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**A “Single European Voice” in
International Standardization?
American Perceptions, European Realities**

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INTRODUCTION

Product standards are an increasingly prominent item on the transatlantic political agenda. While quantitative trade restrictions are less and less relevant in EU-U.S. trade relations, non-tariff barriers, such as product standards, have become the tool of choice for firms and policymakers determined to protect parochial commercial interests. As a result, divergent national product standards are now a frequent cause of conflict between Americans and Europeans. This applies both to mandatory (regulatory) as well as voluntary product standards.

Equally significant, but so far less widely noticed, are transatlantic quarrels over the setting of international product standards, such as the voluntary ISO system for environmental management standards (ISO 140001, see Roht-Arriaza 1995; Taylor 1998), or mandatory international food standards developed by the Codex Alimentarius Commission. This paper is exclusively concerned with the setting of international voluntary product standards. Such international voluntary product standards are written specifications that establish accepted practices, technical requirements or terminology for a particular product, service, or system that are not sanctioned by governmental authority. Instead, the decision over the adoption of a voluntary standard is left to the individual standards users (in most cases firms, but also governmental agencies or consumer organizations). Even though the adoption of such standards is voluntary, their exact technical shape has tremendous implications for the international competitiveness of firms since international standardization means that some firms have to bear switching costs.

The predominant number of voluntary standards—both on the national as well as the international level—are developed in highly institutionalized forums that bring together all stakeholders in a consensus-based process. The major international standards producers—the International Standardization Organization (ISO) and the International Electrotechnical Committee (IEC)—are international not-for-profit organizations. As international standards have gained in importance in recent years due to the globalization of industry, both the ISO and the IEC are becoming the focal point for a steadily rising number of transatlantic commercial conflicts. These conflicts are not confined to disagreements over the actual shape of new international product standards (i.e., their specific technical content). Perhaps more fundamentally, transatlantic conflicts over international product standards are rooted in deeply opposing visions of how the international standardization system—i.e., the institutions, processes and practices by which international standards are developed and disseminated—should be structured (see Büthe and Witte, forthcoming). One central feature of these transatlantic quarrels in the ISO and IEC

context are American claims that the EU somehow "dominates" the main international standardization institutions. Some of the major U.S. standardization organizations, as well as an increasing range of American firms, argue that ISO and IEC structures and processes work to the disadvantage of U.S. commercial interests. In particular, they identify at least two mechanisms through which Europeans effectively "control" ISO and IEC and "exclude" American stakeholders:

First, Americans claim that the European countries increasingly vote as a block in the ISO and the IEC. Even though both organizations are international non-profit organizations, their operating structure is modeled on the United Nations principle: both accept only one member organization per country, and each member organization has only one vote once a draft international standard comes up for the final confirmation procedure. U.S. standards interests assert that Europeans use their combined voting power to effectively impose their preferences on the rest of the world. Alleged European "block voting"—an issue hotly debated in other institutional contexts as well—has led American standards stakeholders to demand a fundamental restructuring of ISO and IEC voting mechanisms.

Second, American standards bodies and firms argue that the Europeans have managed to successfully "capture" the ISO and IEC through bilateral cooperation agreements that provide European regional standards bodies with preferential access to the international standardization process. The "Vienna Agreement" [between ISO and the Comité Européen de Normalisation (European Committee for Standardization, CEN)], and the "Dresden Agreement" (between the IEC and the Comité Européen de Normalisation en Électronique" the European Committee for Electrotechnical Standardization, CENELEC) have come under American attack, since they establish a close structural link between international and European standards projects. In fact, an American observer argues that the Vienna Agreement is essentially "... about achieving identical ISO and European standards through an

exclusive, cooperative, and symbiotic arrangement." This, he continues, supposedly serves parochial European objectives through "... the transmutation of European standards into international standards that regulate the global market" (Thomas 2000, p.4).

In sum, American standards interests presume that the members of the EU speak with a strong "single voice" in international standardization. The American National Standards Institute (ANSI) proclaims in the U.S. National Standards Strategy: "The European Union is aggressively and successfully promoting its technology and practices to other nations around the world through its own standards processes and through its national representation in the international standards activities. ... Emerging economies with the potential for explosive growth are looking to ISO and IEC for standards. In some sectors these standards do not reflect U.S. needs or practices. ... The exclusion of technology supporting the needs of the United States from international standards can be a significant detriment to U.S. competitiveness. The United States will lose market share as competitors work hard to shape standards to support their own technologies and methods." (ANSI 2000) Robert Mallett, a former deputy secretary of the U.S. Department of Commerce, complains that "... if we [the United States] do not set our minds to figuring out a way to counter the global strategies of competitive nations, we will not find our technology embedded in the standards of the future, and U.S. industry will be at a significant disadvantage." (Mallett 1998, p.63) Likewise, the Congressional Office of Technology Assessment (OTA), in a report to Congress, came to a similar conclusion already in 1992, urging U.S. legislators to proactively address international standards issues by improving U.S. influence in international standards competition (OTA 1992). Even some members of the U.S. private sector community, usually mindful of protecting their prerogatives vis-à-vis governmental influence and dedicated to keeping the involvement of government agencies in voluntary standardization to a minimum, have called upon the Administration to accord "... standard setting the

same degree of recognition and integration into national policy that has been the norm in Europe for some time" (Updegrave 2002).

