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MOTOR VEHICLES

HARMONIZATION

A concerted effort is needed to open the U.S. regulatory process for motor vehicle safety and environmental performance to greater domestic and international collaboration, Kenneth E. Feith, Daniel P. Malone and John F. Creamer say in this BNA Insight. The authors, experts in trade and regulatory policy, offer eight recommendations to ''ensure America retains its leadership in the promotion of motor vehicle safety and environmental performance at home and abroad.''

BNA Insight

America's Disconnect Between Domestic and Global Automotive Rulemaking: Time to Pull in the Same Direction



By Kenneth E. Feith, Daniel P. Malone and John F. Creamer

One hot summer day, two neighbors were asked to help move a large crate stuck in a door jamb. For hours, they pushed and pulled. Despite their best efforts, the crate wouldn't budge. Finally, one said, ''I give up. We'll never get this crate outside.'' The other mover recoiled in surprise and responded, ''Out the door? I thought we were trying to get it inside!'' [1]

[1] Anonymous.

Executive Summary

The United States enjoys a robust and effective system to regulate the safety and environmental performance of motor vehicles. It also stands as a leader in the promotion of free trade and fair competition worldwide, including through the establishment of common regulatory standards and the elimination of non-tariff barriers.

The relationship between the domestic American rulemaking process and the U.S. commitment to fair trade bears a striking similarity to the introductory anecdote of the two movers. While giving best efforts, they

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tend to pull in opposite directions. The United States espouses international cooperation and a commitment to common rules. Its safety and environmental rulemaking, however, remains sealed within a domestic process largely adverse to open technical discussion, outside recommendations, and international cooperation prior to formal proposal. As a result, the U.S. has difficulty implementing the regulatory harmonization at home that it actively supports abroad.

In the past, the U.S. could arguably pursue its regulatory agendas independently of the world given the global dominance of the American automotive industry. But the automotive industry has evolved into a worldwide enterprise where the U.S. is only one of several important markets; and the competitiveness of U.S. automakers and suppliers is tied to their global presence. The U.S. is no longer the world's largest producer of motor vehicles and most of the industry's growth is occurring outside of the traditional triumvirate of North America, Europe, and Japan.

American competitiveness is, therefore, closely tied to its global presence; and nominal differences in regulatory requirements across borders can significantly hamper the growth of American companies in foreign markets. More importantly, America's position as a source of innovation—and the *jobs* that come with such innovation—are directly impacted by the relationship between U.S. domestic policies and its actions in global regulatory affairs.

Amid signs that U.S. regulators understand the risks a closed rulemaking system poses to American manufacturers, jobs, and competitiveness, this article advocates for a *concerted* effort to open the U.S. regulatory process to greater domestic and international collaboration. Far from questioning the fundamental soundness of U.S. rulemaking, the authors call for the institutionalization of approaches that have already proven effective on an *ad hoc* basis in order to ensure that America retains its leadership in the promotion of vehicle safety and environmental performance at home and abroad.

I. Introduction

In 1929, the United States Department of Commerce reported a world vehicle population of thirty-two million units. American manufacturers had designed a staggering ninety percent of them.[2] More than eighty percent ran on American roads. The U.S. could never sustain such domination of the automotive industry. But few could have predicted how dramatically different the automotive industry would be eighty years hence.

In 2010, the world vehicle population reached one *billion*. During that year, Beijing added 2,000 vehicles, Delhi 1,335 vehicles, and the rest of the world 95,500 vehicles *per day*.[3] While the United States remained the largest automotive market in the world with just under twenty-four percent of all vehicles in use, the definition of an American manufacturer had become less a question of ownership than of jobs with the rise in foreign-owned car and component manufacturers in the U.S.

Global growth in vehicle use continues to accelerate.[4] Some forecast a possible *doubling* of the vehicle population to more than *two billion* units within the next few decades.[5] The vast bulk of this growth will occur outside the United States in markets such as China and India, served significantly by U.S. manufacturers' overseas plants.[6]

[2] ''US Makes Ninety Percent of World's Automobiles,'' *Popular Science*, Vol. 115, No. 5, p. 84. (Nov. 1929).

[3] Branigan, ''China and Cars: A Love Story,'' The Guardian, Dec. 14, 2012; Vyawabare, ''Does Delhi Need A Cap on Car Ownership?'' Int'l Herald Tribune, Sept. 10, 2012.

