In the aftermath of the 2003 war in Iraq, there is growing concern over the durability of international institutions and their capacity to withstand international change. Transaction costs are a central factor in theoretical explanations of the conditions under which international institutions will persist or be replaced. Rational institutionalists expect regimes to persist after conditions underlying their creation have changed because of the transaction costs of negotiating a replacement regime. Andrew Moravcsik has recently challenged this view, arguing that such costs are generally low and, in any case, arise from domestic and transnational sources rather than interstate bargaining. Others have argued that transaction costs shape the structure of security institutions. All these approaches assume that states can accurately forecast the transaction costs of maintaining or replacing an international regime. However, as an examination of the replacement of the Coordinating Committee on Multilateral Export Controls (CoCom) by the Wassenaar Arrangement demonstrates, this assumption is not necessarily warranted. This essay reviews transaction-cost-based theories of international cooperation and proposes that incorporation of a variable concerned with states’ capacity to estimate transaction costs would improve our theoretical understanding of institutional persistence and change. Moreover, it considers problems of defining and measuring transaction costs, assesses factors limiting states’ accurate estimation of transaction costs, and presents some propositions regarding transaction cost estimation and regime persistence. The essay also examines the implications of inaccurate transaction cost estimation for recent US foreign policy and international order.

Faced with changed international conditions, members of international institutions may choose to maintain and adapt existing institutions as the member states of the North Atlantic Treaty Organization (NATO) have done. Or, they may choose to replace an existing organization with one more specifically tailored to the new context as in the cases of the replacement of the General Agreement on Tariffs and Trade (GATT) with the World Trade Organization (WTO) and the Organization of African Unity by the African Union. The prominence of international institutions in international relations in recent decades makes the question of when international institutions are likely to be adapted or replaced increasingly significant. And the “à la carte multilateralism” of recent US foreign policy (Haass 1997, 2001; Shanker
2001) calls into question the durability and relevance of international institutions such as the United Nations (UN) and NATO, making the task of explaining institutional adaptation and replacement highly salient. (The concept of à la carte or “hard headed” multilateralism in which the United States acts through formal institutions, ad hoc coalitions, or unilaterally, depending on the situation was articulated in speeches in 2001 by then US State Department Director of Policy Planning Richard Haass.) Existing theories addressing this question, however, are limited by an oversimplified conception of the role of transaction costs in determining institutional robustness.

Transaction Costs and Theories of International Institutions

Transaction costs play a central role in theoretical explanations of international organizations (Sandler and Cauley 1977; Keohane 1984; Yarbrough and Yarbrough 1990; Downs and Rocke 1995; Kang 1995; Lake 1999; Moravcsik 1999; Wallander 2000; Weber 2000). Most famously, Robert Keohane (1984:101) has proposed that the origins, functions, and durability of international regimes are best understood by conceiving of them as “information-providing and transaction cost-reducing entities,” arguing that states establish regimes to help them realize Pareto-improving bargains that would otherwise fail due to information asymmetries and transaction costs. Regimes provide information through standard-setting and monitoring. And they reduce the transaction costs of cooperation by legitimizing compliance and delegitimizing violations, by facilitating negotiation, and by linking different issues and associated regimes (Keohane 1984:89–92). Further, once established, regimes are durable because the transaction costs of negotiating replacements are high: “international regimes are easier to maintain than to construct” (Keohane 1984:102).

David Lake (1999) and Katja Weber (2000) have argued that the structure of security regimes is determined largely by transaction costs. Weber contends that transaction costs and threat levels interact to determine the choice between three alternatives: States will opt for (1) no cooperation or an informal alliance when the threat level is low, (2) a binding alliance when the threat is high and transaction costs are low, or (3) confederation when both threat level and transaction costs are high. “Given high threat, the more numerous and severe the transaction costs (uncertainty, asset specificity, and heterogeneity) a state faces, the greater the likelihood it will seek structurally sophisticated security apparati to reduce these costs” (Weber 1997:333). Lake (1996:2) similarly argues that the form a security institution takes on a continuum from “anarchic alliance to a hierarchic empire”—exemplified by NATO and the Warsaw Pact respectively—is determined by costs of opportunism (reduced by hierarchy) and governance (greater as hierarchy increases).

Andrew Moravcsik (1999:270) has argued that an assumption of high transaction costs “underlies most ‘supply-side’ theories of international cooperation, whether they stress the autonomy of international institutions (as do functional regime theory and recent writings in international law), the impact of hegemonic distribution of power, bargaining outcomes induced by institutional ‘focal points’ and other procedural constraints, or . . . the intervention of third-party entrepreneurs.” This view, he notes, supports a number of predictions, including “the ‘stickiness’ of institutions, suboptimality of outcomes, and the strong impact of supranational entrepreneurs” (Moravcsik 1999:301). “Stickiness” refers to institutions maintaining their form after the conditions underlying their creation have changed. Moravcsik, however, rejects the assumption of the uniformly high transaction costs of bargaining, contending instead that the transaction costs of international cooperation are a function of the extent of political involvement by domestic and transnational groups. He expects regimes to be less sticky and more subject to renegotiation or replacement. The key factors making regimes sticky
stem from the domestic and transnational political support given existing institutions. Absent significant domestic and transnational pressure, the transaction costs of interstate bargaining are expected to be low. Where domestic and transnational support for existing international arrangements is strong, the transaction costs of negotiating new regimes that correspond to changed conditions will be high. Such costs will be products of domestic and transnational politics rather than interstate bargaining. Consider, for example, trade liberalization negotiations under conditions of increased economic interdependence where significant domestic groups favor the maintenance of international measures permitting protectionism and domestic intervention. The costs of negotiating such trade liberalization measures—for instance, NAFTA—are high in Moravcsik’s view due to domestic political pressures, not bargaining costs. The effect of transaction costs arises from “societal ‘lock-in’ effects and the resulting stability of state preferences, not the costs of interstate bargaining, monitoring, and sanctioning” (Moravcsik 1997:537).

