautious experts, however, available scientific knowledge in the late 1990s had not always been sufficient. For instance, one expert regarded the French rejection of herbicide-tolerant oilseed rape as 'compatible with the tone of the SPS Agreement' (WTO, 2006: Annex I-4, paragraph 657).

The plaintiffs asked particular experts whether the EC defendant's delays or bans were the only way to manage scientific uncertainty, and whether the additional information the defendants requested from companies was essential and if there were alternative ways to manage the potential risks. These questions pressed the experts to comment on risk-management issues. For example, the Panel and plaintiffs posed questions about whether the EC procedures delayed product authorizations by requesting extra molecular data. In response, two experts argued that detection methods were not a necessary component of risk assessment (WTO, 2006: Annex J, paragraph 22).

Giving the Panel's verdict

The Panel's findings focused on the defendant's procedures: between 1999 and 2003 the EC had applied a general *de facto* moratorium, which led to its failure to complete regulatory procedures for 24 applications (out of 27 targeted by plaintiffs) without 'undue delay', thus violating Article 8 and Annex C of the SPS Agreement. Additionally, the nine national safeguard measures (bans) violated SPS Article 5.1's requirement for a 'risk assessment'.

For both categories of complaint, the Panel gave the EC's advisory body a decisive role, while maintaining distance from any particular judgement by scientific experts:

> EC committees issued opinions on each product and also reviewed the arguments and the evidence submitted by the member State to justify the prohibition and did not consider that such information called into question its earlier conclusions. The Panel thus considered that sufficient scientific evidence was available to permit a risk assessment as required by the SPS Agreement [Article 5.1]. Hence in no case was the situation one in which the Panel had been persuaded that the relevant scientific evidence was insufficient to perform a risk assessment, such that the member State might have had recourse to a provisional measure under Article 5.7 of the SPS Agreement. (WTO, 2006: 1068, paragraph 8.09)

In that way, the Panel rejected the defendant's main argument, ostensibly on legal-procedural grounds. The EC had cited SPS Article 5.7 as a basis for precautionary measures due to scientific uncertainties, as evidenced by disagreements among the scientific experts during the dispute procedure as well as the wider risk debate. By contrast, the Panel interpreted SPS Article 5.7 as a legitimate basis for a provisional restrictive measure *only* when the relevant scientific evidence was insufficient to perform a proper risk assessment under Article 5.1.

For that legal issue, the Panel deferred to favourable EC risk assessments – such as those from the Scientific Committee on Plants and Scientific Committee on Food, whose earlier opinions had declared that information was adequate for a risk assessment on GM products relevant to the WTO dispute. Moreover, given the existence of official EU risk assessments, this placed a retrospective burden of evidence on EU member states for an alternative risk assessment to demonstrate the inadequacy of evidence at that time. In this regard, the Panel cited the SPS Agreement, which defined a risk assessment as 'the evaluation of the likelihood of entry, establishment or spread of a pest or disease within the territory of an importing Member …, and of the associated potential biological and economic consequences' (WTO, 1994, Annex A(4)).

The Panel did not explicitly judge whether EC scientific committees' opinions fulfilled that definition, but it did judge that national objections failed to do so. With the Panel's narrative

of ‘sufficient evidence available’, any scientific uncertainties and scientific dissensus were cast as irrelevant. This excluded the EC’s narrative of science as historically contingent and contested.

Implications for the SPS Agreement

The Panel made substantive claims – for example, by innovating ontological categories (GMOs are pest, transgenes are food additives, etc.), by asserting that antibiotic markers genes are not dangerous, or by disregarding uncertainties that did not fit its narrow model of risk assessment. But these substantive judgements were not acknowledged as such. They were represented either as dictionary-based elaboration of terms and definitions in the SPS Agreements, or else as a purely legal review of the EC’s regulatory procedures, rather than as an engagement with scientific knowledge. Hence it seemed pointless to address substantive risk issues in the findings.

