

DEMOCRACY, SCIENCE, AND FREE TRADE:
RISK REGULATION ON TRIAL AT THE WORLD TRADE ORGANIZATION

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I. INTRODUCTION

Among the most common critiques of globalization is that it increasingly constrains the ability of democratic communities to make unfettered choices about policies that affect the fundamental welfare of their citizens, including those of health and safety, the environment, and consumer protection. Traditionally, free trade rules were about constraining border measures such as tariffs and quantitative restrictions on imports. Increasingly, however, such rules include requirements and constraints addressed directly to domestic regulation. For example, a country's policies with respect to intellectual property rights or its regulatory approach to network industries, such as telecommunications, may now be fundamentally shaped by rules that are made and interpreted at the international level. One of the most visible and controversial areas where trade rules constrain regulatory diversity is that of food safety. The World Trade Organization ("WTO") Agreement on Sanitary and Phytosanitary Measures ("SPS Agreement"), negotiated in the Uruguay Round and enacted in 1994, requires that countries either adopt harmonized international standards or, if they choose to maintain stricter regulations, base these on risk assessment, scientific principles, and scientific evidence. The SPS Agreement also requires that the regulations adopted be the least trade-restrictive available to achieve the desired

level of protection. The above provisions apply even to nondiscriminatory regulations that would not run afoul of the Most Favored Nation and National Treatment provisions of the GATT itself. The SPS Agreement also prohibits "arbitrary" and "unjustified" distinctions in levels of protection in situations that are comparable, where these distinctions lead to "discrimination" or "disguised restriction on trade."

Such strictures appear to provide fuel for criticism that globalization suffers a "democratic deficit." As two critics put it, "the essence of free trade is deregulation.... Trade regimes like NAFTA, the GATT, and the WTO already have enormous clout in determining environmental, agricultural, land-use, health and, food safety rules." n1

The beef hormones dispute between the United States and the European Union may seem to exemplify how the SPS provisions rob democratic communities of sovereign regulatory choices. The United States successfully challenged at the WTO an EU ban on beef injected with natural and synthetic growth hormones. The ban directly responded to widespread fears of citizens about the risks presented by such hormones, particularly if they might be present in foodstuffs at levels beyond those that would occur if the hormones had been administered in accordance with good veterinary practice. The ban, however, was found by a WTO panel not to be based on a risk assessment that followed scientific principles and procedures, a result upheld by the WTO Appellate Body (on narrower grounds to be discussed later in this essay).

The present essay is intended as a response to the "democratic" challenge to the SPS provisions and their interpretation by the WTO dispute settlement organs. I argue that these provisions can be, and should be, understood not as usurping legitimate democratic choices for stricter regulations, but as enhancing the quality of rational democratic deliberation about risk and its control. There is more to democracy than visceral response to popular prejudice and alarm; democracy's promise is more likely to be fulfilled when citizens, or at least their representatives and agents, have comprehensive and accurate information about risks, and about the costs and benefits associated with alternative strategies for their control. If rational deliberation is an important element in making democratic outcomes legitimate, then providing some role for scientific principles and evidence in the regulatory process may enhance, rather than undermine, democratic control of risk. On the other hand, democracy also requires respect for popular choices, even if different from those that would be made in an ideal deliberative environment by scientists and technocrats, if the choices have been made in awareness of the facts, and the manner that they will impact on those legitimately concerned has been explicitly considered.

II. TRADE RULES THAT CONSTRAIN DOMESTIC REGULATION: THE CHALLENGE TO THE CONVENTIONAL CASE FOR FREE TRADE

There are many respects in which enhanced access to foreign markets can require regulatory changes in those countries, and there are also the various transaction costs to trade from regulatory diversity. n2 The entanglement of trade liberalization commitments with explicit strictures on domestic regulation, however, raises important challenges to the conventional case that trade liberalization, generally speaking, enhances both domestic and global welfare. It had often been argued that a country effectively can pursue any given regulatory goal by means other than protectionist trade restrictions such as tariffs, and thus, the removal of such restrictions in no

way reduces the capacity of governments to achieve welfare-maximizing regulatory outcomes for their citizens. n3

Thus, in commenting on the original General Agreement on Tariffs and Trade ("GATT") Agreement, conventional trade law scholars characteristically have emphasized the extent to which free trade commitments do not reduce regulatory heterogeneity. n4 The main obligation of the GATT with respect to domestic regulations is that they be nondiscriminatory either between GATT/WTO Members (Article I: MFN Treatment) or between domestic and imported products (Article III:4: National Treatment). The nondiscrimination requirement would seem to leave enormous room for domestic regulatory autonomy; n5 moreover, in those hard cases where some kind of discriminatory regulation is necessary for legitimate public policy purposes, it might be justified under Article XX of the GATT, which allows the maintenance of otherwise GATT-inconsistent measures that are, inter alia, "necessary" for the protection of human or animal health or life (XX(b)) or the protection of public morals (XX(a)).

Something like a nondiscrimination requirement would seem essential to sustain a trade liberalization bargain, even on tariffs and other traditional "border" measures; if countries can "cheat" on trade liberalization concessions by creating the same protective effect through domestic regulations, then confidence in such a bargain will likely be weak. The classic economic case for trade liberalization referred to above tends to downplay such considerations, since that case suggests that even unilateral liberalization is economically rational. In as much as international trade law, however, reflects the notion that I should expect a reciprocal benefit for a concession I confer on others (even if it would have been in my interests to confer it absent the concession), some conventions about what constitutes legitimate domestic regulation versus "cheating" on concessions seem to be required. "Nondiscrimination" has proven to be a relatively robust convention in this regard, because protectionism implies discriminatory treatment. n6 Once discrimination has been extended, however, to include disparate impact, or de facto discrimination, as it has been in GATT jurisprudence, the nondiscrimination norm begins to seem like a less stable criterion for distinguishing legitimate regulations from protectionist "cheating" on tariff and related concessions. n7

III. SCIENCE, DEMOCRACY, AND THE SPS AGREEMENT

On one view of the SPS provisions, requiring that regulations be based on scientific principles and evidence and on risk assessment, addresses the challenge of finding a criterion more stable than nondiscrimination by making "science" the authority that decides whether regulations stricter than international standards are legitimate. This approach, however, removes the ultimate power of decision from the democratic communities that the regulations purport to protect. Walker expresses this view as follows: "The central strategy of the SPS Agreement is to use science to distinguish between those sanitary measures consistent with the Agreement and those in violation of the Agreement." n8 Along similar lines, David Wirth suggests that "scientific tests lie at the core of the trade disciplines established in the new Uruguay Round SPS Agreement." n9 If one accepts this understanding of the SPS Agreement then there is an inevitable cost to democracy in protecting the trade liberalization bargain. If this cost to democracy is genuinely required for trade liberalization, then the notion that liberalization will generally maximize both domestic and global welfare becomes questionable. One answer, which finds strong support in one branch of the trade policy literature, is to say that, especially with

respect to trade regulations, "democratic" outcomes typically reflect capture of the regulatory process by concentrated interests. Thus, hand-tying of the political process by international rules, or by an apolitical authority such as "science," actually may enhance domestic welfare and even result in regulatory outcomes that reflect more closely the preferences of most citizens. n10 Aside from the questionable empirical basis for the "capture" thesis, n11 there is another criticism: if citizens place a value on the capacity for self-government, paternalistic or technocratic responses even to admitted defects in the democratic process may well not result in overall gains to democratic welfare. Another response is to argue that "scientific" constraints on democratic regulatory choices be regarded as de minimus substantive requirements. n12 Judgments by the WTO dispute settlement organs about what constitutes de minimus scientific evidence, however, would themselves entail substantive judgments of value concerning the regulatory process, begging the question of which regulatory values should determine the "minimum."