When domestic and transnational support for change is strong (and thereby shapes national preferences), the transaction costs of interstate bargaining to establish new arrangements consistent with these preferences will be low. Such has been the case, Moravcsik (1998:372) argues, throughout the history of European integration, with the partial exception of the negotiation of the Single European Act, in which supranational entrepreneurs played a “significant if secondary” role in reducing the transaction costs of the bargaining. Even in this case, he contends, national preferences determined through domestic and transnational politics were the decisive factor. Thus, for Moravcsik (1997) the significance of transaction costs, like the effect of national power, is largely a function of state preferences, which are ultimately determined through domestic and transnational politics. When existing regimes and state preferences no longer correspond, transaction costs will present little obstacle to negotiating new arrangements. Absent domestic or transnational support, regimes will not be sticky.

In contrast to Moravcsik, Keohane (1984) expects regimes to persist beyond changes in the conditions of their creation; they will last “after hegemony.” Two stylized models arise from these opposed perspectives. In the first, which might be called “Keohane’s world,” transaction costs of replacing regimes are high and institutions are consequently sticky, tending to persist in the face of changes in the international environment. In the other, “Moravcsik’s world,” transaction costs are low and institutions are readily disbanded and replaced when circumstances change. A policy of à la carte multilateralism, then, is more feasible in Moravcsik’s world.

Both views, however, assume that states can accurately judge the transaction costs of negotiating new regimes. Keohane’s argument implicitly holds that states will recognize the costliness of replacing an existing regime and choose to maintain it. States’ anticipation of the costs, not the costs of replacement, produces stickiness. Moravcsik (1999:301) assumes that where involvement of domestic and transnational actors is low, states will often “have both the incentive and capability to provide the information and ideas required to negotiate efficiently.” Thus, if domestic and transnational actors are unconcerned, states will not be deterred by the anticipated high transaction costs of bargaining. They will accurately anticipate that the costs will be low. In sum, Keohane expects that states will correctly anticipate the high transaction costs of replacing existing regimes and tend to keep the regimes they have. Moravcsik expects that states will accurately recognize the generally low transaction costs of replacing existing arrangements and tend to

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1The neglect of the implications of states’ greater or lesser capacity to correctly anticipate the transaction costs of regime replacement is somewhat at odds with Keohane’s (1984:88) emphasis on anticipated transaction costs in his explanation of regime creation. “Within the functional argument being constructed here, these expectations explain the formation of the regimes: The anticipated effects of the regimes account for the actions of governments that establish them” [italics in original].
replace them readily absent substantial domestic or transnational political support for the status quo.

But what if the assumption of accurate transaction costs estimation is loosened? Adding a new variable—states’ capacity to correctly anticipate the magnitude of the transaction costs involved in replacing an existing regime, or transaction cost estimation for short—renders problematic the arguments of both Keohane’s neoliberal analysis and Moravcsik’s liberal intergovernmentalist framework regarding transaction costs and regime persistence. In fact, the incorporation of this variable can, when its values are extreme, reverse predicted outcomes, generating, for example, Keohane’s predicted outcome in “Moravcsik’s world.” (Such can also occur if actual transaction costs are low but states expect them to be high.) If the crystal ball is clouded, states’ choices between formal institutions and ad hoc international “sheriff’s posses” (Haass 1997) may be neither appropriate nor well explained by current theory. Thus, theories of regime persistence must take account of states’ capacity to accurately forecast the transaction costs of regime replacement.

This essay develops a framework for assessing the implications of transaction cost estimation for theoretical explanations of regime persistence and change by (1) presenting a case study in which states were unable to accurately forecast the transaction costs of replacing an existing regime, (2) discussing the difficulties in defining and measuring transaction costs apparent in both the economics and international organization research literatures, (3) proposing a set of hypotheses for researching the effects of transaction cost estimating on regime persistence, (4) addressing the implications of transaction cost estimation for American foreign policy, multilateralism, and international order, and (5) outlining an agenda for future research.

### Transaction Cost Estimation

**From CoCom to Wassenaar: A Case of Failure to Anticipate Transaction Costs**

On November 16, 1993, representatives of member states of the Coordinating Committee on Multilateral Export Controls (CoCom or COCOM) agreed, at a high-level meeting in Wassenaar (a suburb of The Hague) to disband the organization and replace it with a successor more suited to the post-Cold-War era. CoCom had been established by NATO member states in 1949 to coordinate restrictions on trade with the Soviet Union and its satellites. (For accounts of CoCom’s creation and early period, see Osgood 1957; Yasuhara 1984; Sorensen 1991; Mastanduno 1992; Roodbeen 1992; Henshaw 1993; Lombardi 1993.) CoCom, the first multilateral export control regime, developed practices that were later adopted by regimes subsequently formed to coordinate regulations on nuclear, chemical, biological, missile, advanced conventional arms, and dual-use technologies. These included lists of items to be controlled, proscribed destinations, and procedures for licensing and monitoring exports of controlled technologies. With the collapse of the Soviet Union, CoCom began to shift its focus from “economic containment” (Mastanduno 1992) to limiting arms proliferation. However, by the early 1990s, CoCom was widely considered to have outlived its Cold War mission. The United States attempted to gain agreement to maintain CoCom in a modified form, creating a forum for participation of former target states, dramatically reducing the number of items on the control lists, and shifting the focus from East–West trade to proliferation. But under pressure from both European members and Russia, American officials recognized that the demise of the regime was inevitable and sought to obtain commitments to strengthen the other regimes and establish a successor in exchange for agreeing to disband CoCom. Agreement was eventually reached in late 1993.

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2Author’s interviews with former US government officials, January 1999.
CoCom was to cease operations on March 31, 1994, and it was expected that the successor regime would start up when CoCom shut down (Agence France Press 1993; Davis 1994). In fact, negotiations to establish the so-called new forum were more difficult than anticipated, taking more than two years. According to one US official, “we formally terminated CoCom on March 31, 1994 but delayed considerably longer than anticipated in getting the successor institution started. The United States originally hoped for a seamless transition with the new arrangement starting upon the termination of CoCom.” However, the establishment of a successor regime was repeatedly pushed back during the course of difficult negotiations over the next two years. (For a more complete account of the negotiations, see Lipson 1999.) Stumbling blocks included differences between the Americans and the Europeans over the stringency of requirements for prior notification of controlled exports, what items the regime would cover, and what states would be targets of the new regime. While the Americans and Europeans agreed that Russian participation in a successor regime was necessary to avoid the serious gap that would result from the omission of a major arms supplier, Russian arms exports to Iran were a major barrier to its participation. The United States was also concerned about the level of development of Russia’s national export control system and its domestic political instability. There was disagreement among former CoCom members over whether to include Russia in the negotiations right away or to make Russian participation contingent on improved national export controls and resolution of the Iran issue, with the United States holding out for concessions (Litavrin 1997). In June 1993, the Russian government agreed to forego any further arms sales to Iran and the Americans accepted that previously agreed upon sales could be completed. This set of agreements and US determination that existing Russian contracts “would not endow Iran with any significant new capabilities nor change the balance of power in the region” (Litavrin 1997:109) laid the basis for an agreement between Vice President Gore and Russian Premier Victor Chernomyrdin on Russian participation in the negotiations. In addition to the issue of Russian participation, there were significant conflicts between the US position and those of the European states. According to one US official, at first “France resisted the idea that the new arrangement would cover both conventional arms and dual-use items. The French argued that arms transfer policy was their foreign policy prerogative alone.” Others were resistant to coordination of dual-use controls.

