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Explaining Trade Agreements: The Practitioners' Story and the Standard Model

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Abstract: There are two widely accepted explanations of why politically motivated governments make trade agreements. There is an *informal* explanation, which I shall call the 'practitioners' story', even though it is most economists' informal view as well. And there is a *formal* explanation in the economics literature, which I shall call the 'standard model', referring to the basic structure shared by the Bagwell–Staiger and Grossman–Helpman models. Unfortunately, the practitioners' story and the standard model contradict each other at every crucial point. For example, in the practitioners' story, trade agreements are about reducing politically motivated protectionism; and getting an agreement depends on political support from exporters. But in the standard model, trade agreements *never* reduce such protectionism; and politics plays no role in securing an agreement. This paper expounds the contradictions between the practitioners' story and the standard model, which have gone largely unremarked. It refutes suggestions by defenders of the standard model that the contradictions are illusory. It identifies the different assumptions made by the two explanations that generate the contradictions. It gives reasons for skepticism about the standard model. And it discusses why all of this matters.

1. Introduction

Here is a conundrum. The best-established economic model of trade agreements (specifically, the core structure shared by the Bagwell–Staiger model[1] and the Grossman–Helpman model[2]) is *fundamentally and completely inconsistent* with most trade practitioners' understanding of trade agreements. Indeed, it is inconsistent with most *economists*' informal understanding of trade agreements.

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I am very grateful to Bill Ethier and Henrik Horn for encouragement and instruction over many years; and to Gene Grossman, Bob Staiger, and Alan Sykes for generously spending time to educate someone who fundamentally disagrees with them. For very helpful comments on drafts, thanks to Chad Bown, Bernard Hoekman, Doug Irwin (so long ago he may not remember), Keith Maskus, Petros Mavroidis, Joost Pauwelyn, and Kamal Saggi. Also to Alan Winters and anonymous reviewers for the *World Trade Review*. Errors and misunderstandings that remain are, alas, my very own.

1 Bagwell and Staiger (1999, 2002).

2 Grossman and Helpman (1995).

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And almost no one seems to notice, or to regard this situation as worthy of discussion.

I wrote a paper some years ago in which I expressed skepticism about the Bagwell–Staiger model, mainly on the ground that it could not explain actual trade agreements.[3] But I did not appreciate then the depth of the contradiction between the Bagwell–Staiger/Grossman–Helpman model and what I shall call the 'practitioners' story', the informal story of how trade agreements come about that is told by practitioners and economists alike. There is nothing in the literature that fully explores the contradictions between the best-established formal model of trade agreements and almost everyone's informal view.

I will describe the mechanisms of the practitioners' story and the Bagwell–Staiger/Grossman–Helpman model in Section 2, but the core contradictions they generate are easily stated. First, and crucially, in the practitioners' story, governments make trade agreements to reduce protectionism. But in the Bagwell–Staiger/Grossman–Helpman model, trade agreements will *never* reduce protectionism as we normally understand it. This leads to a further contradiction. In the practitioners' story, getting a trade agreement requires mobilizing political support for the agreement from export interests. But in the Bagwell–Staiger/Grossman–Helpman model, politics plays no role in explaining why we get an agreement.

It is a remarkable proposition that, in the best-established model, trade agreements never reduce protectionism. Some readers may suspect I am relying on an idiosyncratic notion of 'protectionism'. But what I mean by 'protectionism' is exactly what we all commonly mean in this context. *Protectionism is unilateral trade policy that restricts imports in order to get political support for the government from import-competing producers.*[4] Most of us think trade agreements are primarily about restraining protectionism in this sense. But in the Bagwell–Staiger/Grossman–Helpman model, trade agreements never reduce protectionism in this sense. The sole function of trade agreements in the Bagwell–Staiger/Grossman–Helpman model is to eliminate terms-of-trade manipulation, unilateral trade policy that aims at improving the home country's terms of trade.

3 Regan (2006).

4 Incidentally, although we do not usually bother to specify what the import-competing producers are lobbying for, we usually assume implicitly that they are lobbying for protection against foreign competition in order to increase their producer surplus. I mention this because in the Bagwell–Staiger model producers *may*, and in the Grossman–Helpman model producers *will*, lobby also over their share of distributed tariff revenue and their consumer surplus. I shall suppress further mention of these possibilities, which are hardly ever mentioned outside the Grossman–Helpman model; this will simplify the exposition without changing the conclusions. (This means I am speaking loosely when I say below that Grossman and Helpman's 'political-support' terms, or Bagwell and Staiger's 'politically optimal tariffs', represent the protectionist component of the unilateral tariff. Strictly speaking, they represent the government's response to lobbying over domestic prices. This includes protectionism, but it also includes the government's response to lobbying by producer groups over their consumer surplus, if any.)

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Terms-of-trade manipulation is a completely distinct phenomenon from protectionism, reflecting a different governmental motivation. Protectionism aims to affect domestic relative prices, in response to special-interest politics; terms-of-trade manipulation aims to affect world prices, to increase national income.

I cannot emphasize too strongly that the distinction between protectionism and terms-of-trade manipulation is a matter of the *government's motivation*, not the tariff's effects. Appreciating this point is crucial to understanding the Bagwell–Staiger/Grossman–Helpman model. As I shall explain below, both the Bagwell–Staiger model and the Grossman–Helpman model distinguish explicitly between the political motive for tariffs and the terms-of-trade motive. And in both models, a trade agreement will eliminate only tariffs (or the portions of tariffs) that are motivated by terms-of-trade considerations; the agreement will *not* reduce tariffs (or the portions of tariffs) that are motivated by politics. Consider a tariff imposed by a large country on a good that is also produced domestically. This tariff will have both a protective effect for the import-competing industry and a terms-of-trade effect. But whether the tariff is protectionism, or terms-of-trade manipulation, or both, depends on whether the government is *aiming at* the protective effect, or at the terms-of-trade effect, or both. And in the Bagwell–Staiger/Grossman–Helpman model, how far a trade agreement will reduce the tariff varies according to the motivation.

For convenience, I shall hereafter refer to the Bagwell–Staiger/Grossman–Helpman model as the 'standard model'. Some people have objected that my real target is just the Bagwell–Staiger model, and that the Grossman–Helpman model allows trade agreements that reduce protectionism. We shall see that that is not true. Grossman and Helpman do not call attention to the paradoxical consequences of their model, as Bagwell and Staiger do; and it may seem hard to believe that a model of trade agreements that includes a detailed micro-politics of protectionism could *not* allow trade agreements to reduce protectionism. But that is what the model says. So far as trade agreements are concerned, the core structure of the Grossman–Helpman model is the same as the core structure of the Bagwell–Staiger model.

Other people have objected to my calling the Bagwell–Staiger/Grossman–Helpman model the 'standard model', on the ground that there are other models out there, such as commitment models.[5] Commitment models may explain some trade agreements, but they cannot explain agreements like the WTO. In the commitment models, the government commits itself by a trade agreement in order to forestall choices by domestic investors that would lead the government to adopt *ex post* a protectionist policy it does not want *ex ante*. But such models cannot explain how a trade agreement can reduce tariffs that are already in place. Nor do they capture the importance of reciprocity in trade agreements.

5 E.g., Maggi and Rodriguez-Clare (1998).

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Indeed, the commitment models do not even involve the kind of 'commitment' that probably has most practical significance in the real world. In the commitment models, the 'audience' for the commitment is domestic investors, and the government's fundamental preferences are stable. But in the real world, most governments that seek commitment by trade agreements are trying to advertise their liberalization to the world, or to tie the hands of future governments with less liberal fundamental preferences.

Finally, some economists have objected to my calling the Bagwell–Staiger/Grossman–Helpman model the 'standard model' on the ground that they do not accept it. But if some economists do not accept the Bagwell–Staiger/Grossman–Helpman model, there are many who do (or who say they do – some people claim to accept the model, but also tell the practitioners' story when talking informally). There is no other model with remotely the same presence in the literature as the Bagwell–Staiger/Grossman–Helpman model, nor with the same degree of (nominal) acceptance. So I shall call the Bagwell–Staiger/Grossman–Helpman model the 'standard model' for lack of a better name; I hope readers who reject the model will be mollified by this acknowledgment. I also hope some of them will take the phrase as a challenge to displace the current 'standard model' with something better.