A quite different view of the role of science in addressing democracy's defects emerges, however, if one understands democracy not simply in terms of popular will and decision, but as a form of legitimation of power that depends on a conception of public justification and deliberative reason. Such an understanding of democracy is to be found in several important accounts of democratic legitimacy in political and legal philosophy, notably those of Jurgen Habermas n13 and of Amy Gutmann and Dennis Thompson. n14 Gutmann and Thompson provide four reasons why deliberation is a central element in democratic legitimacy. First, deliberation can contribute to decisions made under conditions of scarcity by displaying to those who lose that "everyone's claims have been considered on their merits rather than on the basis of wealth, status, or power." n15 Second, deliberation may lead citizens to take seriously the claims of others, thus enhancing democratic equality. Third, deliberation may clarify what is really at stake in disagreements between citizens, allowing, for instance, identification of conflicts that result from misunderstanding and misinformation and that could be solved in fact without the need for trade-offs between divergent fundamental values. Fourth, deliberation holds out the prospect of learning from one another: "Through the give-and-take of argument, citizens and their accountable representatives can learn from one another, come to recognize their individual and collective mistakes, and develop new views and policies that are more widely justifiable." n16

Gutmann and Thompson's version of the deliberative model of democracy is not, however, uncontroversial. One issue arises from Gutmann and Thompson's n17 own employment of certain moral principles they regard as fundamental to simulating ideal deliberation on a range of public policy issues, thereby reaching substantive policy conclusions which they seem to believe have legitimacy regardless of whether they are, or could be, adopted by citizens in a real deliberative process. Thus, Peter Berkowitz suggests:

What remains curious... is just how much of their own deliberation - the refinement of commonly held opinions, the intricate reasoning from distilled moral principles, the sifting and weighing of the latest social science research - takes place without the actual involvement of fellow citizens, in the comfort of the study and the congenial climate of the seminar room; and to what an extent the legitimacy of the substantive conclusions Gutmann and Thompson

reach is, from the perspective of their own principles, independent of whether their fellow citizens can be persuaded to endorse them.
n18

A version of deliberative democracy that responds to this criticism would respect citizens' real choices, even where these seem irrational as measured against what citizens might be expected to decide in a perfectly rational deliberative process, while at the same time seeking to make the process as perfectly deliberative as possible.

The role of science on this understanding of deliberative democracy is developed by Richard Pildes and Cass Sunstein: the appropriate role of scientific expertise in the regulatory process is not to trump citizens' intuitive judgments about which risks are acceptable and which not, but rather to help ensure that citizens' judgments result from an appropriately structured deliberative process. n19

As David Leebron suggests, the application of the traditional GATT distinction between legitimate and illegitimate domestic regulations may entail a need for transparency in the domestic regulatory process. Harmonization through international standards may be justified where lack of transparency in the domestic regulatory process makes it impossible to make a principled decision as to whether a given regulation is legitimate or an example of illegitimate cheating on trade liberalization commitments. As Leebron observes, "if trade liberalization commitments can be neutralized by disguised regulatory measures, then the multilateral trade negotiation process would be undermined." n20 At the same time, as Leebron suggests, harmonization constrains the ability of governments to make distinctive rules for legitimate reasons, and he argues that the SPS Agreement should be understood as a compromise or trade-off between these countervailing concerns. One might develop Leebron's insight in the following way: the SPS Agreement works on two fronts simultaneously: on the one hand facilitating international harmonization as a solution to the transparency problem, on the other hand seeking to reduce the problem itself, through a range of disciplines on how governments engage in deliberation and justification with respect to regulatory choices.

If these latter disciplines are interpreted largely in terms of deliberative democracy, then it is possible to understand them in the "win-win" fashion in which neo-classical trade theory understands, for instance, tariff reductions or prohibitions on quantitative import restrictions. On the one hand, the transparency n21 in regulatory justification is needed to distinguish "legitimate" policies from disguised cheating on tariff and other concessions; on the other hand, the domestic regulatory process is arguably improved or perfected in the direction of an ideal of democratic rationality. Unlike harmonization, which implies a trade-off between a greater democratic deficit and effective maintenance of the trade liberalization bargain, both democracy and free trade should gain from disciplines that enhance democratic rationality. n22

Yet, if one recalls Berkowitz's critique of the Thompson and Gutmann model of deliberative democracy, things are not quite that simple. Making real world democracy more rational is quite different from constructing a model of democratic deliberation that purports to tell us what citizens would or should decide if they were to deliberate rationally given their existing preferences.

Moreover, since democracy is not just about citizens deliberating, but also deciding and acting, there may be trade-offs within the notion of democratic rationality between the need for

timely and cost-effective action, on the one hand, and the desirability of more adequate deliberation, on the other. n23 So if one wishes to understand the SPS provisions as a "win-win" for democracy and free trade then one must come to grips with this further dilemma. One way of doing so, reflected as I shall argue in the decision of the Appellate Body in the Hormones case, is to respect the manner in which these trade-offs are themselves made within the democratic process of each Member, provided that these trade-offs are themselves made explicitly, transparently, and in a manner consistent with the conception of democratic rationality. When regulators are acting without the information that would be needed to inform rational democratic regulation, they should say so and give a reason that is consistent with the conception of democratic rationality itself; for example, that the best evidence of citizens' preferences is such that the need to avert a possible catastrophe through action outweighs the possible gains for democracy from greater deliberation. Of course, here too matters are not so simple; greater deliberation might change the very preferences that regulators are "democratically" promoting in pushing ahead with action before deliberation. But, from the free trade perspective, what will be important is that there be adequate transparency to permit a reasonable judgment that the regulatory choice can be understood in terms of such a legitimate trade-off. Nor can this element of transparency in justification undermine democratic rationality within each Member state (even if it will not solve all the internal conflicts of democracy for that particular democratic community).

And, even if a deliberative process occurs where the requisite elements of democratic rationality are present, citizens may not change their views; once it is known that a risk is negligible or that there are significant costs but few marginal benefits, and so forth, citizens may still want a regulation to be enacted or maintained. As our consideration of Berkowitz's critique of Gutmann and Thompson suggests, in such situations, not to honor the citizens' choice is in fact to favor an artificial and cryptically elitist conception of democratic deliberation. Yet even here, one could not plainly say that there is simply a trade-off between democracy and rationality; if citizens believe they need a certain regulation, however "deluded" such a belief is, their utility will be reduced if they do not get it, in the sense that they will believe themselves exposed to a risk they believe to be significant. n24 Yet, as Steven Breyer suggests, part of the problem in these cases may be an absence of trust in the information and judgments that expert regulator/bureaucrats feed into the regulatory process, and part of the solution to distrust is "openness in government." n25 This of course suggests another "win-win" - enhanced transparency in justification can help resolve dilemmas within democratic rationality, while at the same time increasing confidence on the part of one's trading partners that they are able to distinguish legitimate regulation from cheating on trade concessions. Relatedly, openness can serve to enhance trust between one's own regulators and those of other countries and can facilitate arrangements such as Mutual Recognition Agreements, which preserve regulatory diversity, while reducing the transactions costs of trade across borders. n26

It is from this perspective that I will now consider the main operative provisions of the SPS Agreement, as interpreted by the WTO Appellate Body.

IV. DEMOCRACY, TREATY INTERPRETATION, AND THE WORLD TRADE ORGANIZATION

The SPS Agreement is, of course, a treaty under the World Trade Organization. Not all the Member countries of the WTO are democracies, either in the sense of displaying the formal institutional characteristics widely identified with democracy - free elections, multiple political parties, legislative debate and so forth - or even in the general sense of providing means of public consultation and participation in government. n27 While an interpretation of the SPS Agreement informed by deliberative democracy might answer certain of the critics of globalization, if this reading were not consistent with the structure of WTO law in general and also with the international legal rules for treaty interpretation, it would risk being characterized as illegitimate. To address the critics, it would then be necessary to amend the actual text of the SPS Agreement to make it explicitly reflect the democratic values in question. n28

The WTO Appellate Body has interpreted the dispute settlement procedures of the WTO to entail treaty interpretation based on the rules to be found in the Vienna Convention on the Law of Treaties (Vienna Convention). n29 Article 31 of the Vienna Convention provides that a treaty is to be interpreted in light of its purpose and object, and its context, including the preamble. n30 Additional sources of interpretation include, inter alia, subsequent practice between the parties with respect to the application and interpretation of the treaty, and any relevant rules of international law applicable in the relations between the parties. n31 In the recent Shrimp/Turtle case, n32 which concerned a potential conflict between trade liberalization and environmental goals, the Appellate Body looked both to the Preamble of the WTO Agreement - the framework treaty establishing the World Trade Organization - and to evolving international environmental law in order to interpret provisions of the 1947 GATT relating to trade action for protection of exhaustible natural resources. This kind of interpretation tends to integrate the GATT treaties into a dynamic system of international law as a whole.