In November 1994, the head of the negotiations for a successor regime forecast the establishment of such a successor by the end of the year (Tech Europe 1994). However, that goal was not met; indeed, negotiations continued through 1995. By early 1995, a “small group on conventional arms” attempted, with little success, to spur progress in the larger group of negotiating states (Goldring 1995). Eventually the United States conceded on some points in the hope that the regime could be strengthened in the future. To start, the regime would have no provision for prior notification of exports; instead, members would report semiannually on exports and license denials of items on the conventional arms and dual-use lists. This procedure was a significant departure from CoCom in which member states were required to notify each other in advance of prospective exports of controlled items and any state could veto an item’s export. The United States did not want a veto rule in Wassenaar (fearing that new members would veto American exports) but did seek a prior notification requirement. However, the Americans ultimately settled for transparency provisions and consultation. According to the regime’s founding document, the “Initial Elements,” countries that deny a license are to report this fact within sixty (preferably thirty) days. Any state approving a license

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3Personal communication with US official involved in Wassenaar Arrangement affairs, May 17, 1999.
4Personal communication with US official involved in Wassenaar Arrangement affairs, May 17, 1999.
for an export of an item “essentially identical” to one denied by another state within the past three years must provide notification within sixty (again preferably thirty) days of approving the license (as opposed to after the transfer occurs). This latter provision is intended to permit efforts to prevent the export before it takes place. This provision also represents another compromise; the United States would have preferred a clear “no undercut” clause, forbidding any member state to approve an export that another has denied. Instead, the regime merely seeks to provide an opportunity to persuade members to forego “undercuts,” as the Initial Elements specifically state that “notification of a denial will not impose an obligation on other Participating States to deny similar transfers” (Wassenaar Arrangement 1996). In addition to the lack of a prior notification requirement and the weak no undercut provision, the United States was disappointed by the refusal of other members to designate target states. Instead, there was a shared understanding, not formally stated, that Iran, Iraq, North Korea, and Libya were states of concern. Finally, the reporting categories for conventional arms were initially limited to those used in the UN Register of Conventional Arms. The United States sought to expand these reporting requirements and has continued to pursue this issue and other concerns, with limited results, since the Wassenaar Arrangement was established (Davis 1996; US Department of State 2001, 2002).

Negotiating states announced agreement on a general framework in September 1995; the regime was formally established in December. However, the first plenary meeting of the new regime was nearly a disaster as the Russians objected to prior notification of undercutting exports, a condition accepted by all other states (Bonner 1996; Walkling 1996b). As a result of this and lesser problems, the meeting was suspended and outstanding issues were deferred to a July meeting at which most major outstanding issues were resolved (with the Russians accepting the majority position on undercut notification) except who would head the new regime’s secretariat, a matter which remained unresolved for months. The Russian concession was attributed to Boris Yeltsin’s June 1996 election victory and the united front presented by other participants in the negotiations (Walkling 1996a).

Thus, the new regime, formally named the Wassenaar Arrangement on Export Control for Conventional Arms and Dual-Use Goods and Technologies, began operation in July 1996 with the adoption of the Initial Elements. The Elements define as the regime’s purpose “to contribute to regional and international security and stability, by promoting transparency and greater responsibility in transfers of conventional arms and dual-use goods and technologies, thus preventing destabilising accumulations” (Wassenaar Arrangement 1996). They were amended in 2001 with the addition of a commitment to prevent terrorist groups from acquiring controlled items. The basic idea underlying the regime is that, by sharing information about arms and dual-use exports, member states will be able to recognize export trends leading to destabilizing arms buildups in particular regions and develop coordinated responses for dealing with such. States are required to share information semiannually about exports to nonmembers—and within sixty days of denying an export license or approving an undercutting export—for items on two lists: a conventional arms list and a dual-use list. The latter is divided into two “tiers”; one concerns basic items (tier 1) and the second sensitive items (tier 2). Tier 2 contains a subset of “very sensitive” items such as stealth technology over which members are required to exercise “extreme vigilance.” The Wassenaar dual-use list is modeled on CoCom’s industrial list.

During the interim period between CoCom’s demise and Wassenaar’s establishment, former CoCom members continued to implement CoCom control lists and regulations with some modifications through national agencies but with no coordinating international institution to provide information or reduce transaction costs. The issues that caused the greatest difficulties in the Wassenaar negotiations were central to the nature of the successor regime: what types of items would be
controlled, what restrictions would be placed on exports of controlled items, what states or regions would be targeted, and whether there would be a mechanism for addressing undercutting. In fact, there was significant concern over the possibility that if the Russian position on undercuts was adopted, states could use other members’ reports of license denials as leads to secure sales opportunities for their own exporting firms. One Western official noted that accepting this position would render the organization a “sham” (Bonner 1996). Since disagreements over prior notification of exports, undercut notification, and target state designation were key stumbling blocks causing the negotiations to miss the original target date for establishing a successor by more than two years, we can infer that US officials underestimated the transaction costs of negotiations to resolve these issues.