Here is the program for the rest of the paper. In Section 2, I begin by presenting the practitioners' story, the informal story that most of us (when thinking informally) regard as explaining trade agreements. I then sketch intuitively the workings of the standard model. And I explore the contradictions between the practitioners' story and the standard model. In Section 3, I discuss (and reject) some arguments offered by defenders of the standard model to show that the practitioners' story is just a particular case under the standard model; or to show that somehow the standard model can allow trade agreements that reduce protectionism after all. In Section 4, I explain how the different results in the practitioners' story and the standard model flow from different assumptions about how domestic trade politics works; and I criticize as unrealistic the assumptions of the standard model. In Section 5, I discuss additional reasons why the standard model cannot explain the trade agreements we see in the real world. Section 6 concludes by discussing why all this matters.

Some preliminary remarks about why it matters may clarify my claims. Even though trade agreements in the practitioners' story reduce protectionism, I am not suggesting that the practitioners' story describes a guaranteed high road to reducing protectionism. The practitioners' story makes specific assumptions about how domestic trade politics works, and the standard model makes different assumptions. Trade negotiators should accept, and act on, whichever account is true. If the assumptions of the standard model are true, then the mechanism of the practitioners' story is not available, and effort spent trying to negotiate an agreement that reduces protectionism will be wasted. But conversely, if the assumptions of the practitioners' story are true, or truer (as I think they are),

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then trade negotiators who accept the standard model, and hence make no attempt to reduce protectionism, will be missing an important opportunity. Some readers may think that whatever difference there is between the practitioners' story and the standard model cannot matter in the end, because the terms of the eventual agreement should depend only on which producer groups lobby over the agreement, and with what force. I agree that if the same political forces are active in both accounts when an agreement is being negotiated, then we should get the same agreement in both accounts. But it still matters which account is true. The reason (elaborated in Section 4) is that in the practitioners' story, but not in the standard model, the mere fact that the governments are looking for an agreement changes the balance of political forces.

2. The practitioners' story, the standard model, and the contradictions

In the practitioners' story, governments acting unilaterally impose tariffs in order to get political support from import-competing producers who want protection from foreign competition. These protectionist tariffs cause deadweight losses in the home country, but the political benefit to the government outweighs those losses. But these same governments can then benefit, in many cases, from a trade agreement that reciprocally reduces such tariffs. Each government loses political support from its import-competing producers when it lowers its own tariff, but it can replace that lost support with support from its exporters, who benefit from the reduction of the foreign tariff. The new support from exporters may fully replace the lost support from import-competing producers, but it need not. Lowering the tariffs reduces the domestic deadweight losses that the tariffs cause. So as long as exporter support in each country comes sufficiently close to replacing the lost support from import-competing producers, both governments can be made better off.

This utterly familiar story is told not just by trade lawyers and trade officials, but also by trade-focused political scientists, and by many international economists when arguing informally.[6] Despite this broad acceptance, there is no generally accepted formal model of the practitioners' story. There are genuine difficulties in constructing a model, although I shall not start discussing details of a model-building project I cannot complete. Wilfred Ethier has developed a model in which trade agreements reduce protectionism, which I discuss briefly

6 Precisely because this story is so deeply rooted in the conventional understanding of trade agreements, it is not easy to find completely clear statements. One particularly nice statement is Pauwelyn (2008: 559–560). Pauwelyn thinks we need a new model for future trade negotiations, but he does not doubt that the practitioners' story captures the core dynamic of trade negotiations past and present. The story is also told telegraphically in, e.g., Hudec (1993: 314–316), Destler (2005: 17, 253–254) (like Pauwelyn, Destler suggests that changing patterns of trade and the emergence of 'trade and' issues may be reducing the relevance of the practitioners' story, but certainly not in favor of the standard model); Krugman (1997: 118), Hoekman and Kostecki (2001: 27–28, 32–33).

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in Section 4.[7] But it is not clear that Ethier's model captures the practitioners' story; and Ethier himself is not fully satisfied with his model. (Incidentally, Ethier has also offered many cogent criticisms of the standard model, without having any noticeable effect on its popularity; this is a mystery.) Before Ethier (on this topic) there was Arye Hillman and various co-authors, who plainly held the practitioners' view of trade agreements, but whose models also seem not to have captured the practitioners' story, and who also did not succeed in forestalling or dislodging the standard model.[8] It might be suggested that the unsatisfactoriness of attempts to model the practitioners' story indicate that it is incoherent. But in view of the story's wide acceptance, such a conclusion seems premature. We need more attempts.

There is no story about the workings of the standard model that is as familiar as the practitioners' story. But there is a story, familiar to economists, about the simplest case under the standard model. Imagine two similar-sized countries, trading two goods, with national-income-maximizing governments. Each country can benefit from imposing an appropriately chosen 'optimum tariff'. The tariff reduces the country's imports, and hence brings about a lower world price for those imports (it improves the country's terms of trade); the country in effect collects some tariff revenue from foreign exporters (which I shall refer to as the 'terms-of-trade tariff revenue'). The tariff will cause some deadweight loss in the local economy, but if the tariff is properly chosen, this loss will be outweighed by the terms-of-trade tariff revenue. So, both countries will impose optimum tariffs. But now, suppose the governments agree to eliminate these tariffs. Each government will lose the terms-of-trade benefit of its own optimum tariff (the terms-of-trade tariff revenue), but it will no longer experience the terms-of-trade loss inflicted by its trading partner's optimum tariff (experienced as reduced surplus earned by its exporters, which is a component of national income). In effect, each government hands back the tariff revenue it was collecting from foreign exporters. Because the countries are similar-sized, the transfers in both directions roughly cancel out; the agreement is approximately terms-of-trade neutral. But, of course, when each government eliminates its optimum tariff, it also eliminates the domestic dead-weight loss from the tariff. So an agreement to eliminate the optimum tariffs makes each government better off; it allows each government to maintain the terms-of-trade outcome it achieved by its unilateral optimum tariff, while avoiding the deadweight loss.[9]

7 Ethier (2011: 311–314), (2007: 618–620).

8 E.g., Hillman (1982), Hillman *et al.* (1995), Hillman and Moser (1996).

9 If the countries are of different sizes, then an agreement to simply eliminate the optimum tariffs may not be terms-of-trade neutral, and it may fail to make the larger country better off. But a supplemental international transfer payment can be found that will make the agreement terms-of-trade neutral; and an agreement that incorporates such a transfer payment will make both governments better off. It will preserve

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I shall refer to this story about the simplest case under the standard model as the 'optimum-tariff story'.[10]

If we compare the practitioners' story and the optimum-tariff story, we see two fundamental differences. *First*, in the practitioners' story, the unilateral tariffs are motivated by the desire for political support. The tariffs that the agreement reduces are protectionism.[11] In contrast, in the optimum-tariff story, the only motive that the national-income-maximizing governments have for a tariff is the terms-of-trade motive. The tariffs that the agreement reduces are terms-of-trade manipulation. *Second*, in the practitioners' story, getting the agreement depends on political support from export interests. But, in the optimum-tariff story, there is no special-interest politics at all.[12]

Of course, both the Bagwell–Staiger model and the Grossman–Helpman model allow for the possibility that governments have political-support motives as well as terms-of-trade motives. So we cannot simply take it for granted that the optimum-tariff story is a fully adequate representation of the mechanism that produces trade agreements in the standard model. But in fact, it is, as I shall show in the rest of this section. *First*, both the Bagwell–Staiger model and the Grossman–Helpman model say that even when governments have political-support motives and engage in protectionism, a trade agreement will eliminate *only* the tariffs (or the parts of tariffs) that are motivated by terms-of-trade considerations – just what the agreement does in the optimum-tariff story. *Second*, we shall see that even when there is political motivation in the standard model, politics plays no role in explaining why we get an agreement. Again, just as in the optimum-tariff story.

the terms-of-trade outcome each government achieved by its unilateral optimum tariff, while avoiding the domestic deadweight losses.