It has been vigorously argued, most notably by Thomas Franck, that democracy is an emerging right or norm in international law - a right that entails not only participation in elections but is closely related to rights of freedom of association and expression, which facilitate democratic deliberation. n33 In this broader context of the evolution of international human rights law, interpreting those provisions of WTO treaties that bear on domestic governance (like the SPS treaty) in a manner that supports and encourages democratic governance seems appropriate. Democratic governance is, however, increasingly seen as instrumental to the achievement of objectives explicitly stated as fundamental to the World Trade Organization. The Preamble of the WTO Agreement lists as among these objectives, "raising standards of living, ensuring full employment and a large and steadily growing volume of real income..." and "optimal use of the world's resources in accordance with sustainable development..." Some of the best current economic thinking about development suggests that such goals are very unlikely to be attained without democratic governance. According to Amartya Sen, for example:

in judging economic development it is not adequate to look only at the growth of GNP or some other indicators of overall economic expansion. We have to look also at the impact of democracy and political freedoms on the lives and capabilities of the citizens. It is particularly important in this context to examine the connection

between political and civil rights, on the one hand, and the prevention of major disasters (such as famines), on the other. Political and civil rights give people the opportunity to draw attention forcefully to general needs, and to demand appropriate public action.... This is a part of the "instrumental" role of democracy and political freedoms. n34

Openness and accountability of political and regulatory institutions also has been identified by the World Bank as an important determinant of economic growth and development. n35

The growing salience of democracy in relation to the objectives of the international trading system, of course, does not provide a justification for interpreting the provisions of the SPS Agreement in a manner that does violence to the text of the treaty. Thus, following the Vienna Convention, the cogency of an interpretation informed by considerations of democracy must be tested against the language of the treaty itself, and prior interpretations of the treaty by the WTO dispute settlement organs. It is to these matters to which we therefore now turn.

V. "SUFFICIENT SCIENTIFIC EVIDENCE," "SCIENTIFIC" JUSTIFICATION, AND RISK ASSESSMENT

Article 2.2 of the SPS Agreement requires that Members ensure, inter alia, that each SPS measure is "based on scientific principles and is not maintained without sufficient scientific evidence." n36 Measures that "conform to" international standards, however, are deemed to conform to this, as well as the other provisions of the SPS Agreement. n37 Article 3.3 of the SPS Agreement allows Members to maintain a higher level of protection than that which would be achieved by international standards if there is a "scientific justification." n38

The meaning of scientific justification for purposes of the SPS Agreement is explained in Article 5 of the Agreement: measures must be "based on" a risk assessment, and the risk assessment "shall take into account available scientific evidence" of risk, along with a range of other factors including "ecological and environmental conditions." n39 In Annex A, risk assessment is defined as:

The evaluation of the likelihood of entry, establishment or spread of a pest or disease within the territory of an importing Member according to the sanitary or phytosanitary measures which might be applied, and of the associated potential biological and economic consequences; or the evaluation of the potential for adverse effects on human or animal health arising from the presence of additives, contaminants, toxins or disease-causing organisms in food, beverages, or feedstuffs. n40

When read carefully, and in relation to one another, these provisions do not have the effect of usurping democratic judgment about risk and its regulation and placing these matters under the authority of "science." As language such as "based on" and "take into account" suggests, the SPS Agreement brings science in as one necessary component of the regulatory process, without making it decisive. Thus, "sufficient scientific evidence" arguably refers to the evidence that is

needed if science is to play this democratic role in risk regulation, not to some threshold of scientific proof or certainty below which democratic judgments about risk are illegitimate.

In the *Hormones* n41 case, the Appellate Body tended toward this kind of interpretation of the SPS Agreement. The Appellate Body (AB) viewed the language "based on" in Article 5.1 as implying the existence of a justified rational basis for a measure in assessed risks; a measure still could be based on a risk assessment even if scientific opinion were divided or uncertain. n42 All that was required in the evidence represented by a risk assessment was evidentiary support for the connection being drawn by the government between the measure in question and the reduction or elimination of the identified risks. It is worth citing the AB's analysis at length:

We do not believe that a risk assessment has to come to a monolithic conclusion that coincides with the scientific conclusion or view implicit in the SPS measure. The risk assessment could set out both the prevailing view representing the "mainstream" of scientific opinion, as well as the opinions of scientists taking a divergent view. Article 5.1 does not require that the risk assessment must necessarily embody only the view of a majority of the scientific community. In some cases, the very existence of divergent views presented by qualified scientists who have investigated the particular issue at hand may indicate a state of scientific uncertainty. Sometimes the divergence may indicate a roughly equal balance of scientific opinion, which may itself be a form of scientific uncertainty. In most cases, responsible and representative governments tend to base their legislative and administrative measures on "mainstream" scientific opinion. In other cases, equally responsible and representative 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. By itself, this does not necessarily signal the absence of a reasonable relationship between the SPS measure and the risk assessment, especially where the risk involved is life-threatening in character and is perceived to constitute a clear and imminent threat to public health and safety. Determination of the presence or absence of that relationship can only be done on a case-to-case basis, after account is taken of all considerations rationally bearing upon the issue of potential health effects. n43

This interpretation of Article 5 suggests a number of important implications. It should be noted, first of all, that the AB was here addressing, at least explicitly, only one kind of uncertainty or indeterminacy, that produced by divisions of scientific opinion. The AB also indicated, however, that the "very existence" of divergent scientific views may itself indicate that there is "scientific uncertainty." n44 Here, the AB seems to be referring to a different kind of "uncertainty" which may, but need not be, manifested by disagreement among scientists, namely the degree of error or inaccuracy inherent in assessing risk using scientific methodologies. The suggestion is that uncertainty in this sense does not in itself prevent a measure from being based on a scientific assessment of risk nor by implication, that it is being sustained without sufficient scientific

evidence. The AB also suggests, however, that when it is rational for a government to act in the presence of a given level of uncertainty in the evidence will depend, inter alia, on how serious the consequences of not acting would be, in terms of harm to human health or economic interests, should the higher estimates of the risk prove true. Of course, this cannot be a matter of scientific judgment; science cannot tell us just how conservative or protective it is reasonable to be in the presence of a given level of error or uncertainty in a scientific assessment of risk. In a democracy, this will depend on citizens' preferences about risk. But awareness of the existence of uncertainty and margin of error, as well as knowledge about the possible consequences of action or inaction, can allow citizens to determine the course of action most consistent with their underlying preferences about risk. To put it in terms of the language of the SPS Agreement itself, each country may determine its "appropriate level of sanitary and phytosanitary protection." n45 Whether it is rational for a government to take precautions in the presence of a given degree or kind of uncertainty in the scientific evidence will ultimately depend upon democratic judgments about the "appropriate level" of protection.

The AB's democratic understanding of the role of "science" in regulation is also exemplified by its statement concerning the range of scientific views that may be taken into account, or even relied upon, by regulators in a (democratically) rational regulatory process. The AB suggests that this may include "nonmainstream" science. Now if the range of views includes these, any sense in which science can be an authority or neutral arbiter between legitimate and illegitimate policies surely disappears - for this authority would depend upon the authority of "science" itself to determine what constitutes science. And what actual human authority could be found that might make this judgment except the scientific "powers that be," namely mainstream science itself - for whom nonmainstream science might be indistinguishable from magic, shamanism, "superstition," and so on? The democratic view of the place of science in regulation is, however, quite compatible with a place for "nonmainstream" science; indeed, it reflects an older view of the meaning of science: one that predates the identification of "science" with the methodologies and techniques characteristic of modern natural science - namely, that of reasoned inquiry in the broadest sense. n46 What is critical is whether the "science" in question can contribute to democratic rationality - transparent deliberation about policy among citizens and their representatives that does not exclude from consideration any reasoned claim.

Yet a further illustration of the democratic approach to the role of science is the AB's rejection of a strict separation between risk assessment and risk management - the former based on quantitative analysis of risks themselves and the latter involving judgments of value as well as fact, in the determination of the best strategy to manage risk. n47 As the AB observed,

it is essential to bear in mind that the risk that is to be evaluated in a risk assessment... is not only risk ascertainable in a science laboratory operating under strictly controlled conditions, but also risk in human societies as they actually exist, in other words, the actual potential for adverse effects on human health in the real world where people live and work and die. n48

Here, the issue was whether a risk assessment could take into account risks that might arise from the use of the hormones in question in an abusive fashion, contrary to sound veterinary practice. It was in fact this kind of risk that played an important role in the public outcry that had led to

the EC ban in the first place. n49 The Appellate Body nevertheless held that the ban on hormone-injected beef violated the SPS Agreement because the European Community had not offered a risk assessment that dealt specifically enough with the risks posed by the use of hormones in a manner inconsistent with sound veterinary practice.