Treating the Wassenaar Arrangement as a regime may be controversial. After all, it is widely considered a weak arrangement in the export control community, raising questions about whether it qualifies as a regime. Like CoCom, Wassenaar is an informal, nontreaty-based agreement. As it works through transparency and information sharing, with no veto on exports, Wassenaar is widely viewed as much weaker than CoCom, requiring less “depth of cooperation” in the terminology of George Downs and his associates (1996). However, Wassenaar fits the criteria of the so-called consensus definition of international regimes: “sets of implicit or explicit principles, norms, rules, and decision-making procedure around which actor expectations converge in a given [issue] area of international relations” (Krasner 1983:1–2). The term “consensus definition” comes from Andreas Hasenclever and his colleagues (1996:8). Wassenaar qualifies as a regime, albeit a weak one, under this definition. Briefly, Wassenaar is based on the principle that destabilizing accumulations of arms threaten international peace and security and can be limited through transparency and coordination of export controls; norms of transparency and restraint regarding exports of advanced conventional arms and dual-use technologies and, more recently, small arms; rules concerning reporting requirements governing specific categories of arms and technologies; and decision making by consensus.

In his analysis of export control regimes, Claus Hofhansel (1993:375) adopts a narrower definition of international regimes (following Haggard and Simmons 1987:495) as multilateral agreements among states involving explicit injunctions regarding an issue area. Based on this conception, Wassenaar would be considered more a “nascent” regime than a full-blown one. Cassady Craft (2002:17) proposes conceiving of the Wassenaar Arrangement not as a regime but as “an arrangement nested within a regime [the nonproliferation regime] that is itself nested within” the liberal security community. While Craft is correct that Wassenaar is nested within both the broader nonproliferation regime and the liberal security community (though it includes nonmembers of that community), the analysis presented here treats Wassenaar as a regime nested within a more encompassing regime, the broader nonproliferation regime. (On nesting of regimes, see Aggarwal 1985, 1998; Young 1996.)

The contrast between CoCom and NATO is intriguing. CoCom was often (inaccurately) called the “economic arm of NATO.” (CoCom’s membership consisted of the NATO countries [with the exception of Iceland] plus Japan and Australia. Indeed, CoCom was formally not part of NATO in order to make it possible for neutral European countries to coordinate their policies with the regime.) Both CoCom and NATO were established at the beginning of the Cold War to coordinate Western containment of the Soviet bloc. And the end of the Cold War brought predictions of the demise of both institutions. In fact, according to one former US government official, efforts to establish a framework for cooperation by former target states with CoCom was “basically a corollary to what was being done in NATO” with the establishment of the North Atlantic Cooperation Council.5 However, while

5Author’s interview with former US government official, January 15, 1999.
CoCom was disbanded and replaced, NATO was strengthened and enlarged. Rational institutionalist analyses of NATO’s post-Cold-War adaptation (Hellmann and Wolf 1993; McCalla 1996; Wallander 2000) point to the consistency of NATO’s post-Cold-War persistence with institutionalist propositions regarding states’ propensity to maintain existing regimes rather than create new replacements and relate these to transaction costs. John Duffield’s (1994–1995) discussion of NATO’s post-Cold-War functions and institutional alternatives to NATO supports these analyses.

NATO’s persistence is more consistent with the neoliberal position that states are inclined to keep the arrangements they have, recognizing the high transaction costs of negotiating new ones. CoCom’s replacement by the Wassenaar better fits the liberal intergovernmentalist view that transaction cost concerns do not produce sticky regimes, but the difficulties with the “new forum” negotiations do not conform neatly to the liberal intergovernmentalist expectation that states will usually be able to efficiently negotiate new agreements. The CoCom-Wassenaar case is more problematic for neoliberal functional regime theory. Keohane’s argument would lead to an expectation that states would have preferred to reform CoCom rather than create a replacement from scratch. And the difficulties with the “new forum” negotiations support this view. However, Keohane contends that anticipation of the high costs of such negotiations will lead states to maintain the regime they have. In this case, states apparently failed to anticipate the problems they would have in establishing a replacement regime, contrary to functional regime theory’s expectation.

A number of alternative explanations can be conceived. It could be argued that, given persistent differences between the United States and European members of CoCom, the fact that the institution lasted as long as it did bears out neoliberalism. Alternatively, at least some European states may have preferred no regime at all, and obstructionist positions may have been intended to secure this goal rather than a replacement regime. The purpose in presenting this case was to illustrate a point—that is, just as states underestimated the high ex ante transaction costs of replacing CoCom, states may not have been able to reliably anticipate the transaction costs that would be involved in regime replacement, complicating existing explanations of regime persistence. This essay does not aim to use this case to provide a test of functional regime theory, liberal intergovernmentalism, or any other theory or explanation. However, the case of the disbanding of CoCom and the subsequent Wassenaar negotiations suggests that theoretical debates regarding the role of transaction costs in explaining regime persistence are incomplete and would benefit from explicit consideration of states’ ability to accurately anticipate transaction costs.

Transaction Costs: Problems of Definition and Measurement

Peter Katzenstein (1996:17, n. 51) has noted that “neoliberalism and institutional economics have been notably unsuccessful in measuring transaction costs, an opaque concept at best that is central to an understanding of how institutions work.” Not only is the concept difficult to measure, even its definition is unsettled. As one study (Benham and Benham 2000:2) indicated, “there is no standard terminology. Many different definitions of transaction costs appear in the literature.” Another analyst (Polski 2000:10) observes:

Transaction costs have been defined in various ways. . . . Coase (1937) defines transaction costs as the costs of using the price mechanism, which includes the cost of discovering relevant prices, and negotiating and concluding contracts. Arrow (1969) defines transaction costs as the costs of running the economic system . . . . Williamson (1985), who focuses on contracting activities, defined transaction costs to include the ex ante costs of drafting, negotiating and safeguarding an agreement, and the ex post costs of haggling, costs of governance, bonding costs to secure commitments.
Aside from issues of definition, even economists lament "the inherent difficulty of measuring transaction costs" (Evenson, Kimhi, and DeSilva 2000). Where precise definitions and measures of transaction costs exist, they are typically tailored to a specific context and inappropriate for the analysis of international regimes. For example, consider measures of transaction costs of stock trading that focus on factors such as "spread plus commission" or time series of daily securities returns (Lesmond, Ogden, and Trzcinka 1999).