10 So far as I know, this story was introduced into the modern literature by Wolfgang Mayer (1981). Some people have been surprised that I do not attribute the story to Harry Johnson (1953–54). In earlier drafts, I did – I thought I remembered the story from Johnson (1953–54). But Gene Grossman pointed out to me that it was not there (and gave me the Mayer cite). Johnson (1953–54) is entirely about establishing that a country may be better off with an optimum tariff than in free trade, even if its trading partner retaliates; trade agreements are never mentioned. Harry Johnson (1965: 265), states the conclusion of the optimum-tariff story, and plainly assumes that the readers all understand the story; but he does not spell it out. Incidentally, it seems likely that both Robert Torrens and John Stuart Mill, who certainly had the idea of optimum tariffs, also anticipated this explanation for trade agreements. See Humphrey (1987).

11 There is no reason why the practitioners' story could not be expanded to allow for a trade agreement that *also* eliminates terms-of-trade manipulation, by essentially the mechanism of the optimum-tariff story; the practitioners' story makes no mention of terms-of-trade manipulation, because practitioners do not regard terms-of-trade manipulation as a significant phenomenon in the real world. It might seem that even a purely protectionist government must at least *take note* of the world-price effects of its protectionist tariff, in order to set the tariff at the right level. But taking note of world-price effects for this purpose is not the same as being motivated by them. Also, if import-competing producers reward the government on the basis of the *tariff* (not the domestic price), then it is the producers who have to think about the world-price effects.

12 Of course, the benefit to exporters from the agreement plays an essential role in the optimum-tariff story; but the increased exporter surplus is valued only as a component of *national income*, balancing the national-income loss in tariff revenue. It gets no extra weight on political grounds.

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First, we explain why trade agreements address only terms-of-trade manipulation (and not protectionism) in the standard model. The mechanism is most clearly displayed in the Grossman–Helpman model. Grossman and Helpman derive a formula for the unilateral tariff in Nash equilibrium, which is additively separable and has two terms. Grossman and Helpman say these terms reflect the 'political support' and 'terms-of-trade' motives, respectively.[13] They point out that the formula for the 'political-support' term is just the formula they had derived in a previous article for the tariff that would be chosen by a small country facing fixed world prices.[14] So the political-support term represents the tariff that would be chosen by a large country, *if it behaved as if the world price were fixed at its equilibrium level*, or, in other words, if it optimized with respect to domestic prices alone. And, of course, the political-support term includes the part of the tariff that is attributable to protectionism, as its name indicates.[15] The 'terms-of-trade' term in the formula for the unilateral tariff is just the classic expression for the optimum tariff. Notice incidentally that having an additively separable formula for the unilateral tariff allows us to see immediately that the government will *always* engage in terms-of-trade manipulation in this model. Grossman and Helpman also derive a formula for the tariffs that will be installed by an efficient trade agreement (always meaning efficient from the governments' point of view);[16] and one can see by inspection of this formula that an agreement that installed tariffs consisting of just the political-support terms of the unilateral tariffs, without the terms-of-trade terms, would be efficient. So an efficient agreement strips out the parts of the tariffs that result from terms-of-trade manipulation, while leaving in place the parts that result from protectionism.[17]

When I say the agreement strips out the terms-of-trade manipulation and leaves the protectionism in place, I am not claiming that the cooperative tariffs take exactly the same *values* as the values of the political-support terms at the Nash equilibrium (even though the formula is the same). World prices may change between the non-cooperative and cooperative equilibria; and since the

13 Grossman and Helpman (1995: 688).

14 Grossman and Helpman (1994).

15 I say 'includes', because this term also takes account of producers' lobbying over their consumer surplus, which hereafter I shall continue to ignore.

16 Grossman and Helpman (1995: 700).

17 The agreement that installs tariffs equal to the 'political-support' terms is not the only possible efficient agreement; and in some cases it may be necessary to bargain to some other efficient agreement to have an outcome that all parties prefer to the Nash equilibrium. (Cf. note 9 *supra*.) But any efficient agreement must call for trade policies that in concert generate the same domestic prices in both countries, and the same trade flows, as the agreement I have singled out; any efficient outcome differs from this agreement only by an international transfer. We may think of this transfer as accomplished by *cooperative* terms-of-trade manipulation, by one or more tariff-subsidy pairs. So any efficient agreement can be thought of as stripping out the *unilateral* terms-of trade manipulation; and leaving protectionism in place; and then adding a transfer payment, which may of course be zero. Similar remarks apply to the Bagwell–Staiger model.

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political-support terms are evaluated at the equilibrium world prices, they may change as well. But the crucial point remains: in the cooperative tariffs, there is no terms-of-trade component, and the political motive operates without constraint at the equilibrium world prices. In that sense, the agreement strips out terms-of-trade manipulation and leaves protectionism in place.

Turning to the Bagwell–Staiger model, notice first that in this model, just as in the Grossman–Helpman model, governments will always have, and act on, terms-of-trade motivation.[18] But Bagwell and Staiger also consider hypothetically governments that do *not* act on the terms-of-trade motive. A government that ignores the terms-of-trade motive will optimize with regard to the domestic relative price, while in effect treating the world price as fixed at its equilibrium level. Taking a liberty with Bagwell and Staiger's terminology, I shall call the tariff adopted by such a government the 'politically optimal tariff'. (This is a liberty, because Bagwell and Staiger actually define the 'politically optimal tariffs' only as the non-cooperative equilibrium tariffs that result when *both* governments behave this way.) The 'politically optimal tariff' is the analogue, in the Bagwell–Staiger formalism, for the 'political-support' term in Grossman–Helpman; it represents the protectionist component in the unilateral tariff. Bagwell and Staiger prove that, when adopted by both governments, the politically optimal tariffs are efficient (from the governments' point of view, of course). Bagwell and Staiger also prove that the Nash equilibrium tariffs, which reflect both the political and terms-of-trade motives, are higher than the politically optimal tariffs. So an efficient trade agreement reduces tariffs, moving us from the Nash equilibrium tariffs to the politically optimal tariffs. In other words, just as in Grossman–Helpman, the agreement eliminates the part of the tariff that is motivated by terms-of-trade considerations, and it leaves in place the part of the tariff motivated by protectionist considerations.[19]

The idea that a model (any model) could say trade agreements do not address protectionism will be very counterintuitive for most readers. To make it more intuitive, note that a protectionist tariff can be understood as a Pigovian tax that internalizes a negative consumption externality (from the government's point of view) caused by the imported good. Each imported unit of the good displaces a domestically produced unit, and lowers the import-competing producers' profits, and thus costs the government a bit of political support. This is a negative effect on the government that consumers do not consider, and that the ordinary operation of the price mechanism does not internalize in the absence of a tariff. So, insofar as the tariff reflects only the government's protectionist motive, it merely

18 This follows from the bedrock assumption that the government's welfare varies directly with the terms of trade (in their formalism, $W_{pw} < 0$). Bagwell and Staiger (1999: 220), (2002: 19).

19 Bagwell and Staiger (2002: 23–25), (1999: 221–224) (and remember the remarks on other efficient agreements in note 17 *supra*.)

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neutralizes this consumption externality. Hence, protectionism is efficient, from the governments' point of view.[20]

So far, we have seen that even when governments have political motives in the standard model, the trade agreement does just what it does in the optimum-tariff story: it eliminates (only) terms-of-trade manipulation. We turn now to showing that the *mechanism* by which we get an agreement in the standard model is the same as in the optimum-tariff story: even if governments have political motives, politics plays no role in securing the agreement. To begin, notice that Bagwell and Staiger's 'politically optimal tariffs', which are defined as the tariffs that would be adopted in non-cooperative equilibrium by governments that ignore the terms-of-trade motive, are perfectly well-defined even for governments that have no political motives at all (in which case they, they are zero).[21] The same is true of Grossman and Helpman's 'political-support' terms.[22] To avoid being misled about the role of politics by Bagwell and Staiger's and Grossman and Helpman's *names* for these tariffs or tariff terms ('politically optimal tariffs', 'political-support' terms), I shall rename them the 'non-exploitive optimal tariffs'. So the 'non-exploitive optimal tariffs' are defined as the non-cooperative tariffs that would be adopted by governments that ignore the terms-of-trade motive. This is just a renaming; but it makes it easier to see that the relevant concept applies equally, whether governments have political motives or not. In our new terminology, what we learned in the preceding paragraphs about the Bagwell–Staiger and Grossman–Helpman models is that the *non-exploitive optimal tariffs are efficient*.