In the subsequent Salmon n50 case, the Canadian government challenged an import ban on fresh, uncooked salmon imposed by the Australian government. The Australian government presented, as its justification for the ban, a risk assessment contained in a 1996 document that found that, apart from heat treatment (which would amount to the same thing as an explicit ban on fresh, uncooked salmon), the scientific evidence suggested that no other means of preventing the risk of the entry of disease agents would reduce the risk of disease to an acceptable low. The risk assessment identified twenty-four diseases that could be spread through imported salmonids, with varying assessments of how likely this would be, depending on the disease in question. For many of the diseases, the assessment suggested that there was very limited evidence on the basis of which one could determine likelihood or probability, and in these cases a very general non-quantitative estimate of the likelihood was given. In almost all cases, the likelihood was low, but the possible social and economic consequences of disease were claimed to be serious enough to justify the maintenance of an import ban. This conclusion differed from that of a 1995 Report that, having stated the probabilities as quite low, had suggested that less stringent precautions might well be indicated. n51

The panel considered the extent to which probabilities of risk would have to be specified on a disease-by-disease basis, and asked scientific experts about whether, given the degree of specification in the risk assessment, it qualified as such for purposes of the SPS Agreement. The answers to these questions reflected considerable confusion or uncertainty about what kind of "scientific" judgment the scientists were supposed to be making. Some thought that only a quantitative assessment could qualify for purposes of a risk assessment, while others found that non-quantitative statements were acceptable where error levels or uncertainty made a quantitative approach less feasible. In some instances, inferences across diseases might be acceptable, presumably where the pathologies were roughly similar; in other cases, it might be necessary to assess the diseases individually in terms of risk of incidence from imported salmonids. The panel concluded, weighing the various scientists' views, that, although overall the Report seemed to fall short of the scientific ideal for risk assessment, it did contain "some" evaluation of likelihood or probability. Similarly, there was "some" evaluation of risk in light of the alternative measures available to achieve Australia's appropriate level of protection, but there was no systematic evaluation of the various options and their relative effectiveness in reducing risk. The Appellate Body, however, reversed this ruling, holding that, having made findings of fact concerning these limitations of the risk assessment, the panel could not properly have come to the legal conclusion that the 1996 Report qualified as a risk assessment within the meaning of the SPS Agreement.

In the questions that it posed to the scientific experts, however, the panel never placed the issues in the context of the legal meaning of the SPS Agreement provisions on risk assessment and scientific evidence. Thus, it asked the experts, *inter alia*, "what, in your view, are the minimum requirements of a risk assessment? Would requirements vary depending on the product and/or diseases addressed?... do these reports, from a technical/scientific point of view, meet the minimum requirements of a risk assessment generally accepted in the specific area of aquatic animal health?" n52 In asking these questions, the panel must have believed either that a

scientific/technical point of view could be dispositive as to whether a risk assessment met the legal requirements of the SPS Agreement or that a judgment about adequacy from a scientific point of view would be at least one element in determining whether the risk assessment was adequate as a matter of law. In the former case, the panel would have actually been ignoring the important rulings of the Appellate Body, discussed above, namely that a risk assessment could contain views from "non-mainstream" science and that for purposes of the SPS Agreement, risk assessment and risk management are not necessarily to be viewed as separate or independent exercises. In the latter case, having considered the scientists' evidence, the panel would have to make its own judgment as to how that evidence bore upon the legal adequacy of the risk assessment. The panel, in any event, did come to a conclusion of legal adequacy after making findings of fact that suggested that, from the perspective of mainstream scientists, there were elements of inadequacy in the risk assessment. So, at one level, the Appellate Body erred in suggesting that the panel's findings of fact were not consistent with its conclusion of legal adequacy. But, at another level, the panel failed to articulate how it intended to use or weigh the scientific evidence in deciding the question of adequacy.

Interestingly, one of the scientists herself expressed some of the reasons why one cannot determine the adequacy of a risk assessment for regulatory purposes using technical/scientific criteria. In oral testimony, Dr. Wooldridge commented: "very often because time constraints and requirements for action dictate that in the given circumstances a qualitative assessment, which is generally much quicker, is the thing that is required or the only thing that can be done." n53 At the same time, Dr. Wooldridge, testifying as a scientist, faulted the Australian risk assessment for failing to undertake quantitative analysis of probability. n54

In examining the entire record of scientific advice and testimony in this case, the naive reader would take away the impression that the scientists were terribly confused about what was required in a risk assessment from a technical/scientific point of view. For example, they took quite varying views on the necessity for quantifying probabilities. But even those who did not think a quantitative assessment need always be done, strongly suggested, at other points in their testimony, that it should be done whenever possible or feasible. Similarly, some, but not all, of the experts appeared to believe that an assessment of probability would be required for each disease; others hedged on this issue. In fact, the scientists oscillated between their sense of what would be required to meet a certain ideal of scientific knowledge about probabilities, and their awareness that the context of the whole question that was being posed to them, was practical - oriented towards political decision and action.

Significantly, none of the experts called by the panel was a regulatory or political economist. It is arguable that the relevant "expertise" that the panel needed in this case was the expertise of those whose research centers on the role of science within the process of regulation and who move between the disciplines of science and regulatory theory. n55 The scientists called upon in Salmon were placed in a virtually impossible position: they were asked to make a purely technical/scientific judgment about the adequacy of risk assessment as a regulatory tool.

How then, in drawing on different kinds of expertise, might the panel have been able to determine the adequacy of the Australian risk assessment on a democratic rationality approach? The 1995 Draft Report had stated relatively clearly the probabilities with respect to transmission of disease and equally clearly the limits and assumptions of those statements - many not based on actual historical data. The probability was, in almost all cases, low or negligible. In light of these results, the 1995 Report recommended consideration of options less stringent than an import ban.

The 1996 Report, of course, came to a different conclusion: that considering the uncertainties surrounding the assessment of probabilities in these cases, and given the political/regulatory decision to require a high level of protection, the import ban remained a defensible and indeed desirable regulatory option. In effect, the 1996 Report sought to justify more stringent regulation based upon what amounted to much of the same evidence of very low, or even negligible, risk. But, in restating the assessment of risks in vaguer or more general terms, the 1996 Report, if it did not hide, at least blunted the significance of a choice for stringent regulation in the presence of negligible risks. n56 From the perspective of rational democratic deliberation, the 1996 Report, therefore, left much to be desired. It impeded, rather than advanced, deliberation on the essential question of whether there are democratically legitimate reasons for choosing a very stringent regulatory option in the presence of findings of low or negligible risk. In *Hormones*, the AB suggested that such a decision might, in some circumstances, be rational, particularly in the presence of various kinds of uncertainty about the finding that risk is low or negligible and in light of a democratic judgment on the consequences if, in actuality, the assessment proves much too low. It could also be democratically rational in light of citizens' revealed risk preferences in the particular case, which relate to the appropriate level of protection (an issue to be discussed in the next section of the Article). But such an inquiry into the rational relationship between the risk assessment and the measures adopted depends upon transparency about the choices made and the assumptions about uncertainty and probability that inform them.

The most recent interpretation of the SPS Agreement by the Appellate Body, in *Japanese Agricultural Products*, n57 appears at first glance to endorse a rather narrow view of the requirements that measures not be maintained without sufficient scientific evidence. In *Japanese Agricultural Products*, the United States challenged a Japanese requirement that, in order for plants to be permitted to enter the country, it must be demonstrated that, with respect to the specific variety of plant in question, quarantine measures such as fumigation are effective to eliminate the risk of codling moth, a pest that can cause considerable destruction to crops. Japan had produced some evidence from experiments that suggested the possibility that effectiveness of the quarantine treatments would vary from one variety of host plant to another, and the scientific experts consulted affirmed that such a relationship was possible. n58 The panel found, however, that Japan had not investigated the possibility of a link between the effectiveness of the quarantine measures and the variety of fumigated plant studies that controlled for other variables. Thus, it concluded that "no evidence before this Panel makes the actual causal link between differences in the test results and the presence of varietal differences." n59 Upon appeal, Japan argued that the requirement of a "causal link" went significantly beyond the requirement of a rational relationship between the scientific evidence and the measures adopted, a relationship the AB held in *Hormones* was the appropriate interpretation of the SPS provisions in question. The Appellate Body, however, upheld the panel's finding of a violation in *Japanese Agricultural Products*, noting that the "casual link" did not go to the relationship between the regulations and the scientific evidence, but to the weight of the scientific evidence itself. The panel had made a finding of fact that, given the absence of any evidence of a causal link between differences in varieties and differences in effectiveness of quarantine treatment, there was not a rational relationship between the evidence and the SPS measure adopted. n60 Moreover, the Appellate Body explicitly rejected the understanding of sufficient scientific evidence as a kind of *de minimis* requirement that some scientific evidence exists.