This paper takes a closer look at these allegations. It finds that, in contrast to the arguments presented by U.S. firms and standards bodies, European coordination on international standards issues is much less extensive, and, in many cases, irrelevant or non-existent. The paper demonstrates that the most frequently voiced concerns—"block voting," the "capturing" of the ISO/IEC process, and "meddling" by the European Commission—have very little practical significance in ISO and IEC proceedings.

This, of course, raises two broader questions. First, how can we explain the inability (or unwillingness) of EU countries to better coordinate their international activities? This paper argues that the absence of a single European voice is the result of two interlocking factors: the slow progress on the "Europeanization" of corporate entities and the existence of intra-European competition between national and regional standards bodies. The second question relates to American motives. If, in fact, a single European voice is weak or even nonexistent, how then do we have to interpret consistent American complaints? In the conclusion, this paper suggests two factors that may help to explain this conundrum. First, some major American standards producers use the "Europe" card in order to deflect attention from their own shortcomings in enabling effective U.S. representation in ISO and IEC. Second, while a single European voice is not pervasive, there have been a number of high-profile cases that have sensitized American firms and standards producers to the increasing relevance of Europe as a major economic player in the international domain.

A PRIMER ON STANDARDS

While we rely on product standards for almost everything we do, very few people have a good understanding of how they are defined, let alone how they are developed. When thinking about standards, most people think of arcane technical specifications. Americans usually recall their last vacation tour across Europe—and the somewhat frustrating experience that, without adapters, hairdryers and other electronic equipment will not work. This ignorance towards standards and standardization mechanisms is not confined to the general public. Indeed, researchers have not paid sufficient attention to a subject that is absolutely critical for a comprehensive understanding of economic history and contemporary economic performance. Yet, interest in product standards has picked up in recent years for a variety of reasons.

First, divergent national product standards are now the most significant impediment to the further expansion of world trade,¹ especially among advanced industrialized economies that have successfully removed most quantitative restrictions on cross-border flows of goods and services.² For example, in 1998, standards and technical regulations were involved in transactions affecting the sale of U.S. exports to EU member states worth about \$150 billion. Divergent standards as well as convoluted conformity assessment rules have been estimated to impede the sale of U.S. goods and services worth approximately \$40 billion (Mallett 1998, p.63). As a result, divergent product standards and technical regulations figure more and more prominently in multilateral, as well as regional and bilateral, trade negotiations.³ The development of international product standards—most prominently in international nongovernmental institutions such as the ISO and its electrotechnical sister organization, the IEC—has taken center stage in efforts to facilitate global trade and investment.³

Second, it is now commonly accepted that product standards are an increasingly important component of a nation's industrial infrastructure. Ever since industry-wide standardization efforts were launched in Europe and the United States in the late nineteenth century, standards were known to make a significant contribution to a country's economic development and growth potential. Yet it is only in recent years, with the growing speed of technological innovation and the increasing relevance of so-called "network goods" that crucially depend on compatibility and interoperability standards, that economists have assigned standards a more critical role in fostering economic dynamism and growth (Katz and Shapiro 1994; Pfeiffer 1989; Shy 2001). Some researchers now consider product standards to be of even greater economic significance than patents (Blind, Grupp, and Jungmittag 1999). Consequently, national, as well as international, product standards are now generally believed to have a direct effect on a nation's economic performance and international competitiveness. It follows that the setting of international

standards is no longer considered to be a simple exercise in technical coordination and rationalization driven by scientific experts (as for example argued by Loya and Boli 1999). Instead, most observers agree that international standardization has strong distributional effects because of the existence of switching costs (Mattli and Buthe 2003). As a result, international standardization is inherently conflict-ridden.

Finally, regional and international efforts to set product standards have received growing attention due to their economic, political, and cultural implications. Product standards are not just transmitters of technical information. They also contain a wealth of information about a society's cultural predilections, such as a country's approach towards risk and risk management. The early European harmonization efforts in the standardization arena, for instance, were met with fierce resistance in almost all EU member states not only because European citizens felt that the Brussels bureaucracy was wasting its resources on endless negotiations over the shape of bananas, but also because citizens feared that the EU would impose a single design on all member states, thereby erasing cultural traditions and unique national identities. Similar arguments are employed in discussions over harmonization of international standardization in proceedings of the ISO or the World Trade Organization (WTO).

This is not the place to discuss the nature and "political economy" of product standards at any length. A few observations are, however, in order. Product standards are a fundamental cornerstone necessary for the proper functioning of markets by fulfilling numerous important roles. They play an instrumental role in creating unified national economies so that goods and services can be traded without barriers. As carriers of critical information, they significantly lower transaction costs and facilitate economic exchange. Furthermore, standards help to protect the health and safety of consumers by excluding potentially harmful products or production processes from the marketplace. Standards also smooth the progress of technology diffusion across firms and industries through a codification of technical information, enhancing the productivity, efficiency, and competitiveness of domestic firms. Finally, standards engender the compatibility of products, benefiting both consumers and producers by enabling them to plan into the future and to take advantage of network externalities.

Given the broad variety of functions that standards fulfill, it is perhaps not surprising that there is no commonly accepted one-sentence definition that could be used as a starting point for further analysis.⁵ It may be helpful, therefore, to briefly introduce a typology of standards functions to provide a sufficiently comprehensive perspective

Table 1 Functional Standards Typology and Examples (Adapted from David, 1987)	
Standard Type	Function/Goal
Compatibility/Interface Standards	Enable compatibility and facilitate development of large user networks (mobile phone networks, voltage outlet standards, etc.)
Minimum Quality/ Quality Discrimination Standards	Ensure minimum quality to protect consumers from hazardous risks (environmental, food safety, and voltage outlet standards, etc.)
Variety reduction standards	Minimize wasteful proliferation of minimally differentiated models (early stages of certain technologies)

on the concept. This paper develops a functional typology of product standards, building on the pioneering work of David (1987).