[4] *See,* Tencer, ''Number of Cars Worldwide Surpasses 1 Billion: Can The World Handle This Many Wheels?'' Huffington Post Canada (Aug. 23, 2011). *See also,* ''Visteon CEO Says Company May Forgo NYSE for Hong Kong,'' Bloomberg, MEMA Industry News, Sept. 18, 2013 (''We need to start being valued on where we do business, not where we're domiciled.'').

[5] *See,* Leahy, ''Bike v. Car on a Hot Planet,'' Inter Press Service, June 6, 2011, Berlin. Moreover, AlixPartners forecasts global expansion of cars and other light vehicles from 80m units in 2013 to 107m units by 2020. Projected annual sales in China will rise from 19m in 2013 to 31m by 2020. Moreover, Carlos Ghosn recently noted that whereas the ratio between people and cars in Western Europe is one to two, in China it is one to twenty and in India one to forty. Clearly, ''peak car''—the point at which *global* demand for cars stops rising—is a *long* way off, *see,* The Economist Special Report—Cars—Gloom and boom, Apr. 20, 2013, at 3, 4 & 15 ('hereinafter ''Gloom and boom,'' *supra* at fn 5). China has imposed vehicle quotas in Beijing and in Shanghai. It plans to introduce similar measures in Chengdu, Chongqing, Hangzhou, Qingdao, Shenzhen, Shijiazhuang, Tianjin, Wuhan, and likely other cities. *See also,* China Seen Widening Car-Purchase Limit, Bloomberg (July 10, 2013).

[6] This global growth could have ominous ramifications. For example, *worldwide* levels of carbon dioxide, the primary cause of global warming, measured at an alarming 400 parts per million *this year*, *see*, e.g., Bowenstein, Greenhouse Gas Milestone: CO2 Levels Set New Record,'' Yahoo! News, May 11, 2013. ''The burning of fossil fuels, such as coal for electricity and oil for gasoline, has caused the overwhelming bulk of

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The automotive industry has arguably become the global industry *par excellence*. Few, if any, other industries have taken the design, sourcing, manufacture, and sale of their products to such a complex, global scale. And worldwide vehicle growth will continue to foster a ''source everywhere, manufacture everywhere, sell everywhere'' automotive world in which honing competitiveness within a complex, fast-changing global industry is the fundamental imperative.[7]

Clearly, superior product, pricing, and processes will continue to differentiate successful automotive manufacturers. But another factor, less within the control of automakers and their suppliers, will play a critical role. A host of safety and environmental performance requirements not only impact vehicle design and innovation but also set the ground rules for competition within a marketplace.

The impact of regulatory performance standards on global competitiveness combined with the complexity of the global automotive industry create an interdependency between national regulations and international trade. This interrelationship mandates careful attention to how national safety and environmental requirements are developed and enforced. The United States must be alert to trading partners who may seek to profit from America's dynamic market while protecting their home market through non-tariff regulatory barriers. At the same time, the United States must be careful to avoid American regulations that push American industry out of alignment with prevailing global practices.

It is precisely here where a fault line exists between the American rulemaking process and the United States' commitment to free and fair international competition.

As a matter of national policy (and indeed national security), the United States has pushed for free trade and global economic integration for more than eighty years. As its trading partners have grown into economic powers in their own right, the United States has worked hard to remove barriers to the free flow of goods and services. America has thus contributed mightily to an important chapter of an overall global success story that has benefited millions of people and has bound nations together through mutually beneficial economies. In many ways, globalization, for better or worse, was ''born in the U.S.A.''

Paradoxically, U.S. domestic regulations emanate from national processes that eschew international cooperation. Despite U.S. leadership in establishing forums for international regulatory cooperation, the United States has (until very recently) shown little interest either in developing domestic regulations in partnership with other countries or in transposing internationally harmonized regulations into U.S. law.

Like the two men and the crate, the United States promotes international harmonization while overseeing a domestic regulatory regime that largely ignores non-U.S. rulemaking. While supporting and indeed leading efforts towards greater uniformity across international vehicle safety and environmental regulations, the U.S. remains tied to a national regulatory process largely isolated from international regulatory activities during the development of its regulations. One set of forces pushes for equal treatment under uniform worldwide regulations while another pulls resources into meeting domestic priorities.