Next, I define the 'net non-exploitive return' as the sum of all the benefits and costs to the home government of its tariff, but *exclusive of* the terms-of-trade benefit (or cost, in the case of an export subsidy). Once again, this definition of the 'net non-exploitive return' applies equally, whether governments have political motives or not. If the government has political motives, then all the political benefits and political costs of the tariff are counted in the net non-exploitive return, along with the cost in domestic distortion; but if the government does not have political motives, the net non-exploitive return is just the domestic distortion. Note that *the net non-exploitive return is maximized at the non-exploitive optimal tariff*.

Now, to establish that politics plays no role in explaining why we get an agreement in the standard model, we give a perfectly general explanation for why

20 At this point, the reader may wonder, 'If protectionist tariffs are efficient, why are they reduced in the practitioners' story?' We have already hinted at the answer. In the practitioners' story, as we explain in Section 4, the mere fact of negotiating over an agreement changes the political forces on the government. So what was efficient before, and what is efficient in the standard model, is efficient no longer.

21 Bagwell and Staiger point this out (2002: 25), (1999: 223).

22 Grossman and Helpman do not point this out, but it is easily confirmed by setting the parameters in their definition of the 'political-support' term to reflect the assumption that no producer groups organize.

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we get an agreement, which makes no reference to politics at all. (The explanation will be easily recognized as a generalization of the optimum-tariff story.) In the standard model, rational governments always have, and act on, terms-of-trade motives, which leads them to impose unilateral tariffs that are higher than the non-exploitive optimal tariffs. But, for each government, the terms-of-trade benefit from having a tariff higher than the non-exploitive optimal tariff comes at the cost of a reduction in the net non-exploitive return (which is maximized at the non-exploitive optimal tariff). Suppose now that each government agrees to reduce its tariff to the non-exploitive optimal level. (This corresponds to giving up the optimum tariffs in the optimum-tariff story.) We already know such an agreement would be efficient. And if the countries are the same size, it would also be terms-of-trade neutral, so it would allow each government to secure the same terms-of-trade outcome it gets by its unilateral terms-of-trade manipulation, without the attendant reduction in its net non-exploitive return. So both governments can be made better off by the agreement. If the countries are not the same size, then we may need to supplement the move to the non-exploitive optimum with an international transfer, to make the agreement terms-of-trade neutral. But this again gives us an agreement that allows both governments to secure their non-cooperative terms-of-trade outcome, without the attendant reduction in their net non-exploitive return. So both are made better off. As promised, this is a straightforward generalization of the optimum-tariff story.

We now have a perfectly general explanation of why there will be a trade agreement in the standard model, *which makes no reference to politics*. Unilateral terms-of-trade manipulation leads to a non-cooperative equilibrium with tariffs higher than the non-exploitive optimum, and a terms-of-trade neutral agreement that eliminates the terms-of-trade manipulation then moves us to the (efficient) non-exploitive optimum. If political motivation is present, it is taken into account in calculating the net non-exploitive return and the non-exploitive optimal tariffs. So politics helps to determine the *terms* of the agreement. But the explanation for why there will *be* an agreement is exactly the same, whether the governments have political motives or not. And note that the fundamental description of the *terms* of the agreement as the non-exploitive optimal tariffs is also exactly the same, whether the governments have political motives or not. For understanding the agreement, the politics is epiphenomenal.[23]

23 It is worth explaining concretely why getting an agreement in the standard model does not require mobilizing exporter support (as it does in the practitioners' story). Suppose import-competing producers are organized, and exporters are not. There will be a loss in political support from the import-competing producers when we move to the non-exploitive optimum, but that loss is more than compensated for *just by the reduction in the domestic deadweight loss*, because moving to the non-exploitive optimum increases the net non-exploitive return. So, we get a trade agreement *even when import-competing producers are organized, and exporters are not.*

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3. Denying the contradiction between the practitioners' story and the standard model

We now have two stories, both plausible, which contradict each other. The practitioners' story claims that a trade agreement can reduce protectionism; the standard model claims it cannot. As we shall see in Section 4, once we squarely confront the contradiction, it is not difficult to find the reasons for it. But people seem reluctant to confront the contradiction. Even the architects of the standard model sometimes argue that their model *can* explain trade agreements that address protectionism. In this section, I examine some of those arguments and explain where they go wrong. The fact that they are made at all confirms the deep-rooted appeal of the practitioners' story, and the near impossibility of actually believing the standard model.

3.1 Is the practitioners' story just a specific case under the standard model?

Staiger and Alan Sykes have written: 'For Regan, the goal of trade agreements is to eliminate protectionism. But why do governments care about protection imposed by other governments? In our view, the answer lies in the fact that their exporters are harmed, and earn less on their export sales than otherwise. This is precisely the injury that terms-of-trade theory captures.'[24] But, contrary to Staiger and Sykes's claim, the injury from protectionism is *not* 'precisely the injury that terms-of-trade theory captures', assuming that by 'terms-of-trade theory' they refer to the standard model. In the standard model, trade agreements do not reduce protectionism; hence, they do not reduce the *injury* from protectionism.

It is true that in the practitioners' story, the reason Home cares about Foreign's protectionism is that it harms Home's exporters by reducing the world price of their exports (and thus Home can get political support from its exporters for negotiating down Foreign's protectionism). The injury Foreign's protectionism imposes on Home is mediated through the terms of trade; in that respect, it is like the injury that Foreign's terms-of-trade manipulation imposes in the standard model. Even so, in the *standard model* a trade agreement will eliminate Foreign's terms-of-trade manipulation (along with Home's), and it *will not* reduce Foreign's protectionism (nor Home's). So the injury from Foreign's protectionism, *even though it is an injury mediated through the terms of trade*, is *not* 'the injury that terms-of-trade theory captures'. In other words, the so-called 'terms-of-trade theory' does not capture all 'terms-of-trade injury'. The practitioners' story, in which trade agreements reduce protectionism, is not a special case of the standard model.[25]

24 Staiger and Sykes (2009: 31).

25 One consequence of this discussion is that the widely used phrase 'terms-of-trade theory' is dangerously unspecific, and should be abolished from the literature.

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Bagwell and Staiger make the same error when discussing Cordell Hull's thinking behind the Reciprocal Trade Agreements Act.[26] Hull's reason for wanting *reciprocal* liberalization was to mobilize exporter support for trade agreements; and Bagwell and Staiger point out that exporters would benefit because of the improved world price for their exports when the foreign tariff was lowered. True enough. But then Bagwell and Staiger say this shows that Hull's story can be represented in their own framework. This does not follow. We have just explained one reason why it does not follow: the tariffs Hull meant to reduce by his agreements, and did reduce, were protectionist tariffs,[27] and in Bagwell and Staiger's framework, trade agreements that reduce protectionist tariffs are impossible. A second reason is that in Hull's story, exporter politics plays a crucial role in securing an agreement. But we saw in Section 2 that in the standard model politics plays no role at all in explaining why we get an agreement. More specifically, in the standard model, we get an agreement *even when import-competing producers organize and exporters do not*.[28]

Incidentally, Bagwell and Staiger also misstate the role of reciprocity in the practitioners' story when they say 'the ability of reciprocity to neutralize the adverse terms-of-trade implications of unilateral liberalization is the essence of [Cordell Hull's story]' as well as of their own story.[29] In Hull's story, which is to say the practitioners' story, the government is not motivated by terms-of-trade advantage when it *imposes* its tariff, and hence its objection to unilateral liberalization is not the terms-of-trade loss. Rather, its objection is the loss of the political support from import-competing producers that it sought when it imposed the tariff. And the benefit it seeks from its trading partner's liberalization is not the terms-of-trade improvement as such, but the political support from exporters that that improvement brings.