This functional typology contains three elements: compatibility and interface standards, minimum quality and quality discrimination standards, and variety reduction standards (see Table 1).⁶

The overwhelming majority of economists are focusing their studies on *compatibility and interface standards* (Cabral and Leite 1992; Church and Gandal 1993; David 1985; Farrell and Saloner 1986; Farrell and Saloner 1988; Gandal 1994; Gandal, Salant, and Waverman 2001; Katz and Shapiro 1986; Katz and Shapiro 1994; Matutes and Regibeau 1996; Pfeiffer 1989; Schmidt and Werle 1994; Shy 2001). The interest of economists in compatibility and interoperability standards is rooted in the peculiar characteristics of markets for network goods as well as the specific roles compatibility standards play in such markets. Markets for network goods are providing economists with interesting cases to study conceptual issues such as externalities,⁷ increasing returns to scale⁸ (Arthur 1984), imperfect competition, and innovation. As network products—specifically those in the information and communications arena—are becoming ever more significant, compatibility and interface standards become more important as well. Standardization is an important element in developing the full potential of network product markets.

One of the key goals of standardization has always been to assist customers in making informed buying decisions. Confusion in the marketplace is to the detriment of all. If customers cannot be sure about the level of quality of a certain product—if, in fact, they cannot be sure if a product meets their individual needs—market transactions are less likely to take place. This results in less trade, and potentially in the complete breakdown of the market. Consequently, the role of *minimum quality standards* in strengthening markets cannot be overemphasized. A recent study of food safety regulation in the United

States in the late nineteenth and early twentieth century clearly demonstrates their importance.⁹

Variety reduction standards may be put in place to limit the number of possible variants of a product or a process. Such reductions can lead to economies of scale, thereby stimulating economic growth. A majority of existing standards perform this variety reduction function. As Tassej writes, "variety reduction is no longer simply a matter of selecting certain physical dimensions of a product for standardization (such as the width between threads of a screw). Variety reduction is now commonly applied to non-physical attributes such as data formats and combined physical and functional attributes such as computer architectures and peripheral interfaces" (Tassej 1999).

It is important to emphasize that the individual components of this typology are not exclusive. A product standard may fulfill multiple functions at the same time. For example, a standard that facilitates the interoperability of a mobile phone network may also ensure its minimum quality. Furthermore, the function of a standard may change over time. Initially, a product standard may simply be designed to ensure a minimum level of quality—as was, for example, the reason behind the introduction of grades for petrol. As the product becomes established in the market, that same standard may also signal various product characteristics to customers. In sum, it is not likely that all standards will fall neatly into any one of the categories suggested above.

SETTING INTERNATIONAL STANDARDS

International standards are crucial to the further expansion and proper operation of the global economy. As companies continue to internationalize their activities, they increasingly look to international standards to serve their business needs.¹⁰ As indicated earlier, product standards can develop through a variety of mechanisms and processes. Standardization through institutionalized cooperation among standards stakeholders is the predominant form of product standardization, both at the national and international levels. The main international standardization organizations are the ISO and the IEC. The ISO and the IEC operate roughly according to the same rules and procedures. Since the ISO is much larger and more significant than the IEC, this study focuses exclusively on the former rather than the latter.

A Primer on the ISO

Over the past two decades, the ISO has undergone tremendous expansion. The number of standards published by ISO has nearly doubled and its budget and staff have increased significantly. Yet researchers have all but ignored the politics of international product standardization. Since international standardization is of great commercial relevance, firms and other stakeholders have a vested interest in influencing the shape of technical standards negotiated under ISO auspices. But how can stakeholders influence the technical shape of product standards developed in ISO committees? What resources do they need? What action strategies do they have in order to develop the international standardization process to suit their commercial needs? What roles do national standards organizations and government agencies have in this process?

In order to evaluate American claims with regard to European predominance in ISO work, it is important to develop a thorough understanding of how ISO standards are actually produced. ISO membership is organized along national lines.¹¹ However, the ISO is not an intergovernmental organization such as the United Nations and its specialized agencies. Instead, it is an international non-governmental organization. Consequently, it is not governments that are represented in the ISO, but national standards bodies. The nature of these national standards bodies varies greatly across countries, but in most OECD countries they are peak-level non-profit or for-profit standardization organizations, in some cases mandated by their government to represent national standardization interests in the international realm.¹² Currently, the ISO has 94 voting members. The work of the ISO is organized in 187 technical committees, 532 subcommittees and 2,105 working groups. The German, American,

and Japanese standards bodies are the most active in the ISO. Given their combined market power, they are arguably also the most influential. This influence is reflected in the fact that the German, American and Japanese standards bodies host 68 of the 187 technical committees of the ISO (ISO 2003, p.184). Germany, the United States, and Japan also provide a substantial portion of ISO's core institutional budget. The regional standardization organizations (the Comité Européen de Normalisation (CEN), the Comité Européen de Normalisation Électronique (CENELEC), and the European Telecommunications Standards Institute (ETSI))¹³ in Europe have cooperation agreements with ISO (see below). Regional standards organizations are not voting members, however, and therefore have no direct influence on ISO standardization.