Neither set of forces is inherently ''bad.'' America needs fair access to foreign markets as much as America needs safer roads and cleaner air. Indeed, U.S. trade policy and regulatory activities have been eminently successful in meeting the nation's needs. But in an industry as global as automotive, they cannot be mutually exclusive.

Both American trade policy and domestic rulemaking can be strengthened by establishing international cooperation as a core element of the regulatory process. In contrast, failure to do so endangers American global influence and competitiveness even as Europe, Japan, and other nations are moving ahead in building a common global regulatory system.

The balance of this article examines the disconnect between the U.S. automotive safety and environmental rulemaking process, and its leadership in promoting global trade through the elimination of unnecessary disparities in vehicle regulations worldwide.[8] It is intended as a clarion call to U.S. lawmakers and regulators for the opening up of America's rulemaking processes to the realities of global competition in the automotive in-

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man-made increase in carbon in the air, . . .'' Id. *See also*, McKibben, ''Global Warming's Terrifying New Math,'' Rolling Stone, Aug. 2, 2013. On May 21, 2013, the U.S. Environmental Protection Agency, pursuant to its authority under the Clean Air Act, proposed its ''Tier 3'' vehicle and fuel standards to reduce air pollution from passenger cars and trucks, *see* EPA – HQ – OAR – 2011 – 0135. On critical issues like this, while the EPA's proposals are laudatory, a *national* goal should also be to promote *global* solutions. Indeed, other nations would benefit greatly from research and development in this crucial area. That should be captured in a comprehensive harmonized regulatory approach. Otherwise, the EPA's efforts may have far less positive environmental impact than intended. *See generally*, W. Nordhaus, ''The Climate Casino'' (Yale Univ. Press 2013); ''Can China clean up fast enough?'' The Economist (Aug. 10, 2013) at 9 (''In January 2013 the air of Beijing hit a level of toxicity 40 times above what the World Health Organization deems safe''); ''UN urges global response to scientific evidence that climate change is human-induced,'' United Nations News Centre, Sept. 27, 2013 (''extremely likely'' that humans have been the dominant cause of unprecedented global warming since 1950), *cited by* Fareed Zakaria, CNN Global Public Square, Oct. 27, 2013; *See*, March 31, 2014, United Nations Intergovermental Panel On Climate Change (absent change, significant risk ahead for all). Other human activities (e.g., power plants, air conditioning, industry) surely have contributed heavily, *see, e.g.*, G. Friedman, The Next Decade, Doubleday (2011) at 232. But, on its current trajectory, what impact will the manufacture and use of *two billion* vehicles have on this profound predicament?

[7] *See*, Thomas Friedman, ''Made In The World,'' Sunday N.Y. Times, Jan 29, 2012, SR 11. *See generally*, John Fullerton, ''Commodities Are Different (in a Full World),'' Huff Post Business (July 30, 2013) (Macro public policy and scale urgent in a world of shrinking natural resources, climate induced shortages, and numerous other challenges).

[8] More so than ever, the automotive industry's ''business *global* footprint'' is no longer sympatico with governing (and conflicting) *national* safety and environmental regulations, *see*, Thomas Friedman, ''Made for the World,'' fn 7 *supra*. National regulations focus on one market. Those regulated, however, are hard-wired to commonize globally. This disconnect has practical, measurable adverse impacts on consumers in regard to, for example, product selection, cost, quality, availability, reliability and even repair. It smacks of inefficiency while not resulting in safer vehicles, roads, or environmental benefits.

dustry. It discusses how the failure to pull consistently in the *same* direction undermines American influence and risks setting the United States market and automotive industry on a course towards isolation and costly idiosyncrasy. It concludes by proposing reforms towards preventing such a destructive outcome.

II. Automotive Rulemaking

Automotive regulations define minimum performance standards for systems critical to automotive safety and environmental performance. While these standards reflect the current state of automotive technology, the regulations often encourage innovation by rewarding investment in strategies that meet the short, medium, and long-term policy targets. In essence, manufacturers not only design and build vehicles to meet the minimum performance standards but also anticipate how technological innovations may correspond to evolving safety and environmental goals.

While these standards promote and protect the public welfare, they also set *de facto* minimum performance requirements for entry into a marketplace. Lowest cost is not the final arbiter anywhere in the world where high safety and environmental standards hold sway. For example, no vehicle without advanced safety features and highly tuned engines mated to sophisticated environmental sub-systems can be sold in markets like the United States, the European Union, or Japan. Whether intentionally or not, regulations safeguard against global competition becoming a ''race to the bottom'' to build the cheapest vehicle consumers can be persuaded to buy.