In the international relations literature, transaction costs have typically been defined somewhat loosely. Despite the central role they play in his theory, Keohane (1984) never provides an explicit definition of transaction costs. Others adopt definitions from the economics literature on transaction costs that seem more suited to economic settings than to international politics. Lake (1999:59, quoting Matthews 1986:906) cites an economic definition of transaction costs: "The fundamental idea of transaction costs is that they consist of the cost of arranging a contract \emph{ex ante} and monitoring it \emph{ex post}, as opposed to production costs, which are the costs of executing a contract." Weber (2000:138, n.19) notes Arrow's definition of transaction costs as "the costs of running the economic system," and she (Weber 2000:14–16) develops a conception of transaction costs based on Oliver Williamson's (1975, 1979, 1981, 1985) work but never states a discrete definition. Thus, the literature on transaction costs and international cooperation tends to transfer the concept of transaction costs from new institutional economics without explicitly adapting a definition to the international relations context.

In practice, work on transaction costs in international relations relies on proxies and indirect measures, focusing on "dimensions such as the number of actors, the resources at the disposal of each, the extent of their specialization, the transparency of their intentions, and the security of their property rights" (Moravcsik 1999:301). Barbara Koremenos and her colleagues (2001:782) have used such proxy measures as number of actors and uncertainty "because they are more readily observable." Weber (1997:331–333) identifies uncertainty, asset specificity, and heterogeneity of actors as measures for factors that determine the magnitude of transaction costs relevant to international security arrangements. In her subsequent book, Weber (2000:25, 115) adds technological development as a fourth factor, although she finds it empirically less significant. She measures uncertainty by looking at the number of great powers (reasoning that more great powers produce greater opportunity for opportunistic defection from security arrangements) and clarity of signals (that is, adherence to international agreements with consistent adherence producing clearer signals and reducing uncertainty about a state's reliability). Asset specificity was determined by the extent to which security arrangements require investments in "highly trained men, specialized equipment, or specific sites that states otherwise would not invest in or could not readily shift to" (Weber 1997:333). And heterogeneity of states was assessed in terms of the "religious, language, cultural and political backgrounds of countries" (Weber 1997:333).

Except for the number of actors, these measures are difficult to operationalize precisely and constitute only indirect indicators of transaction costs. A further problem, noted by Richard Sherman and Scott Solomon (2001:18), is that transaction costs are "observable only after the fact." However, if the concern is with the accuracy of states' forecasting of such costs, it is really states' perceptions of transaction costs before the fact that matter. As Lake (1999:42–43) puts it, "nonetheless, it remains the case that the variables [pertaining to transaction costs] are probability distributions and it is the beliefs of the polities about the variables rather than the variables themselves that matter." But measuring states' perceptions of transaction costs—particularly of future transaction costs—is very challenging. (For an attempt to measure perceptions concerning transaction costs in a domestic setting, see Lubell 1999.)

Given these difficulties, one might wonder whether the effort to measure perceptions regarding transaction costs is necessary. Lake (1999:42–43) has
argued that it is not because states assess transaction costs accurately and, as a result, perceived and actual costs (including prospective estimates) should correspond to actual transaction costs. He writes, “in principle, I cannot think of any reason why the beliefs of polities about the variables discussed below would be systematically biased; although polities may possess incorrect beliefs in any instance, there is no reason that they should be consistently wrong or always wrong in the same direction.” But because states do misjudge future transaction costs at least on occasion, as demonstrated by the case of CoCom’s disbanding and replacement, and such misjudgments, as described in what follows, can have significant theoretical implications, we should not be comfortable accepting Lake’s assumption. There is a need to explore the implications of relaxing it.

The ad hoc, indirect, *ex post* nature of conventional approaches to measuring transaction costs in the international relations literature is not conducive to consideration or empirical analysis of the implications of states’ capacity to accurately anticipate the transaction costs of regime creation or replacement. However, given the shakiness of the assumption regarding accurate forecasting, it seems worthwhile to examine the implications of treating states’ ability to anticipate transaction costs as a variable.

**Hypotheses Regarding Transaction Cost Estimation and Regime Replacement**

What, then, might be the consequences of incorporating states’ capacity to accurately anticipate transaction costs—called here transaction cost estimation—for theories of regime persistence? If states are consistently able to forecast transaction costs with perfect accuracy, then the variable would drop out, having no effect on the causal relationship between transaction costs and regime persistence. If, however, states cannot do so, then there are a number of different ways this effect could manifest itself. States might systematically overestimate costs, they might consistently underestimate them, they might over- or underestimate costs depending on other factors, or their estimates might vary more or less randomly. States might also learn to become increasingly more accurate in their projections of *ex ante* transaction costs. Each of these has different implications for whether existing regimes are maintained after the conditions prevailing at their establishment have changed.

The above observations suggest hypotheses about the likelihood of states deciding to replace existing regimes. But this information alone tells us little about the overall rate of regime creation apart from replacements of existing regimes. Since the distinction between theoretical explanations may lie as much in their predictions regarding the rates of regime creation as in predictions about regime persistence, it is worth considering benefit as well as cost estimation. Moreover, since a key benefit of regimes according to the theories under consideration is their cost-reducing quality, benefit estimation is itself arguably encompassed by transaction cost estimation. A focus on states’ capacity to accurately forecast costs also implies consideration of their capacity to correctly estimate the benefits of a prospective regime in terms of provision of information and transaction cost reduction. All other things being equal, if states systematically underestimate the transaction cost reduction to be achieved by a possible regime, they will be less likely to establish it. If states systematically overestimate such benefits, they will more likely establish a regime. Combined with the previous observations about state estimates of *ex ante* costs, a series of hypotheses about both regime establishment and persistence can be generated. Below, each alternative posed above concerning the effects of over- and underestimation of transaction costs is considered in turn. These hypotheses hold all other factors—such as extent of dissatisfaction with the existing regime, power differentials within regimes, problem and situation structure—constant.
Systematic Overestimation of Ex Ante Costs

If states systematically overestimate the transaction costs of replacing an existing regime, the effect of regime persistence is likely to closely resemble that predicted by neoliberalism. We should see high regime persistence or stickiness. Whether this process leads to an overall lower rate of regime creation will depend on if states also systematically overestimate the transaction cost savings of prospective regimes. If they tend to similarly overestimate both the benefits (transaction cost reduction) and the costs of regimes, then the rate of regime creation should correspond to that predicted by neoliberalism: significant new regime creation and little elimination or replacement of existing regimes. If states consistently overestimate the difficulty of establishing regimes, while underestimating in advance their benefits, then the expected result will be little regime establishment in the first place, but (assuming the benefits of reduced transaction costs were recognized after the fact) high persistence and low turnover in regimes. Stated more formally:

H1: TC overestimation → high regime persistence
H1a: TC overestimation + BEN overestimation → moderate regime establishment/high persistence
H1b: TC overestimation + accurate BEN estimation → moderate/low regime establishment/high persistence
H1c: TC overestimation + BEN underestimation → low regime establishment/high persistence

TC = expected ex ante transaction costs of regime establishment
BEN = expected benefits (information provision, transaction cost reduction) of regime once established

Hypothesis 1a yields about the same empirical predictions as neoliberalism in terms of regime establishment and stickiness. However, the causal theory yielding the prediction differs. To the best of the author’s knowledge, Hypotheses 1b and 1c do not correspond to established theoretical frameworks.