The ISO Standardization Process

As noted above, ISO work is organized in decentralized technical committees and working groups. These committees are coordinated by the ISO central secretariat. However, they are hosted and administered by the national member bodies of ISO. For that reason, international standardization in the ISO context cannot be regarded as centralized. In fact, the ISO central secretariat has only very limited ability to directly influence the development of technical standards in ISO committees. The ISO standardization process features five stages¹⁴:

Figure 1: ISO Standardization Process

ISO Standardization: A Multi-Stage Process

Proposal Stage
Preparatory Stage
Committee Stage
Enquiry Stage
Approval Stage



During the *Proposal Stage*, firms officially express the need for a new standard to their national standards development body, which transmits that demand to the relevant technical committee or subcommittee in ISO. The proposal becomes an official work item of the ISO when a majority of the members of the committee vote in favor of its inclusion into the technical committee's work program, and when at least five members declare their willingness to actively work on the project.

During the next phase, the *Preparatory Stage*, the technical committee (or subcommittee) forms a working group that produces a working draft for the standard. This usually involves a clear definition of the standard's scope and a definition of the best technical solution to the problem under consideration. Once the working group is satisfied, it forwards a draft to the technical committee to start the "consensus-building" phase.

During that stage (called the *Committee Stage*), the draft forwarded by the working group is officially registered by the ISO central secretariat. It is distributed among technical committee members and comments are solicited. This process continues until consensus is reached. Note, however, that the ISO defines consensus simply as the absence of major objections by any participant to a proposal.

The fourth stage—the *Enquiry Stage*—entails another round of comments and suggestions among all ISO members for a period of five months. The document is approved as a final draft international standard if a two-thirds majority of the technical committee (or subcommittee) vote in favor of it, and not more than one quarter of the votes cast are against it. In case the draft is rejected, the document returns to the committee stage.

During the final two-month *Approval Stage*, the final draft international standard is circulated to all ISO member bodies for a final vote. Further technical comments on the draft are no longer taken into consideration, but are saved for future amendments or revisions of the standard. The standard is finally approved as an international

standard if a two-thirds majority of the technical committee (or subcommittee) vote in its favor and no more than one quarter of the total number of votes cast are no votes. Once a final draft standard has been approved, the final text is sent to the ISO central secretariat for publication as an ISO international standard. All international standards are reviewed on a regular basis, usually every five years. Changes to an existing standard are only discussed when a majority of the committee members agrees to initiate a review procedure.

Based on an analysis of the generic ISO process, five crucial factors influence the ability of stakeholders to impact ISO standards development:

1. Access to sufficient economic resources. Standards development in the ISO stretches over long periods of time. The average development time of a standard is two years. In some cases, the development process takes up to five years. A heavy emphasis is put on consultation during the decision-making process. Decisions are also not made exclusively on the committee level. Instead, all members get a chance to vote on (and thereby reject) a standard during the process. Only those stakeholders with access to sufficient economic resources to finance such a long-standing commitment will be able to successfully influence international standardization outcomes. This is a considerable challenge for many small and medium-sized companies, firms from the developing world, as well as for consumer interests.

2. Sufficient technical expertise. International standardization in the ISO is a technical process dominated by scientists and engineers. Only those stakeholders who have the necessary technical expertise can be expected to have a significant impact on international product standardization. A lack of experts and/or a lack of access to certain technologies will inhibit stakeholders' ability to make a difference.

3. Ability to shape the work program of a technical committee, subcommittee, or working group. The overwhelming part of the ISO standards develop-

ment process takes place in decentralized committees and working groups. Effective control of such a committee or working group implies control over the shape of a standard. Having a committee or working group hosted by the national standards body does not automatically imply effective control of the standardization process. However, it provides domestic firms (and other standards interests) with much better access to the process and helps them to set the agenda. The fact that technical committee hosts usually do not change once they are assigned to one country reinforces this dynamic.

4. Access to early and accurate information. ISO standards development uses procedures that involve several stages of devising technical specifications and taking decisions by consensus (and via a formal vote at the final stage). As a result, in order for firms to have an appreciable impact on the shape of ISO standards, they have to be involved in the development process as early as possible. In many ways, the preparatory stage—the development of a working draft that sketches the general technical specificities and the scope of the new standard—is already decisive. Later discussions in the working group, the technical committee, and among ISO member bodies are based on this early document that sets the general direction for the development of the product standard. Later changes to these very basic decisions made early in the process are increasingly difficult as the technical committees move through the process. This difficulty is due to the consensus-based decision-making principles that the international standardization organizations have mandated for all stages of standards development. It becomes successively difficult for firms who join later in the standards development process to reverse earlier decisions on which all the previous member of the technical committee agreed.

5. Effective representation of one single national voice. In order to effectively influence standardization outcomes, it is crucial for stakeholders to be able to organize a single national voice to project their interests into the international

domain. The ISO's membership is, as noted above, organized along national lines. Stakeholders can only participate in ISO work through national delegations (in the United States through Technical Advisory Groups, or TAG's) that are convened by the national standardization body. Firms themselves are not members of the ISO. National delegations are elected in "mirror committees" formed by the national standardization body (Eickhoff and Hartlieb 2002b). For each international standards committee, there exists a national mirror committee. Decision-making in the ISO is based on the principle of "one nation-one vote." As a result, domestic mechanisms facilitating the creation of a national single voice—despite the fact that there might be divergent economic interests at home as well—greatly improves the ability of firms to affect standardization outcomes.