A. At the U.S. National Level

The first Federal Motor Vehicle Safety Standards (FMVSS) took effect in 1968. In 1970, the United States created the National Highway Traffic Safety Administration (NHTSA) and the Environmental Protection Agency (EPA) to better focus government efforts on reducing road deaths and air pollution.[9]

When the United States Congress created NHTSA and the EPA, imported vehicles accounted for less than fifteen percent of the U.S. market. Volkswagen was by far the leading import brand and ''globalization'' had yet to enter the popular lexicon. America's Big Three—General Motors, Ford Motor, and Chrysler—were enjoying their last days of summer before the winds of foreign competition would unleash a harsh period of restructuring and permanent adaptation to a changed competitive landscape.

The United States inaugurated a regulatory system focused on mandating improved vehicle safety and environmental performance with little reason for concern over rulemaking in foreign markets or the impact of regulations on international trade. In relatively short order, the United States led the world in the widespread introduction of catalytic converters, unleaded gasoline, anti-lock braking, airbags, and other advances.

In the United States, Congress enacts national policy and goals. Congress decides the all-important threshold issue of *what* to regulate and then typically delegates authority to NHTSA, the EPA, or another of the federal regulatory agencies to establish appropriate regulations *pursuant to congressional directive*.[10] The legislation defines the broad areas of concern and, at a minimum, typically enumerates particular elements that an agency must weigh in its rulemaking. Congressional enabling legislation and applicable laws[11] bend over backward to afford all interested parties (domestic and foreign) the opportunity to participate and to question what the regulatory agencies are doing and why.

Pursuant to the U.S. Administrative Procedures Act (APA), regulatory agencies are also required to analyze the impact of any final rule on, among other considerations, small businesses, the environment, potential cost of recordkeeping and, for those rules that exceed prescribed financial thresholds, the basis and justification of compelling need.[12] The Office of Management Budget (OMB) plays a major role in overseeing these determinations. The scope, term, and public need for regulations, therefore, are determined pursuant to the mandate, enabling authority, and procedural safeguards enacted by Congress with the concurrence of the White House.

At the outset, every automotive regulatory proposal aims to satisfy the best interests of the public in the most efficient and balanced manner available. But U.S. rulemaking follows an iterative process that invites complications (and automotive technologies are exceedingly complex to begin with). Agencies develop regulations frequently based on answers to *specific* questions posed to *specific* interested domestic parties. Only when the regulation is formally proposed is the public given the opportunity to comment, generally absent discussion with Agency experts. Based upon the Agency's determination of comment significance, the proposal may be revised and published as a final rule. While legal means for further comment exist, they are the exception to the rule. The problems the agencies seek to address are often met by an array of different strategies based upon competing technologies, which raises challenges in ensuring that the regulation be ''design neutral'' so as not to interfere with free competi-

[9] This article focuses on national rulemaking. Clearly, the United States also has rulemaking efforts in this area at the state (e.g., California) and local levels, too. Federalism raises complexities that are outside the scope of this Article.

[10] Some infer that the U.S. faces a type of ''Regulaggedon'' (too many regulations) purportedly because of overzealous bureaucrats. For example, in 2012, the official directory of all U.S. federal regulations—the Federal Register—ran 78,961 pages. *See*, Niall Ferguson, ''The Regulated States of America,'' Wall Street Journal, June 19, 2013, at A15 *citing* the Competitive Enterprise Institute's annual survey. Those criticisms fail to appreciate procedural safeguards and the public's role. *See generally*, Portman, ''The Regulatory Cliff and Nearly as Steep as the Fiscal One,'' Wall Street Journal, Aug. 16, 2012; Chasan, ''New Regulations for the New Year,'' Wall Street Journal, Dec. 11, 2012; Howard, ''Starting Over With Regulation,'' Wall Street Journal, Dec. 3, 2011; Wall Street Journal, Dec. 11, 2012.

[11] *See*, e.g., 5 USC § 553, Administrative Procedures Act (APA), Rule Making. The APA, 5 USC § 551, *et seq,* sets forth the overall process. Public participation in an open and transparent process is a procedural strength. Other nations' regulatory processes offer far less opportunity, *see*, e.g., Economy, ''China's Environmental Politics: A Game of Crisis Management,'' Council on Foreign Relations (May 20, 2013) (small percentage of environmental projects subjected to compulsory public participation).