3.2 *Does the standard model allow agreements that reduce protectionism after all?*

Grossman and Henrik Horn have written a paper for the American Law Institute's project on WTO law that is meant to explain the economics of trade agreements to lawyers.[30] In the paper, Grossman and Horn say repeatedly that a large country's unilateral trade policy creates international inefficiencies that call for a trade agreement *regardless of the country's objectives*. Thus, 'In our view, the fundamental rationale for the GATT is to help governments avoid externalities

26 Bagwell and Staiger (2002: 63). Cf. Bagwell and Staiger (1999: 227, n. 20).

27 See Schattschneider (1935), Irwin (2011).

28 See note 23 *supra*.

29 Bagwell and Staiger (2002: 63).

30 Grossman and Horn (2012). I shall criticize one aspect of the paper. The paper also contains a great deal of valuable material about the structure of trade agreements, and how they develop over time, which I do not discuss.

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from unilateral determination of policies. These externalities arise when governments reduce import demand in order to achieve their domestic policy objectives.'[31] '[T]he reason why governments prefer to invoke trade barriers is not important.'[32] 'The more fundamental problem caused by unilateral tariff setting is that governments reduce trade volumes in order to achieve their objectives, whatever they may be.'[33] These quotes suggest that even pure protectionism creates the grounds for a trade agreement. But Grossman and Horn give no explanation of how a trade agreement can reduce protectionism. As we shall see, the only explanation they give for trade agreements is the standard model, in which the agreement will not address protectionism.

There is a sense in which Grossman and Horn are right that, in their model, there will be a trade agreement whatever the government's purpose. In their model, the government will always act on the terms-of-trade motive, whatever *other* objects the government may or may not have;[34] and this *terms-of-trade manipulation* will always provide the grounds for a trade agreement. But the statements quoted in the previous paragraph seem to suggest that protectionism *by itself* would give rise to a trade agreement, which is a different claim, and inconsistent with their model.

Grossman and Horn appear to offer two explanations for trade agreements; but the explanations are in fact the same, and they are both the standard model. Section 4 of their paper sets out what they refer to as the 'National Market Power Model', which is straightforwardly the standard model. Grossman and Horn first explain the traditional optimum tariff for a national-income-maximizing country;[35] then they explain why such an optimum tariff is globally inefficient, and they give the optimum-tariff explanation for a trade agreement between two countries with optimum tariffs;[36] then, citing Bagwell and Staiger, they point out that even if governments have political motives and engage in protectionism, they will still also 'exploit national market power', and so 'fundamentally the same explanation for the existence of trade agreements' applies as with national-income-maximizing governments.[37] Here Grossman and Horn are explicit that the explanation for the trade agreement depends on the fact that the governments engage in terms-of-trade manipulation (whether or not they also engage in protectionism).

31 Ibid.: 61.
32 Ibid.: 19.
33 Ibid.: 45.
34 See text between notes 15 and 16 *supra* (which, strictly speaking, was about the Grossman–Helpman model, but it is all the same). See also the further arguments in each of the next three paragraphs. And note Grossman and Horn's statement: 'Governments may set positive tariffs to cater to particular constituents, but the resulting tariffs will be even greater than what would result from constituent pressures due to the temptation they have to exploit national market power'. Ibid.: 42.
35 Ibid.: 33–36.
36 Ibid.: 36–38.
37 Ibid.: 42.

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Section 3 of Grossman and Horn sets out an 'International Externalities Model' of trade agreements. Grossman and Horn appear to suggest that this model is more general. But we shall see that even in this model, the authors implicitly assume that governments engage in terms-of-trade manipulation, and they explain only why there will be an agreement to eliminate that; there is no explanation of how an agreement could eliminate protectionism. First, Grossman and Horn impose three assumptions about each government's objective function: (1) starting from a zero tariff, the government has an incentive to raise the tariff; (2) as Home's tariff is gradually increased, with Foreign's tariff held constant, Home's welfare first increases and then declines; (3) Home is always hurt by an increase in Foreign's tariff.[38] Next, they expound the concepts of a best response function and a Nash equilibrium, and they give a diagrammatic explanation of why a trade agreement can make both countries better off than in the Nash equilibrium.[39] They also give a very brief 'mathematics-in-words' explanation. They explain that, starting from the Nash equilibrium, 'A small change in the Home tariff would reduce the Home government's welfare only slightly (because a near-optimal choice yields almost the same welfare as an optimal choice), but would provide clear political gains to the Foreign government. [And similarly, *mutatis mutandis*, for a small change in Foreign's tariff.]'[40] This is a solid argument, but on analysis it turns out to be just a new version of the familiar argument that *terms-of-trade manipulation* will create the occasion for a trade agreement. Grossman and Horn's assumptions guarantee that the governments will engage in terms-of-trade manipulation. To see why, notice first that their assumption (3) tells us two things: it tells us that each country is large; and it also tells us that each government's welfare function depends directly on the terms of trade. Also, by definition, in the Nash equilibrium each government optimizes. (Grossman and Horn rely on that fact when they say that a small change in Home's tariff has a negligible effect on Home's welfare.) But if some country is large, so that the government can affect the terms of trade, and if the government's welfare function depends directly on the terms of trade, and if the government optimizes, then the government will necessarily engage in terms-of-trade manipulation. So what Grossman and Horn prove in their Section 3 is still just the familiar proposition that when governments engage in terms-of-trade manipulation, there is room for a trade agreement. Their argument suggests no reason to think that the trade agreement will do anything more than eliminate the terms-of-trade manipulation. This is still the standard model.

Grossman and Horn also describe a concrete example in which they claim that a trade agreement will reduce protectionism. But the example does not work. Grossman and Horn consider what happens in the Grossman–Helpman model

38 Ibid.: 18–19.
39 Ibid.: 19–24.
40 Ibid.: 23.

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if (a) the government puts a zero weight on social welfare and cares only about its campaign contributions, and (b) special-interest groups constitute only a negligibly small proportion of the population and hence receive only a negligible fraction of the tariff revenue, so that they do not lobby over tariff revenue. As Grossman and Horn say: 'In this case, governments will choose their tariffs solely in view of the campaign contributions they are offered, which will in turn be based on the protection that special interests gain from tariffs and not on the revenues that are generated.' Grossman and Horn claim that even in this situation, where the tariffs are pure protectionism, the tariffs will still be inefficiently high, and there will be a trade agreement.[41] But, in fact, if we set the parameters of the Grossman–Helpman model to reflect assumptions (a) and (b), the unilateral tariffs and the tariffs required by an efficient agreement become either infinite or indeterminate (depending on whether the relevant sector is organized or not).[42] So we cannot make assumptions (a) and (b) concurrently without going beyond the domain of the Grossman–Helpman model. This is another route to our previous conclusion that there *must* always be terms-of-trade manipulation in the model, which explains the trade agreement. Grossman and Horn have given no explanation of how a trade agreement might reduce protectionism, either in the Grossman–Helpman model, or in their own general approach.

4. Accounting for the difference between the practitioners' story and the standard model

Once one confronts squarely the fact that the practitioners' story and the standard model say very different things about trade agreements, it is not hard to explain the difference. The practitioners' story and the standard model make different assumptions about which producer groups lobby in which contexts, and for what; and they also make different assumptions about what favors governments are willing to provide.

The practitioners' story treats exporters as inert in the non-cooperative context. Exporters rouse themselves only to lobby in favor of some proposed trade agreement. Of course, proponents of the practitioners' story are aware that in the real world some exporters lobby for and even secure unilateral export subsidies.