Access to expertise and economic resources are two conditions critical to success in international standardization. Without sufficient financial and technical resources, stakeholders cannot expect to have any significant input in international standardization proceedings. The hosting of a technical committee by the national standards body can also be expected to have a strong effect on standardization outcomes. As noted above, when a national standards body hosts an ISO committee, subcommittee, or working groups, domestic stakeholders have enhanced access to the work process. This includes easier access to information; better coordination with committee secretariat; and lower costs for attending committee meetings. However, this is only true if another precondition is met, namely, that the national standards body is effective in disseminating information about new standards activities to national firms.

Moreover, more recent research suggests that the two last items on the list—access to early and accurate information and the ability to speak with a "single voice"—matter most in explaining outcomes in international product standardization in the ISO (Büthe and Witte forthcoming; Mattli and Büthe 2003). According to that interpretation,

access to economic resources as well as technical expertise, are seen as necessary, but not sufficient prerequisites for a stakeholders' success in ISO standardization. These studies suggest that the most critical variable explaining effective influence in international standardization is the specific shape of the domestic institutional structure for standardization within which a firm operates. Differences in domestic institutional structure (i.e., variation in the ways national standardization systems are organized), it is proposed, can explain the varying effectiveness of national firms and other stakeholders in influencing international standardization in the ISO. Therefore, the main hypothesis of these studies is the following: the more "complementary" the domestic institutional structure of a particular country is to ISO structures and practices, the more effective national firms will be in influencing the shape of standards negotiated in ISO committees.¹⁵ In other words, differences in fit between infrastructure in country A and the international infrastructure, and infrastructure in country B and the international infrastructure, should explain the varying degrees to which firms are successful or unsuccessful in influencing international standardization outcomes.

ASSESSING EUROPE'S "SINGLE VOICE" IN INTERNATIONAL STANDARDIZATION

The previous section highlighted the crucial elements of the ISO standardization process and demonstrated that stakeholders require various categories of resources to be effective in international standardization. Building on that analysis, this section will critically evaluate American allegations of European "domination" of international standardization in ISO and IEC.

Block Voting in ISO¹⁶

The analysis of the ISO standardization process has emphasized the significance of consensus procedures. However, the last two stages of the ISO standards development features two formal votes: a vote on the adoption of the draft international standard (DIS), and a vote on the final adoption of a technical specification as an ISO standard. As noted earlier, each national member has one vote. It follows that regional economic groupings such as the EU could potentially engage in "block voting." American firms and some U.S. policymakers have in fact argued for years that the EU is abusing this structural advantage to push through European technical preferences against American preferences.

An internal review of voting records conducted by the ISO Technical Management Board demonstrates, however, that these allegations cannot be corroborated by actual empirical facts (ISO-Council 2002). In order to be confirmed, a Draft International Standard (DIS) requires a two-thirds

majority of members of the technical committee that drafted the standard, and a 75 percent majority of all votes cast. Likewise, a two thirds majority of all committee members, and a rejection level of less than 25 percent of all votes cast is mandatory for a Final Draft International Standard (FDIS) to be confirmed at the Approval Stage. As a result, if in fact Europeans were able to impose their technical preferences on other countries, we should find a large number of objections, since all of ISO's current 94 members can vote in the voting stages. This, however, is clearly not the case. Voting data from 1998 to 2001 show that most standards are approved either without any votes against or with only a single vote against, at both the DIS and the FDIS stage.¹⁷ At the DIS stage, for which ISO collected data on the number of no votes from technical committee members, only 24.3 percent of the draft standards have been approved with more than one no vote (1998-2001 average). Of the final draft standards (which are the result of one more round of revisions to take account of the reasons submitted with no votes at the DIS), 58.6 percent have been

approved with no no votes at all, and only 0.24 percent have engendered enough objections to fail.¹⁸

What this indicates is that block voting in the ISO context does not appear to be a serious issue. In fact, in contrast to American complaints, the overwhelming number of international standards are accepted with large super-majorities. The norm seems to be widespread consensus rather than conflict. American representatives participating in this internal ISO review have acceded to the point that "block voting" is not a serious issue. At home, however, many standards organizations and firms continue to raise these allegations.

The Dresden Agreement

As noted above, CEN is not a voting member of the ISO. However, the organization maintains a significant working relationship with the ISO. The emergence of CEN as a major regional standardization organization—particularly after the introduction of the New Approach—presented a formidable challenge for the ISO. In essence, the most potent and active ISO members (i.e., the EU member states) had created a highly effective and successful regional platform for product standardization that threatened to undermine their commitment to international standardization. Scarce resources were therefore rerouted to European standardization projects, and there was a considerable amount of duplication of work in the European and international standardization forums. For that reason, the European and international standards bodies decided to negotiate bilateral cooperation agreements.¹⁹

In the case of ISO and CEN, the so-called "Vienna Agreement" (reprinted in ANSI (1996)), Annex 3) was signed in 1991. The agreement has been characterized as a "... complex, compelling microcosm of the global political economy; a pell-mell of industrial one-upmanship and transatlantic trade sensitivities on the one hand, and common sense on the other" (Chapman 2001). In the agreement, CEN recognizes the primacy of international standards, while the ISO confirms the

right of European and national standards bodies to develop their own standards in case there are exceptional needs. The agreement features two simple cooperation procedures: the ISO takes the lead in the development of a new work item, and CEN (instead of launching a process of its own) simply adopts the international standard through parallel voting. Or CEN takes the lead in the development of a new work item, and the ISO may adopt the CEN-developed standard through a parallel voting procedure. Note that both CEN and the ISO are not obligated to adopt a standard developed under the leadership of the other. In both scenarios, the relevant rules of the ISO and CEN for standards development apply. Most importantly, that means that when standards are developed under CEN-lead, non-European interests are excluded from the development process (except for four observers appointed through ISO). Generally, however, putting work items under the ISO-lead is the preferred approach.