Systematic Underestimation of Ex Ante Costs

If states systematically underestimate the transaction costs of replacing an existing regime, the effect on regime persistence is likely to closely resemble that predicted by realism. We should see low regime persistence, or “stickiness.” States will not be reluctant to abandon existing regimes because the costs of replacing them are expected to be low. However, as long as states expect benefits (provision of information, transaction cost reduction) from regimes, there should also be a higher rate of attempts to establish new regimes than realism would predict, as states would not understand the difficulties involved.

H2: TC underestimation → low regime persistence
H2a: TC underestimation + BEN overestimation → high regime establishment/low persistence
H2b: TC underestimation + accurate BEN estimation → moderate regime establishment/low persistence
H2c: TC underestimation + BEN underestimation → low regime establishment/low persistence

TC = expected ex ante transaction costs of regime establishment
BEN = expected benefits (information provision, transaction cost reduction) of regime once established
Hypothesis 2c corresponds to the predictions of neorealism, while Hypotheses 2a and 2b might correspond to versions of realism that see a greater role for institutions such as hegemonic stability theory (Krasner 1976; Keohane 1980) or neoclassical realism (Brooks 1997). Liberal intergovernmentalist theory would predict variation in rates of both regime establishment and persistence but such variation should correlate more closely with domestic and transnational political alignments than with states’ capacity to forecast the costs and benefits of regimes. Thus, the hypotheses outlined in this section constitute an alternative explanation to liberal intergovernmentalism for variation in birth and death rates of the population of international organizations.

**Factors Affecting Accuracy of Transaction Cost Estimation**

The above stated hypotheses are highly oversimplified. It is much more plausible that the accuracy of states’ estimates of transaction costs will vary in accordance with some other factors rather than be consistently high or low. What factors might affect states’ ability to accurately estimate transaction costs? While transaction costs are in part a function of bounded rationality, states’ capacity to accurately anticipate them should also be expected to vary with the factors that produce such boundedness or with other limitations on rational decision making, such as those growing out of cognition, time pressures, motivated bias, and whether the regime decision is seen by decision makers as taking place within a domain of gains or losses (Goldgeier 1997). However, these are characteristics of individual psychological processes, while state decision on matters such as regime creation and maintenance involve many individuals operating within organizational frameworks. Thus, the accuracy of states’ estimates of transaction costs might also be reduced by small group and organizational dynamics such as groupthink, organizational process, bureaucratic politics, or cultural dysfunction or pathology (Janis 1972; Allison and Zelikow 1999; Barnett and Finnemore 1999). To the extent that Moravcsik is correct that transaction costs are a function of the involvement of societal interest groups, misestimation of transaction costs could also be a result of political pressure or misjudgment of the relative strengths of different political interests.

In general, one would expect states to be more likely to overestimate the transaction costs of establishing or replacing a regime in periods during which recent negotiations among relevant states (those expected to participate in the regime) have been and continue to be difficult or in which ongoing conflict has been pervasive. The same would be true when the regime pertains to an issue area that has been recently characterized by widespread conflict. Conversely, one would expect that states would be more likely to underestimate such transaction costs during periods of dramatic improvement in relations among relevant states. This logic points to a prediction that states in the early post-Cold-War period would be more likely to underestimate the transaction costs of establishing new regimes like the Wassenaar Arrangement, whereas states on opposite sides of the East–West divide would have been more likely to overestimate the difficulty in establishing regimes in general in the early 1960s. Relatedly, it is plausible to hypothesize that trust would be more likely to lead to underestimation of transaction costs of regime creation or replacement and distrust to overestimation. For an alternative view that sees trust as a means of reducing transaction costs, see Margaret Levi (1999). Moreover, it is possible that other factors cause estimation errors or that errors in estimation of transaction costs are essentially random.

**Learning**

Aside from varying according to level of conflict, trust, cognitive and organizational capacity, and so forth, state transaction cost estimation might also change over time.
If states consistently underestimate ex ante costs, they will likely observe over time that the actual costs are routinely higher than they expected, causing them to update their expectations. Learning may be more complicated when states overestimate costs because correcting the error will require repeated regime creation in order for them to realize that the costs of creating the regimes is lower than initially expected. If states overestimate startup costs, they may not actually create regimes frequently or regularly enough to recognize the disparity. Thus, states should generally be quicker to correct underestimation than overestimation.

Transaction Cost Estimation and “À La Carte Multilateralism”

The approach suggested here has implications for contemporary American foreign policy and international order since the events of September 11, 2001. For example, the Bush administration’s policy of ad hoc multilateralism and multinational (rather than multilateral) coalitions of the willing has been premised on an implicit assumption regarding the transaction costs necessary for organizing ad hoc coalitions (and the low benefits of multilateralism). As Fareed Zakaria (2003:32) has pointed out, ad hoc multilateralism “would require America to build new alliances and arrangements every time it faced a crisis.” If the administration’s belief that these transaction costs are low is mistaken, the implications for US foreign policy and international order are unsettling. It may be difficult to reconstruct the institutions that have been sidelined and strained by recent diplomatic failures (Ikenberry 2001).

Conversely, a preference for ad hoc coalitions over formal multilateral institutions may reflect underestimation of the benefits of multilateralism. General Wesley Clark (2002), Supreme Allied Commander of NATO during the Kosovo campaign, has argued that such an error underlay the bypassing of NATO by the United States during the American-led war in Afghanistan. Calling the US decision to rely on an ad hoc coalition “an unfortunate misreading of the lessons of the Kosovo campaign” (Clark 2002:xxviii), he asks:

Could we not have achieved greater traction with [potential allies in the war on terrorism] through reliance on a more formalized structure for consultation and even some decision making?