[12] Executive Order 12866 mandates that agencies do, in effect, a ''cost/benefits'' or ''cost/effectiveness analysis'' of its final rules.

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tion. In an age when vehicles running on auto-pilot or powered by electricity and hydrogen are a fact, the technical and policy challenges regulators must meet in responding to congressional mandates are *enormous*.

Moreover, the process takes place within a pressurized atmosphere. Congress, representing the public, often sets severe time constraints for the completion of a regulation, seeking immediate solutions to immediate concerns. The automotive industry, upon whom the burden of compliance falls, must be able to integrate the solutions into already complex manufacturing systems to build vehicles that anyone can drive and most people can afford. And a large array of special interest groups weigh in to push and pull regulators in order to satisfy their various constituencies.

Taken as a whole, this national process requires a tremendous investment of time and resources to determine, among other things, the origin of particular accident scenarios, sources of pollutant emissions, the mechanics of injuries sustained, the impact of particular emissions on public health, the state of technological capabilities to address these concerns, and the prescription of performance requirements that meet prescribed goals. This is to be done in a way that does not distort marketplace competition or place unwarranted burdens on businesses—all within often harsh deadlines mandated by Congress!

Given these prodigious challenges, the vast improvements realized in vehicle safety and environmental performance since 1970 are a tribute to the commitment of all stakeholders, and not least to NHTSA and the EPA. Nonetheless, the current rulemaking process needs to foster a more open and inclusive process among stakeholders during the development phases to better address public needs, potential economic implications, and possible policy directions. Doing so will create a more intelligent process that promotes pulling in the *same* direction.

The APA does not include any requirements for evaluating a regulatory proposal against either similar efforts or laws outside the United States, or the potential impact any disparities between the American rule and its foreign counterparts might have on U.S. global competitiveness. Failure to assess the global regulatory environment in relation to domestic initiatives substantially increases the probability that a given U.S. rule will differ, possibly significantly, from those in other major automotive markets. This results in additional compliance costs for U.S. manufacturers and potential obstacles to trade. More importantly, the absence of this requirement, which can be established independent of the APA by the specific regulatory agency, can deprive U.S. regulators of the opportunity to benefit from research and rulemaking conducted abroad.[13]

B. At the Global Level—WP.29

The U.S. commitment to free trade grew out of the collapse of world trade during the Great Depression which drove home how important foreign markets had become to American employment. In 1941, when the United States and Britain established the Lend-Lease program (whereby America aided the British effort in World War II), the agreement included a commitment to work towards ''the elimination of all forms of discriminatory treatment in international commerce, and to the reduction of tariffs and other trade barriers. . . .''[14] In the following year, which began with twenty-six nations signing the Declaration of the United Nations, the U.S. committed itself to promoting ''collaboration among all nations in the economic field with the object of securing economic advancement and social security.''[15] In short, the U.S. coupled its immediate goal of winning the war with an admirable long-term economic goal of winning the peace.[16]

In 1947, under American auspices, the United Nations established the Economic Commission for Europe (UNECE) ''in order to give effective aid to the countries devastated by war.''[17] And in 1952, the UNECE established the Working Party on the Construction of Vehicles (Working Party 29) to focus on the needs of the European automotive industry.

This short chronology serves to underscore the commitment of the United States to the pursuit of fair and open international trade as a matter of national security and economic policy for more than eighty years.

i. The 1958 Agreement

In 1958, based upon a proposal from Germany (itself illustrating how successful the American-led economic policy had been), WP.29 produced a UN agreement to establish uniform regulatory standards for motor vehicles in order to eliminate the patchwork that had been hindering cross-border trade in Europe.

This ''1958 Agreement'' established what has grown to become an international regulatory system to govern the safety and environmental performance of motor vehicles extending well beyond its original European scope. These regulations, known as UN Regulations, detail uniform technical standards—design restrictions, minimum performance requirements, and test procedures to quantify performance—that individual nations may adopt in their local legislation and thereby avoid unnecessary differences in regulatory requirements.

The 1958 Agreement provides a comprehensive framework for running a system whereby vehicle components and systems are certified as compliant with specific UN Regulations through a process known as *type approval*. The cornerstone to the success of this system has been the *mutual recognition* of type approvals whereby the approval of a product under a given regulation by one contracting party (CP) to the 1958 Agreement is made acceptable to any other CP to the Agreement. For example, in a case where the EU and Japan (CPs to the 1958 Agreement) have both adopted a given UN Regulation, a certification granted by Germany under that regulation would be accepted by Japan (and vice-versa), without further testing or certification.