Over the past decade, the Vienna Agreement has come under tremendous fire, primarily from American observers.²⁰ For example, Jim Thomas, CEO of ASTM International, complained that the agreement was part of an effort to "transmute" European standards into international standards. For him and other U.S. commentators, the agreement appears an "exclusive, cooperative, symbiotic arrangement" that demonstrates Geneva's bias in favor of European standards interests" (Thomas 2000). The Japanese delegation to ISO also disparaged the agreement as "not transparent," "lacking in openness," "difficult to understand," and most importantly, "not impartial" (ISO-Japanese-Delegation 2000).²¹ As a result of the Japanese and American criticism, the implementation of the agreement was newly regulated in 2000. However, the basic substance of the agreement was not changed.²²

It is important, however, to put the Vienna Agreement into broader perspective: in 1998, the total number of active work items in the ISO was 6,431. The number of work items proceeding under the Vienna Agreement amounted to 1,054. The work items under ISO-lead amounted to 756.

Those under CEN-lead amounted to 298. As a result, as noted also by ANSI, at the time, less than 5 percent of all active work items in the ISO were under CEN-lead. More than 83 percent of all active ISO work items are not affected at all by the Vienna Agreement (ANSI 1998, p.12). Since then, these numbers have not changed in any significant way.

Yet despite these obvious numbers, there still is a lively debate on whether or not the Vienna Agreement provides European standards interests with privileged access to ISO standardization procedures. Given the comparatively small number of standards developed under CEN-lead, it seems reasonable to assume, however, that the European influence on ISO work is not as large as critics suggest.²³

WHERE IS EUROPE'S "SINGLE VOICE" IN INTERNATIONAL STANDARDIZATION? ALTERNATIVE EXPLANATIONS

The main conclusion from the analysis presented in the previous section is that there is no European single voice in ISO standardization. In fact, there seems to be fairly little European coordination on international standardization matters altogether. Representation in the ISO remains firmly in the hands of national standards bodies. The survey of voting records shows that there is no European block voting. And, in general, European-level coordination on international standards issues is perceived as deficient. The European Commission itself argues that the European standardization bodies so far have not developed into very effective platforms for Europeans to formulate a European "single voice" in ISO standardization affairs.²⁴

How can we explain this inability (or unwillingness) of EU members to better coordinate their international activities in the standardization domain? This paper does not provide the scope for a full analysis of this issue. Instead, the paper seeks to highlight some of the most pertinent factors that may explain the lack of a European single voice in international standardization matters in order to lay the groundwork for further empirical analysis. In particular, this paper highlights two factors: 1) slow progress in the "Europeanization" of corporate entities; and 2) intra-European competition among standards bodies for resources.

The Lack of a "Corporate Europe"

Firms have the strongest interest in a healthy and functioning product standards infrastructure. Large firms cover the bulk of standardization expenditures and are the most active in standardization proceedings. Arguably, because of their strong financial commitment, they usually also effectively control the national standardization bodies. Consumer interests, trade unions, and also small and medium-sized enterprises are less significant players in standardization (Büthe and Witte forthcoming, chapter 2). In the past, European firms have successfully used their national standards bodies to advance their commercial interests. As European economic integration proceeds, one should expect that European corporations with a European (rather than German, French, or Italian) perspective on standardization would emerge. Such European firms should be interested in European coordination on standards matters and in working toward a truly single European voice in international standardization to effectively project their power into emerging markets.

The main problem with this argument is that the Europeanization of corporate structures is not as far advanced in the EU as many would expect. European integration has undoubtedly put much pressure on firms to restructure and to adjust to European (rather than national) realities. In combination with the increasing globalization of corporate activities, Europeanization has forced companies to become more efficient. Yet there are only very few industries in which a true Europeanization of firms has been set in motion. Neither the European market forces nor the emergence of a European political system have triggered the reorganization of corporate organization on the European level.

European Monetary Union (EMU) may lead to future changes. In the meantime, however, "Europe's industrial consolidation shows all the complexity and ambiguity that characterizes its political integration" (Calleo 2001, p.231). Why is this the case? Most importantly, the various national markets in the EU have not grown homogenous. In other words, individual preferences and economic structures remain idiosyncratic.²⁵ As long as firms remain anchored in their national markets rather than the European market, they will have only a limited interest in investing in more systematic European coordination on international standards issues.

Competition among Standards Bodies in the EU

For effective coordination on ISO standards issues to improve, the national standards bodies would have to agree to share information and resources with the regional standards bodies (CEN, CENELEC, and ETSI). Also, the regional standards bodies would have to be put in a position to effectively coordinate a common European position on international standards issues. In order for them to play that role effectively, they would need adequate financial resources.

Financial resources for the European regional standards organizations are provided by the

European Commission, as well as the constituent members of the regional bodies (the national standards bodies). From the perspective of national member bodies, strengthening the European regional standardization organizations is not necessarily a rational decision. Increased financial support for the regional bodies would almost certainly result in less funding for them. Also, transferring funds as well as conveying decision-making power to the European level would most likely result in a slowly creeping yet continuously progressing marginalization of national standards bodies. From the perspective of national standards bodies—in many cases, organizations with a sizeable budget and staff—this is certainly not an attractive option.