Of course, consulting and working decisions closely with allies is difficult, time-consuming, and frustrating. . . . But those who abjure the effort may have underestimated the benefits, for allies will provide a crucial ingredient to long-term American success, especially in this campaign. (Clark 2002:xxx)

Alternatively, if the transaction costs of assembling global “sheriff’s posses” (Haass 1997) are indeed low, then a US grand strategy of cooperative security (Posen and Ross 1996–1997), the Clinton administration’s early policy of “assertive multilateralism,” or Clark’s reliance on formal institutions may unnecessarily sacrifice American freedom of action based in part on inaccurate estimation of transaction costs. But between cooperative security advocates and proponents of à la carte multilateralism, one group’s estimates of the transaction costs of organizing cooperation are wrong.

Lake (1999) argues that since the end of the Cold War, the United States, possessing predominant power, has opted for ad hoc coalitions rather than either outright unilateralism or more binding security relationships as a way of balancing joint production economies for provision of security, costs of opportunism, and governance costs. According to Lake, the combination of low costs of opportunism and low governance costs that rise rapidly with increasingly hierarchical arrangements produces a preference for ad hoc coalitions whether joint production economies for providing security are high (1991 Persian Gulf War) or low (Somalia). These conditions also characterize the post-September 11 interventions
into Afghanistan and Iraq, with joint production economies larger for the latter. The security relationships adopted in the post-September 11 cases have been more anarchical than the cases in Lake’s study but are consistent with the overall logic of his analysis. However, Lake (1999:262) further argues that reliance on ad hoc coalitions “short circuits the balancing processes expected by neorealist pessimists” by reassuring other states that American power is constrained and does not threaten them. Recent US foreign policy appears to be testing this reassurance.

Organizing ad hoc coalitions from scratch to suit each problem or crisis could prove very costly in terms of the diplomatic effort required to establish such arrangements, the military and economic costs of securing other states’ participation, and the reduced legitimacy of American foreign policy. Moreover, shedding the constraints of established multilateral institutions in favor of ad hoc coalitions increases the likelihood that other states, perceiving American power as less constrained and more threatening, will balance against the United States (Walt 1987; Mastanduno 1997; Ikenberry 2001). Such an approach would also be expected to degrade existing multilateral institutions as they are bypassed in favor of more flexible coalitions and sheriff’s posses. Should the costs be greater than expected, it would be exceedingly difficult to rebuild the network of international institutions developed since World War II. The recent record of the war in Iraq suggests that the Bush administration apparently underestimated the difficulty of securing the participation of Turkey in the coalition and of gaining UN Security Council authorization. These facts, coupled with an apparent further miscalculation of the costs of establishing and maintaining post-war security and of post-war nation-building, lend anecdotal support to the suspicion that advocates of reliance on coalitions of the willing underestimate the costs of such a policy. If this should turn out to be the case, inaccurate estimates of the transaction costs of replacing existing security institutions or of bypassing them in favor of ad hoc substitutes could have serious implications for the evolving shape of the post-September-11 international order.

A Transaction Cost Estimation Research Agenda

Existing theories of the role of transaction costs in the creation and persistence of international regimes generally assume that states accurately judge the expected costs of creating or replacing regimes. As the case of CoCom’s replacement with the Wassenaar Arrangement illustrates, this assumption is problematic. This essay has proposed hypotheses regarding states’ capacity to estimate transaction costs for creating and replacing regimes. Further research should address the extent to which these hypotheses explain variations in regime creation and persistence relative to alternative theoretical frameworks. Tests of the hypotheses presented earlier should take into account alternative explanations for institutional persistence found in the literature. In addition to Keohane and Moravcsik’s theories, these could include realist approaches that set a significant role for institutions such as hegemonic stability theory (Krasner 1976; Keohane 1980), Joseph Grieco’s (1995) voice opportunities thesis, and postclassical realism (Brooks 1997). Other possible explanations are those involving “normative fit” (Finnemore 1996:161; Florini 1996; Finnemore and Sikkink 1998), congruence with world culture (Meyer et al. 1997), embeddedness within a security community (Cupitt and Grillot 1997; Adler and Barnett 1998), and path dependence (Pierson 2000).

Normative fit and world culture arguments hold that institutions are selected for their conformity to prevailing normative and cultural standards. Institutions that are consistent with such standards should be more durable than those that are not. This proposition represents an alternative hypothesis to transaction cost analysis. Of course, another possibility is that transaction costs might be a function, in part, of normative fit, with the establishment or maintenance of institutions that cut against
prevailing norms incurring higher transaction costs. However, while it is possible that such factors can affect states' estimations of transaction costs of regimes that are or are not consistent with prevailing standards, the implications, if any, for transaction cost estimation are unclear. Therefore, these approaches are presented here as alternative explanations.

Richard Cupitt and Suzette Grillot (1997) argue that expanded multilateral export control cooperation in the late 1980s and early 1990s corresponded best to a set of hypotheses that explain member-state behavior as a function of CoCom and Wassenaar's embeddedness in a liberal security community. Security communities are groups of states that share common identity and dependable expectations of peaceful change (Deutsch 1957; Adler and Barnett 1998). Although Cupitt and Grillot's focus is cooperation, not institutional adaptation or replacement per se, their analysis can be read as suggesting a variant of the normative fit argument positing that cooperation through institutions embedded in security communities will be more robust than those outside or straddling such communities. The cause of institutional stickiness in this case would be shared identity and norms rather than transaction cost calculations. An obvious objection is that CoCom, though embedded in the Western security community, was in fact disbanded and replaced, apparently contradicting the hypothesis proposed here. But it could be contended that, without the framework of a security community, CoCom might well have been disbanded without a replacement. Therefore, it may be worth considering if institutional durability is affected by whether or not institutionalized cooperation is embedded within a security community.