[13] *See*, I.M. Destler, *American Trade Politics: System Under Stress*, 2nd edition (Washington, DC: Institute for International Economics with the Twentieth Century Fund, 1992), 44-63; Jeffrey J. Schott, *The Uruguay Round: An Assessment* (Washington, DC: Institute for International Economics, 1994), 4-39; and Susan A. Aaronson, *Trade and the American Dream: A Social History of Post-war Trade Policy* (Lexington, Kentucky: The University of Kentucky Press, 1996), 14-33.

[14] *Id*.

[15] *Id*.

[16] *Id*.

[17] *See*, United Nations General Assembly *Resolution* 46 session -1 Economic Reconstruction of Devastated Areas of 11 December 1946, page 2.

Under this system, no country is obligated to adopt any UN Regulation. Some nations have selectively adopted a number of these regulations. In fact, many countries use UN Regulations without formally adopting them under the 1958 Agreement or even being a party to WP.29. Ultimately, WP.29 only exists as a forum for international cooperation in the development of these technical and administrative regulatory texts. The UN Regulations do not carry the force of law until adopted into national law—or, in the case of the European Union, regional law.

Nonetheless, the 1958 Agreement has proven its worth. Fifty-two governments have become Contracting Parties (CP) to the agreement since its inception, including Russia in 1987, the European Union[18] in March 1998, and Japan, the first non-European CP, in November 1998. Australia, New Zealand, South Africa, Ukraine, and others have followed with Egypt being the most recent in March 2013.

In 2011, the European Union streamlined its regulatory processes to replace its directives with direct references to UN Regulations in cases where the latter rules satisfy EU requirements, a decision that grew out of consultations held with automotive industry stakeholders.[19] The decision acknowledged the central role of the EU and its member-states in WP.29 and the fact that the EU is under no obligation to adopt any UN regulation with which it disagrees. Recognizing its importance, this streamlining places international cooperation in the development of vehicle regulations at the core of the European Union's automotive policies. Indeed, the EU and Japan are presently collaborating to deepen this cooperation through an International Whole Vehicle Type Approval (IWVTA) system.

ii. 1958 Agreement Not for All Nations

From a U.S. perspective, application of the 1958 Agreement presents insurmountable obstacles. First, the U.S. vehicle regulations operate within a *self-certification* regime whereby market surveillance rather than government approval determines compliance with mandatory requirements. Second, the U.S. embraces the w*hole vehicle* certification concept rather than the type approval of vehicle components and/or subsystems as required under the 1958 Agreement. Third, regulations under the 1958 Agreement contain provisions and requirements unique to the type-approval system and intended to facilitate cooperation among type-approval organizations (not all of which are government agencies). Fourth, the 1958 Agreement mandates the mutual recognition of type approvals. Fifth, given the significant divergence between the U.S. whole vehicle regulatory scheme and the component type approval provisions of the 1958 Agreement, ready unification poses significant challenges. Finally, the U.S. enforcement of violations is pursued directly with the manufacturer (and buttressed by U.S. product liability law), while the type approval system requires working through a third-party approval authority that may be remote to the manufacturer's country of origin. Indeed, many other nations, including Canada, China, Brazil, and India, have also found either the use of global type approvals or the requirement to accept foreign certifications problematic.

The large chasm that separates the type-approval and self-certification regimes highlights the evolution of the automotive industry into a complex global endeavor. Neither the Europeans nor the Americans in the 1950s foresaw a time when these fundamentally different approaches would come to be seen as a barrier to transatlantic automotive trade. Indeed, few, if any, observers at that time would have predicted Japan (or China or India) to emerge as major auto-producing nations.

By the 1990s, the United States found itself participating in an international regulatory forum whose work increasingly converged with American trade policy goals, especially in ensuring that regulatory anomalies were not used as instruments to block American companies from entering foreign markets. However, it also found itself increasingly isolated from the regulatory decision-making in WP.29 due to the primacy of the 1958 Agreement.

iii. The 1998 Agreement

With this backdrop, U.S. regulatory officials, recognizing the evolving role of WP.29 in establishing uniform regulatory requirements worldwide,[20] and in eliminating technical barriers to market access, also recognized the need to play a more substantive role in WP.29 regulation development activities. Hence, the United States, supported by Japan (whose own dependence upon global markets was not lost on its officials) and the EU proposed a new agreement that would omit the administrative constraints of the 1958 Agreement and focus solely on establishing technical standards and test procedures to determine compliance.