41 Ibid.: 42–43.

42 It is not necessary or convenient to reproduce here the complete formulas for the unilateral and cooperative tariffs. The crucial bit is the first multiplicand in the first term of the unilateral tariff (which is also the only term of the cooperative tariff). This multiplicand is $(I_{iL} - \alpha_L)/(a + \alpha_L)$, where I_{iL} is an indicator variable that equals one if industry i is organized and zero otherwise; α_L is the fraction of all voters that belong to organized industries; and a represents the government's weighting of a dollar of social welfare compared to a dollar of campaign contributions. Now, assumption (a) in the text means that $a = 0$, and assumption (b) in the text means that $\alpha_L = 0$. So the multiplicand becomes $(1 - 0)/(0 + 0)$, which is infinite, if the relevant industry is organized, and $(0 - 0)/(0 + 0)$, which is indeterminate, if the relevant industry is not organized. See Grossman and Helpman (1995: 688, 700).

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But that is not a problem, as long as there are *some* exporter groups that do not lobby (or do not lobby successfully) in the non-cooperative context, but who would lobby for a trade agreement. Those are the groups that are necessary for the practitioners' story to produce a trade agreement.

The standard model, in contrast, assumes that any exporters who would lobby in the cooperative context for a trade agreement *also* lobby in the non-cooperative context.[43] In the Grossman–Helpman model, they lobby for export subsidies. In the Bagwell–Staiger model, they lobby against a tariff. But, of course, their lobbying against a tariff in the Bagwell–Staiger model could in principle result in an import subsidy, which would be equivalent to an export subsidy in this two-good model. So we can regard exporters in the Bagwell–Staiger model either as lobbying against a tariff or as lobbying for an export subsidy, and we shall adopt both perspectives in our discussion below.

Both versions of the standard model share another important assumption. They assume that governments make no distinction between the fiscal cost of benefitting exporters through a trade agreement (which takes the form of tariff revenue foregone) and the fiscal cost of benefitting exporters through a subsidy (which takes the form of out-of-pocket expenditure). This assumption is at odds with the practitioners' conventional wisdom, which assumes governments will be less willing to spend on subsidies than to give up tariff revenue.

So, the practitioners' story and the standard model make different assumptions, both about who lobbies when and for what, and about the government's willingness to respond in various ways. These assumptions explain the different conclusions about whether trade agreements will reduce protectionism. In the standard model, any exporters who would lobby for a trade agreement also lobby in the non-cooperative context, and the government is as willing to benefit them by subsidies as by a trade agreement. As a consequence, it turns out that whatever the government would have been willing to do for these exporters by making a trade agreement, it will already have done for them by *unilateral* tariff-reductions or subsidies. There will simply be nothing left for a trade agreement to do on the *political* front (which is why the trade agreement will address terms-of-trade manipulation, but not protectionism). In contrast, in the practitioners' story, there are at least some exporters who lobby (or who lobby successfully) only in the cooperative context. So the political forces for liberalization are not fully active in the *non-cooperative* context, and the political forces for protection are effectively over-represented in that context. That is why an agreement will reduce protectionism.[44]

43 Bagwell and Staiger assume this implicitly by having the same welfare function for the government in the non-cooperative and cooperative contexts. Grossman and Helpman use the same index variable to represent 'organized/unorganized' in both the non-cooperative and the cooperative contexts.

44 Notice that even though trade agreements reduce protectionism in the practitioners' story, and not in the standard model, it does not follow that we are better off if the practitioners' story is true. Because

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Which account of trade agreements makes the more plausible assumptions? The argument for the assumptions of the standard model is simple: the behavior the standard model assumes is required of informed and rational agents, whether exporters or governments. It would be irrational for exporters who would lobby for a trade agreement not to lobby for unilateral policies that would secure equivalent benefits for themselves. And it would be irrational for a government to distinguish between tariff revenue foregone and out-of-pocket expenditure on subsidies, since they are both just reductions in the fiscal balance.

And yet, most people, both practitioners and economists in their informal thinking, implicitly assume that some exporters are active only when an agreement is under discussion. Why might that be? Let us start with an issue that is not the most important, but is a convenient point of entry. In the Bagwell–Staiger model, exporters lobby against tariffs in the unilateral context. Bagwell and Staiger have argued that to assume otherwise is to assume exporters cannot be brought to understand Lerner equivalence.[45] But if we look at the real world, we don't seem to see many exporters lobbying against tariffs. Jagdish Bhagwati has written, concerning the proposition that protectionism damages exporters: '[I]t is not uncommon to find trained economists who fail to grasp the relationship. It is not surprising, therefore, that export interests have not generally been mobilized in opposition to import-competing industries' demands for protection.'[46] Even if exporters do grasp the relationship, there can still be reasons for them not to lobby against unilateral tariffs. As Wilfred Ethier has pointed out, in a world with many goods, exporters can know in principle that their own government's tariffs hurt exports, without knowing in practice just how much any particular tariff harms exports of any particular good. So no exporter group knows how much it should pay for what reductions in which home tariffs. In contrast, exporters can see just how they will be benefited by a reduction in Foreign's tariff on their product.[47] Robert Hudec also observed that exporters mostly do not lobby against tariffs, but he offers yet a third explanation: 'It is often very bad public relations to oppose a fellow citizen's petition for help from his/her government when there is no visible direct interest at stake.' In effect, each producer group treats trade policies as primarily the business of the producers *directly* affected; so even though exporters are indirectly affected by tariffs, they treat tariffs as not really their business, and they leave lobbying over tariffs to import-competing producer groups. But Hudec goes on to note that exporter groups can lobby for trade agreements, because then

exporters are fully active in the non-cooperative context in the standard model, there will be less (net) protectionism to worry about in the standard model. So we may be equally well off whichever account is true – provided that we *know* which account is true, and guide our actions concerning trade agreements by the true account.

45 Bagwell and Staiger (2002: 31).

46 Bhagwati (1988: 73).

47 Ethier (2004: 305–06); cf. Destler (2005: 5).

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they are not just lobbying against their own country's tariffs, they are lobbying for a reduction in foreign tariffs, which will affect them *directly*.[48]

This raises the question of why the practitioners' story implicitly assumes that (at least) some exporters do not lobby for export subsidies, which also affect them directly. One possible answer is that most exporters do not lobby for export subsidies, because they think they are unlikely to get them. Arthur Dunkel and Frieder Roessler, discussing a different but related issue, have suggested that governments are reluctant to offer production subsidies to import-competing industries as an alternative to tariffs because of the expenditure involved, even when the subsidy would be more efficient.[49] This example is specially significant because the subsidy Dunkel and Roessler were considering does not have the terms-of-trade cost associated with an export subsidy. (A production subsidy for an import-competing industry would improve the terms of trade.) So the example suggests by extension that *even a government that is not concerned with the terms-of-trade cost of an export subsidy* might still be reluctant to help exporters by that means. For a different example, consider that in a purely domestic context it is usually easier for an interest group to get a subsidy in the form of a tax expenditure than to get the same subsidy by an explicit transfer. This would appear as irrationality on the part of the government in any formal model that looks only at the balance in the treasury. But it may not be irrational at all (from the government's point of view) in a larger political and cultural context. For example, the government may prefer the tax expenditure because it is a less transparent mechanism for conferring focused benefits; or it may prefer it because the tax expenditure can be sold in some quarters as a tax cut; or because using the tax expenditure mechanism reduces the overall budget, even though it does not affect the balance.

There may be other reasons of political culture why export subsidies seem so much less popular than tariffs as an instrument of politically motivated trade policy. For example, there is a tendency in the general political culture to understand trade relations through the metaphor of a war for markets. In this war, tariffs are defensive weapons, holding the home territory for its natural occupants, domestic producers. In contrast, export subsidies are offensive weapons, seeking to annex foreign market territory. In the modern world, we are suspicious of invaders, even when the invaders are us. The international trade community seems to share this bias. The GATT/WTO has never proposed to eliminate tariffs completely, even though it attempts to reduce them. Export subsidies, in contrast, are absolutely prohibited by the WTO,[50] and they were strongly discouraged even in the GATT.[51]

48 Hudec (1993: 315–316).
49 Dunkel and Roessler (2012: 224–225).
50 Agreement on Subsidies and Countervailing Measures, Art. 3.1(a).
51 GATT Art. XVI, Section B.

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The last three paragraphs are far removed from any formal model. But considerations of political culture are real, even when they are amorphous. They may account for behavior by governments or exporters that would be irrational in the standard model, or in any familiar sort of model. They may explain why that behavior is perfectly rational in the context of real-world politics.