Path dependence arguments hold that regimes become more durable over time as they are “locked in” through historically contingent processes that generate increasing returns and structure choices over time (Pierson 2000; Ikenberry 2001). The logic of path dependence is that choices that were available at one stage become unavailable later on as positive feedback reinforces the trajectory of past choices. In such circumstances, institutions are durable not because of the anticipated high transaction costs of change or their efficiency in reducing transaction costs but because actors’ preferences and options are historically constrained. Paul Pierson (1996) argues that the mechanisms by which transaction cost economics predicts how efficient outcomes will be generated are weak under the conditions that produce path dependency in political institutions. Thus, path dependence represents a further alternative explanation to transaction cost estimation for institutional durability.

Future research should also attempt to assess the extent and severity of misestimation of transaction costs and the implications for regime creation and persistence. And, finally, transaction cost estimation needs to be treated as a dependent variable in research that seeks to identify factors promoting or inhibiting states' accurate forecasting and evaluation of the transaction costs of cooperation.

Such future research, however, faces imposing obstacles. The need for clearer definition and measurement of transaction costs hampers progress in this area. Just as definitions and operationalizations of transaction costs suited to the realm of economics translate poorly to studies of international regimes, so it is likely that different specifications of the concept will vary across different settings and problems in international relations research. While all such conceptions will have to do with the costs of negotiating and implementing agreements, their manifestations will vary across empirical settings. For example, in export control settings, determining and revising the content of control lists involves significant transaction costs. Such an issue would not be relevant in other contexts. Rather than proposing a single, all-purpose definition, researchers should carefully tailor specific definitions and measurement categories to their particular empirical and theoretical foci. These strategies need to take into account decision makers' perceptions and expectations regarding transaction costs—that is, not simply take objective
measures of variables such as number of actors, specificity of assets, and so forth, but assess how decision makers perceive these variables. In contemporary cases, interviews with policymakers can provide a valuable source of information. Since interview subjects may retroactively alter their originally mistaken estimates, such responses should be checked against other sources for consistency. In historical cases, archival sources and contemporaneous press reports and public statements can be consulted for evidence of decision makers’ estimations of transaction costs. The basic point is that, in addition to measuring transaction costs, researchers must develop methods for assessing perceptions of those costs.

Beyond definitional and measurement problems, the identification of a universe of relevant cases is a considerable challenge. It would require identifying not only further cases (like CoCom-Wassenaar) of regime replacement, but also cases where regimes were not replaced due to anticipated high transaction costs. One can conceive of two possible approaches to this problem. The first, which seems impractical, is to identify the entire universe of cases in which existing regimes were either replaced or maintained due to anticipated high transaction costs. It is not clear that such an approach is possible. Moreover, there is no clear method available for identifying, in particular, cases of nonreplacement due to anticipated high transaction costs. Page Fortna’s (2002) work on peacekeeping, in which she compares outcomes in conflicts to which peacekeeping missions were sent to those to which no missions were sent, is an example of a sophisticated way of tackling a similar problem in a different setting. However, the availability of data covering all civil wars, with and without peacekeeping, makes such analysis feasible. The relevant baseline for a transaction cost estimation analysis would be all regimes for which regime replacement was considered, including those for which it was rejected.

Absent a comprehensive data set of such cases, the possibilities for systematic quantitative analysis of transaction cost estimation are quite limited. Indeed, comparative case studies seem a more promising approach. Data gathering efforts such as the Correlates of War 2 project’s updated intergovernmental organizations data set and the International Regimes Database (IRD) may eventually provide a foundation for quantitative analysis of transaction cost estimation (Pevehouse, Nordstrom, and Warnke url; Breitmeier et al. 1996). However, the IRD project demonstrates the difficulty in conducting comprehensive surveys of existing regimes for a specific Time period or issue area. After eight years of work by a large team of researchers, data for thirty regimes, selected with an emphasis on international environmental regimes, was not yet complete (Mitchell 2002:58). It might be feasible to conduct a survey focused on transaction cost estimation and regime replacement or nonreplacement by gathering less information about a larger number of (if possible, all) regimes in existence during a specific time period.6 However, the data requirements to support a full quantitative analysis of transaction cost estimation (including learning effects over time, which a synchronic study would miss) seem prohibitive largely due to the problem of including cases of nonreplacement. Making a related point, Lake (1999:7) has noted that “we can observe the relationship chosen by a polity, but we cannot observe the relationships not chosen and the costs and benefits associated with these counterfactuals . . . . Yet these ‘unobservables’ are central to the theory and . . . . structure the choice of relations by polities” [italics in original].

A more reasonable alternative, then, is to identify a limited number of cases and conduct rigorous process-tracing and comparative case studies of them to determine the role played by anticipated and actual transaction costs in replacing an existing regime. For such an approach, the literature on legal succession between international organizations offers a natural starting place though it

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6This possibility was suggested by several anonymous reviewers.
overlooks informal nontreaty-based regimes like CoCom and the Wassenaar Arrangement (Myers 1993; Amerasinghe 1996). A case study approach is also warranted due to the unresolved difficulties of operationalizing and measuring transaction costs in the context of international regimes. The best existing work in this area relies on qualitative measures, including proxies, in the context of small N case study research (for example, Lake 1999; Weber 2000). Thus, case study research, despite its limitations, seems the most promising approach given available data and measurement techniques for evaluating the significance of transaction cost estimation for the persistence or replacement of international regimes.

Since the hypotheses presented above, generated by loosening assumptions concerning accurate transaction cost estimation in existing models can lead to predictions equivalent to those of other theoretical models, evidence taken as confirmation of, for example, neorealist expectations may actually indicate the interaction of inaccurate transaction cost estimation with another (that is, neoliberal) model (as in Hypothesis 2c). The relaxation of the implicit assumption of accurate transaction cost estimation in the neoliberal model actually reverses the predictions of neoliberalism regarding regime creation and robustness. Thus, observations of levels of regime creation and persistence consistent with, for instance, realist predictions cannot be taken as empirical support for realism without checks, possibly through process tracing, for the alternative explanation of imperfect transaction cost estimation.

Existing studies of the relationship between transaction costs and regime creation, duration, replacement, and form have advanced our understanding of the role of international institutions in promoting international cooperation. However, by assuming that states accurately anticipate transaction costs of regime creation and replacement, such studies oversimplify this relationship and overlook possible alternative mechanisms of regime creation and maintenance. Making transaction cost estimation an explicit factor in analysis of the relationship between transaction costs and regime persistence should contribute to an improved understanding of the role of international institutions in world politics.

References