Such competition for funding and influence is already noticeable in the allocation of European funds for third-country assistance programs in the standardization arena. For example, since 1989 the EU has funded extensive programs for the central and eastern European countries to transform and modernize their national standardization infrastructures. The EU is entertaining similar programs for countries in Southeast Asia (most notably China and Vietnam), as well as in Latin America.²⁶ The consulting programs funded by the EU are executed primarily by the national standardization bodies of EU member states as well as CEN and CENELEC. Since 1990, CEN alone has executed programs worth approximately €37 million as part of the PHARE (Poland and Hungary Assistance for the Restructuring of the Economy) program. Under the CARDS (Community Assistance to Reconstruction, Development and Stability in the Balkans) initiative, Turkey has received programs worth €12 million for the reform of its national standardization infrastructure.²⁷ In this context, standards officials from CEN/CENELEC and various national standards bodies have repeatedly confirmed that there is open competition between them over the allocation of funds. During an interview, one CEN official complained that national member bodies were dominating the European market for third country assistance, shutting out the European standards organizations despite their superior qualifications.²⁸

One reason why European coordination on international standards issues is rather limited is competition between national standards bodies and the regional standards bodies. The national standards bodies fear that further empowerment of CEN, CENELEC, and ETSI will ultimately lead to their demise. Without further capacity building at the European level (including better funding and more authority in coordinating a common European approach to standardization), a single European voice in international standardization is unlikely to emerge.

CONCLUSION

The study of the determinants and dynamics of international standardization in highly institutionalized fora such as the ISO is severely underdeveloped. This paper seeks to make a modest contribution to the emerging literature on the political economy of international standardization, since International standardization offers a largely unexplored and very promising arena for social science research.

Specifically, the paper explores the effects of European economic integration on international standardization. American standards interests believe that Europe acts with a strong "single voice" in international standardization, voting "en bloc" in ISO standards committees, and that they have gained preferential access and treatment in ISO structures through the conclusion of the Vienna Agreement. These claims cannot be corroborated by actual empirical data. The survey of ISO voting records has shown that block voting is not a serious issue. The analysis of the implications of the Vienna Agreement has shown that it is of very little practical significance for ISO proceedings. This paper has further advanced two hypotheses on why the Europeans are unable to speak with a single voice. The first hypothesis focuses on the continued lack of truly "European" firms. The second hypothesis focuses on competition for funds and influence between the national and regional standardization organizations in the EU.

The question then arises, if in fact Europe's single voice is weak or even non-existent, how should we interpret consistent American complaints? Although this paper cannot deal with that question in any sufficient detail, two observations should be noted that are relevant in this context. First, some major American standards producers appear to use the "Europe" card in order to deflect from their own shortcomings in enabling effective U.S. representation in ISO and IEC. As noted in more detail in Bütte and Witte (forthcoming), American standards producers are much less efficient and effective in promoting successful participation in international standardization. The changes necessary to reorganize and reform these standards bodies in the United States would challenge some of the core organizational principles around which these institutions have been built. As a result, some of the major American standards producers have a very rational interest in preserving the status quo. Consequently, they use "Fortress Europe" as a convenient scapegoat to escape the increasing pressure on them to change their way of doing business.

Second, while block voting may not be pervasive, there have been a number of high-profile cases in which Europeans have opted for a concerted approach that have sensitized American firms and standards producers to the increasing relevance of Europe as a major economic player in the international domain. This includes, among others, the negotiations for the ISO 14001 environmental management standards system (Roht-Arriaza 1995; Taylor 1998). In this particular case, European standards interests have worked effectively together and against American interests. This has left many American observers with the impression that the Europeans work with a strong single voice in international standardization. Further research should explore these two observations in more detail.