How, then, do we understand the outcome of this case in light of the democratic deliberation approach to the SPS Agreement, of which we found considerable traces in *Hormones*? As the

panel report indicates, Japan never really responded to the experts' view that it could quite easily have done more to confirm the hypothesis that varietal differences affect the efficacy of quarantine measures. Other than a claim to deference, Japan never provided a justification for tabling its investigation, even though the United States had raised a presumption that the available science could yield much better evidence on the relationship in question, were the inquiry to be pursued. If the evidence that Japan had were the best that was reasonably available, or if better evidence would have resulted in large costs or inordinate delays in regulation, Japan might have been able to supply reasons for acting on the evidence which it had. In sum, Japan's choice not to pursue better evidence did not reflect democratic rationality. "Sufficiency" of scientific evidence does not, then, refer to some threshold of scientific proof or certainty (which, in any case, does not exist in the abstract) but rather to the extent of the obligation of a Member to engage in scientific investigation within the process of rational democratic deliberation. And such sufficiency will be judged by the relative costs and benefits acting on the scientific evidence that the Member has in fact mustered as opposed to having taken the inquiry further. In this connection, it should also be noted that Japan had also attempted to justify its regulation as a "provisional" measure, which can be undertaken without sufficient scientific evidence, within the meaning of Article 5.7 of the SPS Agreement. Even Article 5.7, however, stipulates that in order to qualify as a provisional measure, the Member must be making further efforts to obtain more accurate information and must review the measure within a reasonable period of time; it was held by the Appellate Body that Japan's measure met neither of these conditions. This omission simply reflects what appears to be Japan's unjustified choice to truncate at a very preliminary stage its investigation into the existence of the risk in question.

VI. APPROPRIATE LEVELS OF PROTECTION

The SPS Agreement provides that Members may introduce SPS measures that provide a higher "level of protection" than international standards, n61 that, in determining their appropriate level of protection, Members "should... take into account the objective of minimizing trade effects," n62 and that "each member shall avoid arbitrary or unjustifiable distinctions in the levels it considers to be appropriate in different situations, if such distinctions result in discrimination or disguised restrictions on international trade." n63 Furthermore, a Member's "appropriate level of protection" is defined as the level "deemed" appropriate by that Member. n64

The notion that distinctions in the level of protection in different situations may be "arbitrary" and "unjustified" relates directly, of course, to one of the main issues in risk-regulation literature: the question of when it is rational or not for citizens to place a higher value on given percentage chance of avoiding one risk rather than another. n65 Summarizing important literature, Sunstein and Pildes suggest the following:

For laypeople, many contextual features are relevant: 1) the catastrophic nature of the risk; (2) whether the risk is uncontrollable; (3) whether the risk involves irretrievable or permanent losses; (4) the social conditions under which a particular risk is generated and managed, a point that connects to issues of consent, voluntariness, and democratic control; (5) how

equitably distributed the danger is or how concentrated on identifiable, innocent, or traditionally disadvantaged victims, which ties to both notions of community and moral ideals; (6) how well understood the risk process in question is, a point that bears on the psychological disturbance produced by different risks; (7) whether the risk would be faced by future generations; and (8) how familiar the risk is. n66

Sunstein and Pildes further maintain: "It is fully rational to attend to contextual differences of this sort." n67

Even if one believes that in some strong sense citizens' distinctions between risks along some of the lines listed above are not rational, it may still, in some cases, make sense to "attend" to those distinctions. The reason is that the utility from a regulation comes not only from the reduced likelihood of an event that one disvalues, but also from the psychological security that results from one's belief about the protection one is receiving. As Viscusi notes, "when a federal agency demonstrates that it will not take chances with individual health, that reassurance alone enhances individual welfare. Conversely, a perception that the government tolerates risks to the public might be more damaging than the risks themselves." n68

In *Hormones*, the AB considered the issue of which differences in acceptable levels of risk could be considered arbitrary and unjustified and which not. The complainants alleged several instances of arbitrary and unjustified distinctions between the levels of protection that the EC deemed appropriate with respect to the synthetic hormones it had banned and certain other substances it had not. Among the most interesting of these claims was that while banning injected synthetic and natural hormones, the EC had not attempted to control foodstuffs in which comparable, or even significantly higher, levels of hormones occur in nature.

Viscusi suggests that people tend to underreact to risks, including cancer risks, presented by natural substances, while overreacting to those produced by conscious human activity. n69 The AB's response to the panel finding of an arbitrary and unjustified distinction in protection as between injected (natural and synthetic) and endogenous natural hormones was as follows:

We do not share the panel's conclusions that the above differences in levels of protection in respect of added hormones in treated meat and in respect of naturally-occurring hormones in food, are merely arbitrary and unjustifiable. To the contrary, we consider there is a fundamental distinction between added hormones (natural or synthetic) and naturally-occurring hormones in meat and other foods. In respect of the latter, the European Communities simply takes no regulatory action; to require it to prohibit totally the production and consumption of such foods or to limit the residues of naturally-occurring hormones in food, entails such a comprehensive and massive governmental intervention in nature and in the ordinary lives of people as to reduce the comparison itself to an absurdity. n70

Yet does this reasoning really save the distinction in level of protection from being "arbitrary" or "unjustified"? Is it really true that the EC does not regulate the level of endogenous hormone residues in people's diets because of the vastly greater costs of such regulation, as the Appellate Body suggested? Might it not also be possible that the differential treatment of endogenous and injected hormones reflects the kind of apparently irrational approach to risk described by Viscusi? Yet another possibility is identified by Carl Cranor, namely that there are morally defensible reasons for this kind of variation in risk tolerance:

It is one thing to die in a natural disaster, such as an exploding volcano or an earthquake, and quite another to be a victim of a murder or of a reckless or negligent release of a toxic substance. In each case the victim is dead. However, human agency and human fault makes a difference in our judgments of the issues. Morally faulty human actions are more blameworthy and frequently of greater cause of concern than acts of nature. n71

If, however, citizens are acting on the basis of a simple misperception of relative risks, then the EC, by banning only synthetic hormones, is not only impeding rational democratic deliberation about regulatory choice, but is also placing citizens at risk, allowing them to draw the inference that a diet that does not consist of meat injected with hormones is actually safe in terms of the risks at issue. The Appellate Body is wrong that the EC would have to regulate endogenous hormones through the same means as injected hormones, were the difference in levels of protection found to be arbitrary or unjustified. The EC might sensibly decide that it could respond to citizens' ignorance of the relative risks posed by natural hormones through an extensive public information campaign disclosing the carcinogenic risks from the levels of residue in foodstuffs. It might still choose a ban as its response to the injected hormones, based upon citizens' concerns that because of problems with abusive veterinary practice they cannot control the levels of these residues simply through dietary information (which would be the case with the natural endogenous hormones).

In the subsequent *Salmon* case, the Appellate Body upheld a finding by the panel that Australia had based its regulation on arbitrary and unjustified differences in level of protection, resulting in "discrimination" or a "disguised restriction on trade." In *Salmon*, it will be recalled, Australia had banned salmon imports on the basis of risk of transmission of pathogens through live or uncooked fish. Australia did not, however, ban imports of bait fish, for which the risk of transmission of disease was apparently even greater, nor did it ban imports of tropical ornamental fish. Australia argued that it was improper to infer differences in level of protection from the mere fact of different regulatory treatment of other fish presenting equal or even greater risks of disease transmission. An examination of the record at the panel level indicates, however, that Australia provided no alternative explanation or justification for the difference in treatment, except that it had not yet conducted risk analysis for these other fish. From the perspective of democratic deliberation, was the Appellate Body right to reject this explanation as consistent with the SPS Agreement? By failing to conduct risk assessments across the range of comparable risks, a government fails to assist its citizens in understanding the relative costs of achieving a given level of protection in cases of different risks. By its selectivity of which risk to consider regulating in the first place, a government may reinforce popular prejudices about which risks are serious or not. n72 The Australian government was right to point out that a government may

not have the resources to study all risks simultaneously. Precisely by virtue of this fact, however, Australia appropriately could be asked to provide an account of why it had acted on salmon prior to bait fish, given that pre-existing general scientific evidence suggested a strong prima facie case that the disease threat from the latter was greater than from the former.