Our discussion strongly suggests that the governments' reluctance to grant export subsidies is the reason, or an important reason, why we need a trade agreement to reduce protectionism. Wilfred Ethier has produced a model that confirms the basic idea here, although in his model the government is not *unwilling* to benefit exporters by export subsidies, but is *unable* to do so because of its trading partner's countervailing duty [CVD] laws.[52] This is a good story. It is not obviously the practitioners' story, which makes no mention of CVD laws. But, of course, the practitioners' story in itself gives no *other* reason for the limited use of export subsidies, so this might be as good a way of expanding it as any. Ethier is dissatisfied with the fact that his model works only if we assume away terms-of-trade motivation completely,[53] but that might be no stumbling block for most believers in the practitioners' story. For myself, I suspect the political culture considerations are at least as important as foreign CVD laws in explaining why exporters are not fully served by unilateral policy. But no one, including proponents of the practitioners' story, has focused sufficiently on these issues.

In sum, the assumptions of the standard model have the advantage of abstract rationality (and concomitant ease of modeling), but the assumptions of the practitioners' story seem more plausible as a description of the real world.

5. Does the standard model explain trade agreements?

There is much about actual trade agreements that the standard model cannot explain. In Section 5.2 below, I will identify a number of specific features of existing agreements that the model cannot explain. But first, in Section 5.1, we look at a broader failure. The standard model does not provide a plausible explanation of why there are trade agreements at all.

5.1 Does the standard model explain the existence of trade agreements?

According to the standard model, trade agreements are about eliminating terms-of-trade manipulation. So the model cannot be taken to explain trade agreements unless countries actually engage in terms-of-trade manipulation, or would do so except for existing trade agreements that constrain them. The evidence suggests that countries do not, and would not, engage in terms-of-trade manipulation (or certainly not to the extent necessary to explain existing trade agreements).

52 Ethier (2011: 311–314), (2007: 618–620).
53 Ethier (2007: 618).

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For a start, the standard rhetoric of trade makes virtually no reference to terms-of-trade manipulation, neither as a policy that countries adopt, nor as a problem for trade agreements to solve. (In contrast, the rhetoric abounds with discussion of protectionism, and the desirability of reducing protectionism by trade agreements.) Bagwell and Staiger acknowledge that practitioners do not talk about terms-of-trade manipulation, and that this casts doubt on the practical relevance of their model. In response, they point out that practitioners talk a great deal about market access. So, to defend the relevance of their model, Bagwell and Staiger argue that 'we may interpret . . . 'terms-of-trade gain' and 'market-access restriction' as . . . phrases that describe the single economic experience that occurs when the domestic government raises its import tariff and restricts foreign access to its market'.[54]

This defense of their model, suggesting that 'market-access restriction' and 'terms-of-trade gain' are equivalent concepts, misses the mark. It is true that if we focus on the *effects* of a tariff, market access restriction and terms-of-trade gain go hand in hand. And it is also true (as we saw in Section 3.1) that when Home, as a *demandeur* in trade negotiations, seeks to help its exporters by securing greater access to Foreign's market, it can be thought of as seeking improved terms of trade. But neither of these propositions is relevant to the question that is crucial for Bagwell and Staiger – the question of whether governments engage in terms-of-trade manipulation. That is a question about governments' *motivation* for *imposing* tariffs. And once we focus on the *motivation* (not effects) for *unilateral* policy (not negotiation), market access restriction and terms-of-trade gain are *not* equivalent. Purely protectionist tariffs aim at restricting market access in order to raise the domestic price; but, *by definition*, purely protectionist tariffs do not aim at terms-of-trade gain, even though a terms-of-trade gain will result. In fact, the terms-of-trade gain works *against* the achievement of the protectionist goal of raising the domestic price. *Ceteris paribus*, the reduction of the world price of the import good *lowers* the domestic price – just the opposite of what the government wants. So although the purely protectionist government is aiming at market access restriction to raise the domestic price, and it incidentally achieves a terms-of-trade gain, it definitely is not *aiming at* the terms-of-trade gain. Bagwell and Staiger's claimed equivalence between market-access restriction and terms-of-trade gain breaks down when we are considering how non-cooperative tariffs are *motivated*. In other words, it breaks down *exactly where it matters* for Bagwell and Staiger's attempt to defend their model against doubts that countries engage in terms-of-trade manipulation. Pointing out the universal concern with market access

54 Bagwell and Staiger (2002: 28–29). For simplicity, I have omitted Bagwell and Staiger's references to 'cost shifting', which they list as a third equivalent. The treatment of cost shifting would be the same as the treatment of terms-of-trade gain. Unlike market-access restriction, cost shifting is equivalent to terms-of-trade gain in all contexts.

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therefore tells us nothing about whether governments manipulate their terms of trade.

Bagwell and Staiger have another response to the objection that governments do not talk about the terms of trade. They remind us that governments that do not talk about the terms of trade, and even governments that never *think* in those terms, might nonetheless be making decisions by some procedure that has the operative effect of terms-of-trade manipulation. But notice that governments cannot be manipulating the terms of trade, *even unconsciously*, if they pay no attention to tariff revenue in their decision-making. Tariff revenue is where the benefit of terms-of-trade manipulation (by tariff-setting) shows up.[55] If we can take the United States as representative of the large, developed countries that have been the drivers of trade negotiation (at least until very recently), then such countries have *not* engaged in terms-of-trade manipulation. In the classic studies of United States trade policy from the Hawley-Smoot period to the present, there is not one word to suggest that tariffs were ever motivated in even the slightest degree by the desire for tariff revenue (whether to be deposited in the treasury or distributed to the citizenry).[56] Which means that during the past eighty-odd years, the United States has not engaged in terms-of-trade manipulation, not even when it was unconstrained by any trade agreements. The history is clear that even when United States tariffs were at their highest, they were pure protectionism.[57]

We can also find direct behavioral evidence of the weakness or absence of the terms-of-trade motive by considering the instruments of unilateral trade policy that governments employ. There are some widely used trade policy instruments that may, in principle, reflect either protectionism or terms-of-trade manipulation, tariffs being the most obvious example. But there are also many commonly used

55 Cf. Ethier (2007: 611).

56 E.g., Schattschneider (1935), Irwin (2011), Baldwin (1985), Destler (2005). Three specific points: (1) Note that Schattschneider and Irwin are writing about a time when the United States was not significantly constrained by trade agreements. (2) There is one episode in Destler where the government is concerned with tariff revenue: it was a political hurdle for the WTO agreement that the budget rules of the time required the projected $12 billion loss of tariff revenue over five years to be offset by other revenue increases or spending cuts. But this reflected a budgetary concern, not a concern with the terms of trade. The problematic budget rule applied to *any* tax cut; and in the case of the WTO, the projected benefit to exporters from a terms-of-trade neutral trade agreement did *not* count as a relevant offset (as it should, if the objection to the tariff cut was the terms-of-trade loss). Destler (2005: 217, 225). (3) Finally, I have been told by former staffers in relevant Congressional offices that no one thinks about the tariff revenue when considering tariffs; but I have not attempted a systematic survey.

57 Schattschneider (1935), Irwin (2011). For some discussion of *why* governments might not attend to tariff revenue or engage in terms-of-trade manipulation, see Regan (2006: 981–982). The central point is that governments are not unitary rational actors; they are big, complicated bureaucracies, in which different agencies focus on different issues and respond to different constituencies. Also, few agencies have the direct right to spend the revenue they bring in. It has been suggested to me that the United States may not be representative, that the European Union might be more inclined to engage in terms-of-trade manipulation, because tariff revenue goes into the *European* treasury (as opposed to national treasuries), where it is a much bigger part of the budget. This is a matter that deserves study.