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NOTES

- 1 Some studies estimate that standards or other technical regulations now impinge on probably 80 percent of international trade. (OECD 1999, p.4)
- 2 According to some observers, such non-tariff-barriers "... have become increasingly pervasive among the advanced industrial countries... Policymakers who view protection as an attractive means by which to meet the demands of pressure groups or advance state interests are likely to rely primarily on non-tariff barriers." (Mansfield and Busch 1995, p.724). See for more background on product standards and technical regulations as non-tariff barriers (Gandal 2000; Ganslandt and Markusen 2001; NIST 1997; Wallner 1998).
- 3 Most regional cooperation forums-including the EU, APEC, or NAFTA-have built a standards component to their cooperative structures. The EU is-as in many other policy areas-the most advanced in this context (Krishna 1998; Rhynd 2003).
- 4 The share of standards developed internationally has increased rapidly over the past two decades. In the German case, for example, only 513 of the total 2,473 standards published in 2002 were purely national standards. 1,311 of these standards were identical with European standards. 572 were identical with international (ISO/IEC) standards. In comparison, in 1995 (only seven years earlier), 1,842 standards were published by DIN. 467 were purely national standards. 751 were identical to European standards, and only 344 were identical to international standards (data provided by DIN).
- 5 The National Research Council concluded a number of years ago that "there is no single, simple definition of standards that captures the broad range of meanings and uses of the term" (National-Research-Council 1995, p.9).
- 6 Some have expanded this typology to include measurement or information standards. Yet they are not included here because they do not really constitute a separate category of standards. In many ways, they are a hybrid of the other three. Some of the issues related to measurement/information standards and the possible role for government have been developed by Tassej (1982).
- 7 A network externality is made up of two parts: a network and an externality. An externality is commonly defined as a side effect of a market activity that affects individuals who do not participate in the market. Externalities arise in production as well as in consumption. They can be either positive or negative. When externalities are present, a perfectly competitive market results in inefficient outcome because it does not take into account the spillover effect caused by externalities. An example of negative externalities is pollution and cars. Pollution is an indirect product of driving a car. The negative value that you get from polluting is small enough, and indirect enough that the value of having your car is greater than adding a bit of pollution to the air. Network externalities are one type of positive externality. Consumers get positive value from other people using the network. This is from knowing that there will be support and knowing that the information will be continuously updated. A user is more likely to continue to use a product or service that allows them to have that type of reassurance.
- 8 Increasing returns to scale are defined as follows: in the presence of increasing returns to scale, changing all inputs by the same proportion changes output more than in proportion. Economies of scale can be accomplished because as production increases, the cost of producing each additional unit falls (also called economies of scale, scale economies, and simply increasing returns).
- 9 Law and Libecap argue that the (mandatory as well as voluntary) standardization of food and dairy products was desired because it played a necessary role in helping firms assure consumers that they were getting quality (i.e. pure) products. The increasing specialization of the foods industry and the subsequent movement of food production out of the household and into the increasingly national market raised information and search costs for consumers who were trying to collect enough data to make informed judgments about the actual quality of various food and dairy products. The increasing information and search costs, in turn, allowed some manufacturers and distributors to mark up their profits by adulterating and misrepresenting their products. Standardization, enforced by state governments, eventually helped to address the problem. Standardization was supported by consumers as well as the majority of producers who were driven out of the market by the few "bad guys" that were able to undercut general market prices because they were selling lesser quality produce (Law and Libecap 2003).
- 10 See DIN (2000, pp.11-12). See also the results of the International Standards Survey, summarized in Mattli (2003).
- 11 A more detailed description and history of the ISO can be found at the beginning of this chapter.
- 12 Note, however, that most standards bodies in developing countries are part of the ministerial bureaucracy. See ISO (2003, p.4).
- 13 On CEN, see <http://www.cenorm.be> (accessed November 17, 2003) and CEN (2002). On CENELEC, see <http://www.cenelec.org> (accessed November 17, 2003) and CENELEC (2002). On ETSI, see <http://www.etsi.org> (accessed November 17, 2003) and CEN (2002).
- 14 For a comprehensive discussion of the process see <http://www.iso.org/iso/en/stdsdevelopment/whowhenhow/proc/proc.html> (accessed June 26, 2003).
- 15 Institutions are considered complementary if the presence of one increases the returns (efficiency) of another (Hall and Soskice 2001). As a result, we should expect that institutions are not randomly distributed across countries. Instead, we should expect clustering.
- 16 This section is drawn from the analysis in Bütte and Witte (Forthcoming, chapter 4).

17 That most countries' SDOs have no serious objections to most proposed new/revised standards is further corroborated by the finding that, on average, over these four years most members abstained in most cases.

18 On average, 20 ISO member bodies cast a vote on the proposed standards, so that 5 negative votes would suffice to achieve 25 percent disapproval and cause the FDIS to fail.

19 Several interviewees noted that the EU exerted considerable pressure on both the ISO and the IEC to agree to such cooperation agreements. They allege that the Europeans threatened the ISO and IEC with a "walkout" from international standards projects in case specific European needs were not accommodated in ISO/IEC work. Interviews conducted by the author with ISO and CEN officials (Geneva and Brussels, March 2003).

20 In a similar fashion, IEC and CENELEC brokered the so-called "Dresden Agreement" (initially known as the Lugano Agreement, see CENELEC (2002); ANSI (1996); Eickhoff and Hartlieb (2002a). It establishes extensive technical cooperation procedures. The Dresden Agreement has drawn much less criticism, primarily because IEC is provided with the right to first refusal for new work items proposed in CENELEC. In case IEC does not intend to take on a standards project, CENELEC may proceed but has to keep IEC informed about progress. Non-European parties have the opportunity to comment on a CENELEC public draft. Today, 75 percent of CENELEC standards are identical to or based upon IEC standards. Since 1995, the share of CENELEC standards identical to IEC standards has increased from 56 percent to 67 percent.

21 Others argue that "though the agreements [Vienna and Dresden agreements] may be justified because the EU has agreed to adopt the international standards, this does not change the fact that the standards developed, or the order in which they are developed, will fit the needs of the Europeans better than other countries. The very logic of 'we must adopt, therefore we need special status' implies a better fit for Europe than other interests until they too enter into such an agreement." (Schellinck and Whitney 1996).

22 See the ISO Guidelines for Implementation of the Vienna Agreement, reprinted in DIN (2001), pp.467-476.

23 Even a U.S. Administration official declared that Europeans are not acting as a bloc in IEC and ISO. Instead, he argued that "...they are participating aggressively and assuming leadership positions in the organization." He characterized U.S. activities as "... more like a whisper ... Clearly it is time for us to re-establish our roots, to reassume our leadership role, to strengthen our voice." Interview with U.S. Deputy Under Secretary for Technology Gary Bachula (2000).

24 See for example Council-of-the-European-Union (1999b); EC (1998a); Council-of-the-European-Union (1999a), Theme 3, section 2b and 2c.

25 Of course, important exceptions apply. The European aerospace market, for example, is highly integrated. There is also a good deal of consolidation in the defense industries, induced by various EU governments.

26 Information provided by officials from DIN as well as CEN in interviews conducted by the author.

27 Information provided by officials from DIN as well as CEN in interviews conducted by the author.

28 Interview with CEN official, March 13, 2003, Brussels CEN secretariat.

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