VII. NECESSITY AND LEAST TRADE RESTRICTIVE MEANS

There are at least two provisions of the SPS Agreement that appear to be very difficult to understand in terms of the process of rational democratic deliberation. These provisions would seem to require certain substantive regulatory trade-offs and thereby to constrain the outcomes of democratic regulation. Article 2.2 requires that each member "shall ensure that any sanitary or phytosanitary measure is applied only to the extent necessary to protect human, animal or plant life or health." n73 One reading of this provision would be that it requires that regulations be based on a demonstration that less restrictive or less costly alternatives are not available for the protection of human, animal, or plant life or health. This reading is consonant with Article XX(b) of the GATT, which provides that otherwise, GATT-inconsistent measures may nevertheless be sustained if they are "necessary" to these purposes. GATT panels have interpreted the concept of necessity here as implying the idea of least-restrictive means. n74 In apparently excluding only regulations that are superfluous or unneeded to achieve the legitimate public objectives in question, such a concept may seem consonant with an unbounded ability of the democratic community to make legitimate regulatory choices. As Trachtman suggests, however, there are interpretations of such tests that lead in practice to the imposition of substantive trade-offs between free trade and other public values. In recognition of the fact that even if adequate to achieve the objectives in question, the truly least restrictive means may have other costs, such as higher administrative or compliance costs than alternative measures; the least restrictive means has been understood as that which is the least restrictive "reasonably" available. As Trachtman observes:

If the reasonableness test amounts to a requirement that the least trade restrictive alternative not be so costly as to countervail the benefits of the regulatory measure, then it bears some resemblance to cost-benefit analysis; excluding from its truncated maximizing analysis on the measurement of the benefits of the regulatory measure. If, alternatively, it amounts to a comparison that requires that the regulatory costs not be disproportionately great in comparison to the trade benefits, then it is a kind of proportionality testing. n75

It should be noted, however, that there is a significant difference between Article 2.2 of the SPS Agreement and Article XX(b) of the GATT. The former deals only with the application of regulations, not regulations themselves. Thus, the significance of Article 2.2 is arguably that it instructs those applying democratically decided regulatory measures to do so in a manner consistent with the public justification of the measures themselves. If read in this way, Article 2.2 is entirely consistent with a democratic deliberation approach to the SPS Agreement. Such a reading makes sense of the treaty language itself. n76 Furthermore, many complaints about

protectionism with respect to food safety measures have related to the manner in which regulations are applied or enforced through border inspections or other enforcement techniques. In Article XX of the GATT, the parallel risk of protectionism being embedded in application of measures is reflected in the language of the chapeau, or preambular paragraph, which provides that, where justified under a specific exception under Article XX, such as XX(b), measures must nonetheless not be applied in a manner that constitutes arbitrary or unjustified discrimination between countries where the same conditions prevail or a disguised restriction on international trade exists. In interpreting the chapeau of Article XX, the Appellate Body has criticized a panel for ignoring the wording "applied" and not distinguishing properly between constraints on the application of measures and on the justification of the measures themselves. n77

Much more difficult from the democratic deliberation perspective is Article 5.6, which requires that "Members shall ensure that... measures are not more trade-restrictive than required to achieve their appropriate level of sanitary or phytosanitary protection, taking into account technical and economic feasibility." n78 A footnote to this provision indicates that for a measure not to be the least trade restrictive, another measure must be "reasonably available, taking into account technical and economic feasibility, that achieves the appropriate level of sanitary or phytosanitary protection and is significantly less restrictive to trade." n79 An interpretation of these provisions that would be largely consistent with a democratic deliberation-based approach to the SPS Agreement is as follows: because Members have complete autonomy to determine their level of protection, they are never prevented from regulating unless there is an alternative measure that achieves entirely the same result, at equal or lower cost. n80

John Barcelo illustrates the implications of this interpretation with the following example:

Thus it would seem that if the United States were to set a policy of zero risk from pesticide Z on apples, it would be entitled to ban the import of apples containing only trace residues of pesticide Z. It is difficult to conceive a less-restrictive alternative measure that could fully and precisely achieve that objective. If the U.S. purpose were to eliminate risk from pesticide Z only, a crude ban on all pesticide residues of any kind on apples would seem inconsistent with the least trade-restrictive requirement. For example if there were a technically feasible, fully reliable, and inexpensive test to detect only pesticide Z residue on apples, the United States would presumably have to use that test instead of banning all apples with any pesticide residue. Such an outcome, however, would not compromise the environmental protection goal in any way. n81

Certainly, this interpretation of Article 5.6 is consistent with the idea that the SPS Agreement is not about constraining the substantive outcomes of a democratically rational policy process. The problem with the interpretation is that it tends to render the provision meaningless altogether; a Member will simply set its "appropriate" level of protection in such a way as to justify the particular measure in question as the least trade restrictive to accomplish that particular level of protection. In fact, in one respect, the interpretation is harmful to the conception of democratic rationality because it encourages the setting of an appropriate level of protection in light of considerations other than those reflecting citizens' considered judgments about the risks they can

tolerate. This concern is perhaps reflected in the Appellate Body's rejection in the Salmon case of the notion that the appropriate level of protection can or should simply be read back from the measures that are under scrutiny:

We thus believe that the SPS Agreement contains an implicit obligation to determine the appropriate level of protection. We do not believe that there is an obligation to determine the appropriate level of protection in quantitative terms. This does not mean, however, that an importing Member is free to determine its level of protection with such vagueness or equivocation that the application of the relevant provisions... such as Article 5.6, becomes impossible. n82

Relevant in this connection is Article 5.4 of the SPS Agreement, which provides that "members should, when determining the appropriate level of sanitary or phytosanitary protection, take into account the object of minimizing negative trade effects." n83 The use of "should," rather than "shall" (which denotes most other obligations in the SPS Agreement) in this provision arguably denotes a lesser degree of obligatory force. From a democratic rationality approach, this language is understandable; it makes clear that Members are not required to make a substantive trade-off or to balance (for example on a proportionality basis) gains in protection of life or health against trade-restrictive impacts. But arguably what this obligation does mean is that regulators must attend to the voices of those affected by the negative trade impacts of regulation, not simply shut them out of the process of determining the level of protection. Such inclusiveness is not only consistent with, but an important dimension of, rational democratic deliberation. First of all, welfare losses from trade-restrictions are borne not only outside but within the democratic community that is regulating. Second, the wider the range of voices that have a say in the regulatory process, the more likely certain kinds of errors and misunderstandings concerning risk will be avoided. As Jonathan Wiener and John Graham note, drawing conclusions from a variety of case studies in risk regulation, "one prominent source of narrow decision-making is what one might call "omitted voice": the absence of affected parties from the decision process and the concomitant disproportionate influence of organized interests." n84 Third, and more controversial, is the argument that, since deliberative democracy is not only about the representation of the wills of those within the community but also about public justifications for policies based on moral reasons, it is incongruous with democratic deliberation to exclude moral claims that relate to the harm that may be done to outsiders from a given policy. As Gutmann and Thompson suggest,

Representatives need not always, or even generally, pay as much attention to the welfare of citizens of other countries as they do to the welfare of the citizens of their own country. Representatives have enough trouble making public policies that deal adequately with our problems. For most of the policies of the welfare state - from health care to unemployment insurance - representatives are probably justified, for reasons of both competence and fairness, in giving priority to citizens of their own country. But it is necessary that they be able to justify this priority in each case (and that may

be less easy to do than is usually assumed). To the extent that representatives accept this burden of justification, foreigners become moral constituents. n85

VIII. CONCLUSION

The dynamic of globalization often appears to sacrifice democratic politics to the demands for greater liberalization of trade. Indeed, while they differ on whether it is desirable, both advocates and critics of globalization see further trade liberalization as linked to regulatory harmonization or reduced regulatory diversity. The foregoing analysis of the provisions in the SPS Agreement, a set of liberalization strictures that arguably sacrifice democratic regulation to free trade, suggests that this kind of claim may require more careful scrutiny than has hitherto been the case. Where there is a concern that domestic regulations may constitute protectionist cheating on negotiated trade concessions, an alternative to harmonization may well be to enhance confidence in the ability to distinguish legitimate domestic regulations from protectionist cheating. Requiring that regulations be defensible in a rational, deliberative public process of justification may well enhance such confidence, while at the very same time serving, not frustrating, democracy. Further research might usefully explore the possibilities of this approach in other areas, such as trade and competition policy, where there is considerable resistance by many states to harmonization, and good arguments against it. n86 But claims of hidden protectionism will not easily go away.