While previous Panels' findings in SPS disputes had reviewed both defendants’ regulatory practices on substantive grounds and the opinions of scientific experts, the GMO Panel chose a different strategy. Its findings focused on the defendant’s regulatory procedures, while avoiding any serious discussion of expert claims. This procedural turn was later reinforced by the Appellate Body’s 2008 ruling which criticized the Hormones II Panel for having ‘reviewed the scientific experts’ opinions and somewhat peremptorily deciding what it considered to be the best science’ (WTO, 2008: 612; Peel, 2010: 216).

This shift may be understood in a political context where previous Panels’ engagement with scientific risk issues had been criticized by anti-globalization activists, EC officials (Christoforou, 2000) and scholars (Busch et al., 2004). The WTO was even warned against becoming a new ‘trans-science organization’, thus undermining regulatory pluralism through a false, narrow conception of science (Walker, 1998). Facing such criticism, especially in the hot social-political context of the GMOs dispute, WTO decision makers found apparently less intrusive means to review the risk issues as a basis for their decisions. Hence the procedural turn in SPS jurisprudence constituted a significant shift in the WTO’s formation of knowledge and norms.

As pioneered in the GMO dispute settlement, the procedural turn constructs both an interface and boundary between science and law. The legitimacy of the judgement rests on its ‘science-based’ imprimatur, hence mobilizing scientific experts and scientific knowledge in the dispute settlement arena. Yet this expertise is framed in a way that allows WTO judges to avoid any explicit engagement with scientific knowledge. Under a procedural requirement for a ‘risk assessment’, the Panel applied a stringent standard of review to the defendants’ substantive risk claims. In several cases involving technical issues, by contrast, US courts have operated a legal epistemology whereby judges explicitly engage with scientific claims in order to separate sound science from junk science or marginal scientific views (Jasanoff, 1995; Edmond, 2002; Leclerc, 2007). Such explicit engagement can also be found in previous SPS findings (Peel, 2010: 254).

As this case illustrates, the WTO settlement process mobilizes scientific expertise in particular ways that can achieve multiple aims: it recruits a source of credibility from the scientific arena, reinforces the standard narrative of a ‘science-based’ trade discipline, and constructs a new scientific expertise for the main task – namely, challenging trade restrictions for being unduly cautious. Moreover, by operating a procedural turn in the WTO’s way of knowing, the Panel now keeps implicit its own judgements on substantive scientific issues. The decision makers’ engagement with scientific aspects therefore becomes less explicit and less accountable.

Summary

The World Trade Organization (WTO) dispute settlement procedure is a key arena for establishing global legal norms for what counts as relevant knowledge. As a high-profile case, the WTO trade dispute on GMOs mobilized and appropriated scientific expertise in somewhat novel ways. As shown above, the Panel interpreted the SPS framework as a requirement for 'risk assessment' – quantifying likelihoods and consequences, and imposing extra burdens upon the defendant to produce evidence. By imposing 'the narrowest applications to date of the notion of SPS risk assessment' (Peel, 2010: 244), the WTO Panel further globalised a 'science-based risk assessment' narrative that had emerged during the USA's Reagan administration (Jasanoff, 2011).

Early on, the Panel put the dispute under the Sanitary and Phytosanitary (SPS) Agreement through a new legal ontology; it classified transgenes as potential pests and limited all environmental issues to the 'plant and animal health' category. For the SPS framing, focusing on the defendant's regulatory procedures, the Panel staged scientific expertise in specific ways that set up how experts were questioned, the answers they would give, their specific role in the legal arena, and the way their statements would complement the Panel's findings.

Moreover, the Panel operated a procedural turn in WTO jurisprudence by representing its findings as a purely legal-administrative judgement on whether the EC's regulatory procedures violated the SPS Agreement. Meanwhile the Panel kept implicit its own judgements on substantive risk issues. As this case illustrates, the WTO settlement process constructs a new scientific expertise for the main task – namely, challenging trade restrictions for being unduly cautious.

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