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instruments that can *only* be motivated by protectionism, because they damage the home country's terms of trade, such as voluntary export restraints [VER's] sought by the importing country, or import quotas assigned in a way that allows the exporters to collect the quota rents. Also, in those cases where export subsidies are granted, the motivation must be political (although not 'protectionism' as we have defined it), since export subsidies damage the home country's terms of trade.[58] Conversely, there is *no* commonly used trade instrument that causes a political-support loss and hence must be motivated by terms-of-trade gain. Export taxes are relatively rare; and the few export taxes we see are usually protectionism for domestic consumers or users of the good in question. In sum, there is little or no actual trade behavior from which we can infer that terms-of-trade motivation *must* be operative. And even if terms-of-trade motivation is operative to some degree, the common use of instruments like VER's that buy political gain at the cost of terms-of-trade loss, and the rarity of instruments like export taxes that buy terms-of-trade gain at a political cost, show that the terms-of-trade motive must be very weak compared to the protectionist motive.

In an important recent paper, Broda, Limão, and Weinstein purport to demonstrate by an econometric analysis that countries engage in terms-of-trade manipulation in tariff setting.[59] They argue that there is a correlation between market power and tariff levels, both across countries and across goods within countries. But even if this is true, we cannot infer that countries engage in terms-of-trade manipulation. To be sure, the correlations Broda, Limão, and Weinstein identify would appear in the tariffs of countries engaged in terms-of-trade manipulation. But they could also very plausibly appear in the tariffs of countries motivated solely by protectionism. If the government has a purely politically determined target for the domestic price of the import good, established without reference to its market power, then the *tariff* will still be correlated with market power, because greater market power means that a higher tariff is required to achieve any particular price for domestic producers. Given that we have abundant other evidence of protectionism, and no other evidence for terms-of-trade manipulation, we should not infer terms-of-trade manipulation from this study.[60]

Essentially the same point applies to a recent paper by Bagwell and Staiger.[61] They point out that in their model of trade agreements, 'trade negotiations should cut tariffs the most on those products and for those countries where the

58 For additional examples and further discussion, see Ethier (2013: 254–257), Regan (2006: 975–978). Even anti-dumping duties and countervailing duties are not motivated by terms-of-trade gain, at least in cases where they succeed in eliminating the dumping or subsidization and then must be removed themselves; such duties ultimately achieve a protectionist gain for the importing country at the cost of a terms-of-trade loss.

59 Broda *et al.* (2008).

60 For a formal statement of this criticism of Broda, Limão, and Weinstein, and for additional criticisms, see Ethier (2012).

61 Bagwell and Staiger (2011). The same point applies also to Ludema and Mayda (2013).

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international cost-shifting motives under unilateral tariff-setting are greatest'.[62] And they then present empirical evidence that they say provides 'strong and robust support' for this prediction.[63] But as with the Broda, Limão, Weinstein study, the empirical evidence Bagwell and Staiger present seems equally consistent with the practitioners' story. The cases where the 'cost-shifting motives . . . are greatest' are cases where Home has greatest market power, and substantial import volume. But these are also the cases where a purely protectionist tariff by Home imposes the greatest harm on Foreign's exporters in achieving any particular domestic price for Home's import-competing producers. So they are the cases where it should be easiest for purely protectionist governments to find an agreement that allows each side to replace support from import-competing producers with support from exporters, as in the practitioners' story. Just as with the Broda, Limão, Weinstein paper, Bagwell and Staiger's evidence appears to be as consistent with a world of purely protectionist governments as with a world of terms-of-trade manipulators.

In sum, we have empirical evidence that market power matters to tariff levels, both unilateral tariff levels (Broda, Limão, and Weinstein) and negotiated tariff levels (Bagwell and Staiger). But intuitively, the practitioners' story accounts for that just as well as the standard model.[64]

The econometric studies fail to discriminate between the possibility that governments are terms-of-trade manipulators and the possibility that they are purely protectionist. But we have seen other evidence that does discriminate, both behavioral evidence (facts about the use of various instruments of trade policy) and reportorial evidence (the histories that suggest no role for tariff revenue in policy choice). This evidence tells us that the terms-of-trade motive is either weak, or absent. Hence, trade agreements must be about something other than terms-of-trade manipulation.

5.2 *Does the standard model explain the particular features of the WTO?*

I have argued that the standard model does not explain the existence of trade agreements. We can also focus the argument on particular features of trade agreements. If we consider the WTO, there are many features that make no sense if we imagine the agreement is solely about terms-of-trade manipulation, but that make perfect sense if the agreement is about reducing protectionism. Because I have discussed these points elsewhere,[65] I will provide no more here than a summary. Some features, of course, make sense whether the agreement is about terms-of-trade

62 Bagwell and Staiger (2011: 1239).

63 Ibid. at 1271.

64 Ethier (2006) discusses another group of empirical studies that are thought to support the standard model (in particular the Grossman–Helpman formulation), because they show that governments respond to political motivation when setting tariffs. But as Ethier points out, these studies do nothing to support the standard model *in preference to* the practitioners' story (or Ethier's 'exchange of market access model').

65 Regan (2006: 978–981).

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manipulation or protectionism: GATT Article II on 'Schedules of Concessions', for example. But other features make sense only if the agreement aims at reducing protectionism, because the targeted behaviors cannot be terms-of-trade manipulation: for example, the prohibition of VER's induced by the importing country; the prohibition in GATT Article XI of complete import and export embargoes and of import quotas that are assigned to foreign exporters without charge; and the prohibition of export subsidies. In contrast, there are no features of the agreement that can *only* be explained by a concern with terms-of-trade manipulation. Furthermore, there are many places where the WTO passes up chances to restrain terms-of-trade manipulation, suggesting that any worry about terms-of-trade manipulation must be limited at best: for example, the lack of any constraint on export taxes; the fact that GATT Article III forbids only *discriminatory* internal measures (since non-discriminatory internal measures can be used for terms-of-trade manipulation, even though they cannot be protectionism); and the requirement of injury to the domestic import-competing industry in the Safeguards Agreement. In sum, analogously to our survey of unilateral trade behavior, we find some features of the agreements that could be designed to restrain either protectionism or terms-of-trade manipulation; some features that make sense only in an agreement aimed at protectionism; and some features that indicate the absence of any strong concern with terms-of-trade manipulation. We find *no* features that *require* us to think the agreement is concerned with terms-of-trade manipulation to any degree. The standard model does not explain the agreements we actually have.

6. Why it matters which explanation of trade agreements is correct

Understanding correctly what an efficient trade agreement will do is essential to intelligent treaty design. If the standard model is correct in saying that an efficient trade agreement will address only terms-of-trade manipulation, then every instance in Section 5.2 of a feature of the WTO agreement that cannot be explained on these grounds is in fact a design flaw, and should be changed. We should have no ban on VER's induced by the importing country; no prohibition of complete import or export embargoes, or of quotas simply assigned to foreign countries without payment; no prohibition of export subsidies; and so on. Furthermore, if we are genuinely worried about terms-of-trade manipulation, we should restrain export taxes; we should have no injury requirement in the Safeguards Agreement; we should have more disciplines on non-discriminatory internal regulation; and so on.

On the other hand, if the *practitioners*' view is correct, and the standard model is wrong, then it would be a disaster for trade negotiators to accept and be guided by the standard model. They would no longer maintain existing limits on protectionism or seek to impose new limits, and the world would lose the primary benefit that trade agreements bring. Or consider the effect if the WTO Appellate

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Body accepted the standard model. If they were reviewing some measure for WTO-consistency, in a context where they needed to interpret the relevant treaty provision in light of the treaty's purpose, they could find themselves arguing: 'We think this measure was motivated by protectionism. Therefore, as the standard model tells us, it is *not* the sort of measure the treaty was designed to restrain. Therefore it is legal.' I trust that sounds as wrong to most readers as it does to me.

At present, there seems to be no danger that trade negotiators and adjudicators will abandon the practitioners' story for the standard model. The standard model has been around for 20 years, without affecting the practitioners' belief that trade agreements are about reducing protectionism. Still, it is worth reminding ourselves of the gulf that separates the practitioners' story and the standard model, as a precautionary measure. Also, if more economists confronted squarely the inconsistency between the practitioners' story and the standard model, we might get formal models of the practitioners' story that lead to unpredictable new insights, with practical import for the negotiation process and for treaty interpretation. In any event, just understanding better a phenomenon as important as trade agreements is valuable in itself.

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