FOOTNOTES:

n1. Tony Clarke & Maude Barlow, MAI: The Multilateral Agreement on Investment and the Threat to Canadian Sovereignty 81 (1997).

n2. See David Vogel, *Trading Up: Consumer and Environmental Regulation in a Global Economy* (1995) (especially chapter one "National Regulation in the Global Economy").

n3. See, e.g., E.U. Petersmann, *Trade Policy as a Constitutional Problem. On the 'Domestic Policy Functions' of International Trade Rules*, in 1 *The World Trading System: Critical Perspectives on the World Economy* 121-51 (Robert Howse ed., 1998). Economic theory demonstrates that trade restrictions almost always lower the national economic welfare of the country imposing the restrictions.... For instance, import tariffs not only redistribute income from consumers to the protected industries and produce revenue for the government, but also create important "deadweight losses" resulting in a net-loss of national economic welfare. Standard economic analysis recognizes only a few narrowly defined exceptions where "optimal tariffs", "infant industry protection" or "strategic protection" of oligopolistic industry might theoretically improve national welfare. But these exceptional conditions are difficult to establish in practice and are hardly ever actually ascertained in decisionmaking about trade. Most economic arguments for trade protection turn out to originate in market failures in the domestic economy - such as endogenous divergences between private and social costs (e.g. in the case of monopolies and "external effects") or policy imposed distortions leading to inefficient production patterns - which can be corrected most efficiently by domestic policies intervening directly at and as close as possible to the domestic distortion... without introducing additional by-product distortions and unnecessarily reducing the gains from trade. *Id.* at 122 (footnote omitted). While, as has been long understood by free traders (indeed since Adam Smith himself), removing trade restrictions has distributive consequences, with some domestic constituencies gaining and others losing, the overall gains are greater than the losses to the losers, thus allowing full compensation to losers, were such a policy to be dictated by the democratic community's relevant conception of distributive justice. See *id.* at 122-23. But see Douglas A. Irwin, *Against the Tide: An Intellectual History of Free Trade 180-88* (1996). Such an argument, as Irwin suggests, depends upon the adequacy of the additional wealth generated from trade liberalization to more than compensate the losers' loss of welfare. This means that the case that distributive justice can always be achieved on the basis of trade liberalization depends upon empirical analysis of the costs of those redistributive policies that would be dictated by a given theory of distributive justice, as well as of the welfare losses that dictate those policies based upon the relevant theory of distributive justice. For an attempt to conduct this analysis employing Rawls's difference principle as a relevant distributive principle, see Michael J. Trebilcock et al., *Trade and Transitions: A Comparative Analysis of Adjustment Policies* (1990).

n4. See Frieder Roessler, *Increasing Market Access Under Regulatory Heterogeneity: The Strategies of the World Trade Organization*, in *Organization for Economic Co-operation and Development (OECD), Regulatory Reform and International Market Openness* 117-30 (1996).

n5. In practice, as Roessler himself admits and as Trachtman discusses quite explicitly, because nondiscrimination requires treating like products alike, how narrowly the nondiscrimination requirement constrains domestic regulation depends upon which products are deemed "like." For example, if a domestic product that does not create an environmental

externality is deemed to be "like" an imported product that does create this externality, these products would have to be treated identically. Thus, this kind of understanding of like products could greatly constrain the scope of legitimate regulatory activity. See Joel P. Trachtman, Trade and... Problems, Cost-Benefit Analysis and Subsidiarity, 9 *Eur. J. Int'l L.* 32, 65-67 (1998); see also Robert Howse, Comments on Roessler and Wilson Papers, in OECD, Regulatory Reform and International Market Openness 165-68 (1996). The Appellate Body of the World Trade Organization has held that the determination of whether products are "like" for purposes of the Article III nondiscrimination requirement is to be undertaken on a case-by-case basis, with the relevant factors depending on context. See Japan: Taxes on Alcoholic Beverages, WTO Report of the Appellate Body, WT/DS8/AB/R (Nov. 1, 1996), at 19-21 [hereinafter Taxes on Alcoholic Beverages].

n6. See Donald H. Regan, The Supreme Court and State Protectionism: Making Sense of the Dormant Commerce Clause, 84 *Mich. L. Rev.* 1091 (1986).

n7. See Michael J. Trebilcock & Robert Howse, Trade Liberalization and Regulatory Diversity: Reconciling Competitive Markets with Competitive Politics, 6 *Eur. J.L. & Econ.* 5, 21-22 (1998); see also Alan O. Sykes, Regulatory Protectionism and the Law of International Trade, 66 *U. Chi. L. Rev.* 1 (1999).

n8. Vern R. Walker, Keeping the WTO from Becoming the "World Trans-science Organization": Scientific Uncertainty, Science Policy, and Factfinding in the Growth Hormones Dispute, 31 *Cornell Int'l L.J.* 251, 253 (1998).

n9. David A. Wirth, The Role of Science in the Uruguay Round and NAFTA Trade Disciplines, 27 *Cornell Int'l. L.J.* 817, 825 (1994).

n10. See, e.g., Petersmann, *supra* note 3.

n11. See generally Robert Howse et al., Smaller or Smarter Government?, 40 *U. Toronto L.J.* 498 (1990).

n12. See John T. Barcelo, Product Standards to Protect the Local Environment - the GATT and the Uruguay Round Sanitary and Phytosanitary Agreement, 27 *Cornell Int'l L.J.* 755 (1994); Wirth, *supra* note 9, at 856 (arguing, for instance, that the dispute settlement organs, under the SPS provisions, should confine themselves to determining whether a challenged measure "qualifies as minimally "scientific").

n13. See Jurgen Habermas, Between Facts and Norms: Contributions to a Discourse Theory of Law and Democracy 287-328 (William Rehg trans., 1996).

n14. See generally Amy Gutmann & Dennis Thompson, Democracy and Disagreement (1996).

n15. *Id.* at 43.

n16. *Id.*

n17. It should be emphasized that Habermas's version of deliberative democracy is not vulnerable to the particular criticism that follows.

n18. C. Sunstein & R. Pildes, Experts, Economists and Democrats, in C. Peter Berkowitz, The Debating Society, *The New Republic*, Nov. 25, 1996, at 36-42.

n19. Cass R. Sunstein & Richard Pildes, Experts, Economists, and Democrats, in *Free Markets and Social Justice* 128 (Cass R. Sunstein ed., 1997).

n20. David W. Leebron, Lying Down with Procrustes: An Analysis of Harmonization Claims, in *Fair trade and harmonization: prerequisites for free trade?* 41, 65 (Jagdish Bhagwati & Robert E. Hudec eds., 1996).

n21. It should be noted that in the GATT and the SPS Agreement itself, "transparency" is used as a term of art to denote transparency in regulations and law themselves, i.e. notice requirements. General Agreement on Tariffs and Trade, Art. X, Oct. 30, 1947, 61 Stat. A-11, T.I.A.S. 1700, 55 U.N.T.S. 194 [hereinafter GATT]; Agreement on the Application of Sanitary and Phytosanitary Measures, Apr. 15, 1994, Marrakesh Agreement Establishing the World Trade Organization, Art. 7 and Annex B, reprinted in H.R. Doc. No. 103-316, at 69-81 [hereinafter SPS Agreement]. In this essay I employ transparency in a broader sense, above all as transparency or publicity in justification.

n22. Juliet Lodge describes the centrality of transparency concerns in critiques of the democratic legitimacy of Union-level policy outcomes in the EU in *Transparency and Democratic Legitimacy*, 32 *J. Common Market Stud.* 343 (1994).

n23. On trade-offs internal to democracy generally, see Ian Shapiro, *Democratic Justice* 45-48 (1999).

n24. See *infra* note 56 and accompanying text.

n25. Steven Breyer, *Breaking the Vicious Circle: Toward Effective Risk Regulation* 81 (1993).

n26. Under such arrangements, each country can retain its own distinctive regulations, while nevertheless allowing imports of goods and services to be sold in its market on the basis of compliance with the exporting country's own regulations, which are deemed equivalent in terms of protection of the public. As Kalypso Nicolaidis points out, such arrangements necessarily require trust between the regulators of the importing and those of the exporting country. See Kalypso Nicolaidis, *Mutual Recognition of Regulatory Regimes: Some Lessons and Prospects*, in *Organization for Economic Co-operation and Development (OECD), Regulatory Reform and International Market Openness* 171-204 (1996).

n27. As John Rawls notes, many countries without democratic institutions adequate to satisfy a liberal conception of justice nevertheless have "decent consultation hierarchies." See John Rawls, *The Law of Peoples* 61 (1999) (emphasis omitted).

n28. For suggestions in this regard, see Steve Charnovitz, *Improving the Agreement on Sanitary and Phytosanitary Standards*, in *Trade, Environment, and the Millennium* 171 (Gary P. Sampson & W. Bradnee Chambers eds., 1999).

n29. See *Taxes on Alcoholic Beverages*, *supra* note 5, at 10-12; *United States: Standards for Reformulated and Conventional Gasoline*, WTO Report of the Appellate Body, WT/DS2/AB/R (May 20, 1996), at 16-17; see also *Convention on the Law of Treaties*, May 23, 1969, 1155 U.N.T.S. 331 [hereinafter Vienna Convention].

n30. See Vienna Convention, *supra* note 29, at Art. 31.

n31. See *id.* at Art. 31.3.c.

n32. United States: Import Prohibition of Certain Shrimp and Shrimp Products, WTO Report of the Appellate Body, WT/DS58/AB/R (Oct. 12, 1998) (especially para. 129).

n33. See Thomas Franck, The Emerging Right to Democratic Governance, *86 Am. J. Int'l L.* 46 (1992).

n34. Amartya Sen, Development as Freedom 150-51 (1999).

n35. See generally World Bank, Governance and Development (1992).

n36. SPS Agreement, *supra* note 21, at Art. 2.2.

n37. *Id.* at Art. 3.2.

n38. *Id.* at Art. 3.3.

n39. *Id.* at Art. 5.5.

n40. SPS Agreement, *supra* note 21, at Annex A, para. 4.

n41. EC Measures Concerning Meat and Meat Products (Hormones), WTO Report of the Appellate Body, WT/DS26/AB/R, WT/DS48/AB/R (Jan. 16, 1998) [hereinafter Hormones].

n42. See Hormones, *supra* note 41, at para. 194.

n43. *Id.* at para. 194.

n44. *Id.* at para. 194 (emphasis added).

n45. SPS Agreement, *supra* note 21, at Art. 5.

n46. A meaning that is actually preserved in the range of ordinary meanings, for example, of the German word *Wissenschaft* and the Russian expression *nauke*. See Jeremy D. Fraiberg & Michael J. Trebilcock, Risk Regulation: Technocratic and Democratic Tools for Regulatory Reform, *43 McGill L.J.*, 835, 857 (1998) ("Scientific analysis is valuable in a democracy because scientific procedures are systematic and can be well-documented. When decisions are made on a scientific basis, they are available for public inspection or review.").

n47. For an explanation and critique, from the perspective of democratic regulation, of separation of risk assessment and risk management, see Ellen K. Silbergeld, Risk Assessment and Risk management: An Uneasy Divorce, in Deborah G. Mayo & Rachelle D. Hollander, *Acceptable Evidence: Science and Values in Risk Management* 99 (1991). In a study of the regulatory consequences of an attempt to separate the performance of risk assessment and risk management at the U.S. Environmental Protection Agency (EPA) in the 1980s, Silbergeld concludes that such separation

is deleterious to sound operations and a sense of shared institutional authority and responsibility. When the scientists are restricted from access to policymaking processes based on the implications of scientific choices (which are prominent in the resolutions of uncertainty), they can only guess how their choices may affect policy. And policymakers, encouraged to remain ignorant of science, may misinterpret uncertainty in some of the ways described in this chapter.

Id. at 111-12.

n48. Hormones, *supra* note 41, at para. 187.

n49. See Vogel, *supra* note 2, at 156. While the consumers' groups accepted that proper use of hormones might address the perceived carcinogenic or genotoxic risk from ingesting hormone-fed beef, they believed that the difficulty of actually detected levels in processed meat would preclude effective enforcement of a requirement of proper veterinary practice, thus leaving a complete ban as the only feasible and effective regulatory measure.

n50. Australia: Measures Affecting Importation of Salmon, WTO Report of the Appellate Body, WT/DS18/AB/R (Oct. 20, 1998) [hereinafter Salmon, Report of the Appellate Body].

n51. See Australian Quarantine and Inspection Service, Import Risk Analysis, Disease risks associated with the importation of uncooked, wild, ocean-caught Pacific salmon product from the United States and Canada (1995).

n52. Australia: Measures Affecting Importation of Salmon, WTO Report of the Panel, WT/DS18/R (June 12, 1998), at para. 6.12 [hereinafter Salmon, Report of the Panel]. The experts were: Dr. David E. Burmaster, Alceon Corporation, United States; Dr. Christopher Rodgers, Fish Disease Consultant, Spain; Dr. James Winton, National Fisheries and Research Center, U.S. Fish and Wildlife Service, United States; Dr. Maron Wooldridge, Department of Risk Research, Central Veterinary Laboratory, United Kingdom.

n53. Salmon, Report of the Panel, *supra* note 52, at para. 56.

n54. See *id.* at Annex 2, paras. 56-58.

n55. For Breyer's proposal on the role of interdisciplinary coordinators within the domestic regulatory process itself, see Breyer, *supra* note 25, at 80-81.

n56. The following claim of Viscusi seems to address the precise problem, from a democratic rationality perspective, with the 1996 Report: "tilting risk assessments in a conservative direction confuses the informational and decision aspects of research about risks. A conceptually sound form of conservatism would have the decision maker (not the risk estimator) adjust the weights on the consequences. Adjusting the probabilities amounts to lying to ourselves about what we expect." W. Kip Viscusi, *Fatal Tradeoffs: Public and Private Responsibilities for Risk* 157 (1992) (emphasis added).

n57. Japan: Measures Affecting Agricultural Products, WTO Report of the Appellate Body, WT/DS76/AB/R (Feb. 22, 1999) [hereinafter Japanese Agricultural Products].

n58. See Japan: Measures Affecting Agricultural Products, WTO Report of the Panel, WT/DS76/R (Oct. 27, 1998), at VII.F.2.b(ii).

n59. *Id.*

n60. See Japanese Agricultural Products, *supra* note 57, at V.A.

n61. SPS Agreement, *supra* note 21, at Art. 3.3.

n62. *Id.* at Art. 5.4.

n63. *Id.* at Art. 5.5.

n64. *Id.* at Annex A, para. 5.

n65. Compare, e.g., Breyer, *supra* note 25, at ch. 2 with Sunstein & Pildes, *supra* note 19.

n66. Sunstein & Pildes, *supra* note 19, at 133.

n67. *Id.* at 133.

n68. Viscusi, *supra* note 56, at 152.

n69. See W. Kip Viscusi, *Rational Risk Policy: The 1996 Arne Ryde Memorial Lectures* 84-88 (1998).

n70. *Hormones*, *supra* note 41, at para. 221 (footnotes omitted).

n71. Carl F. Cranor, *Regulating Toxic Substances: A Philosophy of Science and the Law* 127 (1993).

n72. See W. Kip Viscusi, *The Dangers of Unbounded Commitments to Regulate Risk, in Risks, Costs, and Lives Saved: Getting Better Results from Regulation* 135, 139 (Robert W. Hahn ed., 1996); see also Fraiberg & Trebilcock, *supra* note 46, at 73-75.

n73. SPS Agreement, *supra* note 21, at Art. 2.2.

n74. See, e.g., Thailand: Restrictions on Importation of and Internal Taxes on Cigarettes, Nov. 7, 1990, GATT B.I.S.D (37th Supp.) at 200 (1991); GATT Dispute Panel Report on U.S. Restrictions on Imports of Tuna, *30 I.L.M 1594 (1991)*.

n75. Trachtman, *supra* note 5, at 70.

n76. See the careful parsing of the treaty provisions in Barcelo, *supra* note 12, at 768-70.

n77. See generally United States: Import Prohibition of Certain Shrimp and Shrimp Products, WTO Report of the Appellate Body, WT/DS58/AB/R (Oct. 12, 1998).

n78. SPS Agreement, *supra* note 21, at Art. 5.6 (footnote omitted).

n79. *Id.* at Art. 5.6 n.3.

n80. In this situation, there is no possible legitimate benefit from the more trade-restrictive measure. Indeed, there is a domestic cost, i.e. to consumers, from the trade-restrictive impact, and there is arguably no issue of balancing because no normatively legitimate claim could be made for the superiority of the measure in question.

n81. Barcelo, *supra* note 12, at 763-764.

n82. Salmon, Report of the Appellate Body, *supra* note 50, V.E.3.

n83. SPS Agreement, *supra* note 21, at Art. 5.4.

n84. Jonathan Baert Wiener & John D. Graham, *Resolving Risk Tradeoffs*, in *Risk versus Risk: Tradeoffs in Protecting Health and the Environment* 226, 230 (John D. Graham & Jonathan Baert Wiener eds., 1995).

n85. Gutmann & Thompson, *supra* note 14, at 148.

n86. See Michael J. Trebilcock, *Competition Policy and Trade Policy: Mediating the Interface*, *30 J. World Trade* 71 (1996).