This ''1998 Agreement'' established ''global technical regulations'' (GTR) that take precedence over the UN Regulations of the 1958 Agreement in the sense that UN Regulations must comply with the performance standards and test procedures specified in the GTR. The agreement, intended to balance regulatory harmonization and national sovereignty interests, is dedicated to the development of *technical* requirements attendant to a regulation. This limitation recognizes the sovereign right of individual governments to administer (e.g. adopt, implement, enforce, offer reciprocal recognition, etc.) the use of each GTR they adopt. The 1998 Agreement, which became effective on June 25, 2000, presently has the United States and 35 other Contracting Parties actively pursuing the harmonization of current national regulations and the development of new global vehicle safety and environmental regulations. As of this writing, WP.29 has finalized 15 GTRs with an additional regulation (on tires) pending final adoption. A series of

[18] Individual members of the EU have long been contracting parties and they sit as independent delegations in WP.29. The EU became a contracting party to the 1958 Agreement in 1998 and the 1998 Agreement in 2000. As such, the EU is authorized to express its members' votes as a block. All EU members are required to adhere to the 1958 Agreement as part of the accession agreements signed when they join the Union. Presently, at 27 members, the EU casts its 27 votes as one voice. While all members of the EU are individually obligated to honor the EU adoption of the UN regulation, individual member states are not obligated to adopt such regulations into their respective national laws.

[19] These consultations, held under the CARS 21 program, are discussed more fully in the policy recommendation section below.

[20] As opposed to only among nations accepting type-approvals and mutual recognition requirements of the 1958 Agreement.

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other regulations covering areas such as motorcycle evaporative emissions, electrified vehicle safety, low sound vehicles, and hybrid vehicle emissions are under development in addition to a number of projects to expand or update existing rules and to standardize test tools such as crash test dummies.

As with the 1958 Agreement, a GTR, once voted on and adopted by the UN, does not carry the force of law. Rather, those Contracting Parties that vote in favor of a GTR are obligated only to initiate a rulemaking process to transpose the technical requirements into their national legislation. Moreover, new UN Regulations (under the 1958 Agreement) continue to be established in cases where the Contracting Parties to the 1998 Agreement do not take them on for development as a GTR.

Consequently, WP.29 has evolved into a forum that oversees in parallel the worldwide development of both the type-approval based regulations and the emerging body of global technical regulations applicable to all automotive markets. In recognition of these *de facto* changes in its scope and mission, in 2000, WP.29 officially changed its name to the World Forum for the Harmonization of Vehicle Regulations.[21]

III. Pulling in Different Directions — Examples

Having made this brief tour through domestic U.S. and international rulemaking, the analogy with the ''two men and a crate'' becomes clear. The United States has participated in WP.29 since its inception. In recent years, it has taken a lead role in its transformation from a predominantly regional exercise into a true World Forum.[22] And yet, despite the active involvement of American regulators in shepherding this transition, and in the development of every GTR, the U.S. national rulemaking process retains an inertia when it comes to incorporating these international efforts and their results into its domestic actions.

The following examples illustrate ways in which the absence of a coherent, formal policy for international cooperation fosters dysfunction even as U.S. regulators play leading roles in developing global regulations.

A. GTR No. 1—Door Locks, Related Mechanisms

In 2003, the United States proposed a global technical regulation to reduce death and injury from vehicle ejections by improving standards for door locks and related components. The proposal was successfully developed and adopted as the first global technical regulation in November 2004. In accordance with the 1998 Agreement, NHTSA promptly issued a Notice of Proposed Rulemaking (NPRM) to launch its transposition into the FMVSS under the authority granted the agency by the United States Congress.[23] In 2007, however, a *revised* FMVSS was adopted that included changes based upon input received during the public comment period of the U.S. rulemaking process. These revisions prompted NHTSA to return to WP.29 with a proposal to amend GTR No. 1 to mirror the changes instituted in the FMVSS. Finally, the amendment to GTR No. 1 was established in 2012 (some eight years after initial adoption) to bring the global rule and FMVSS into alignment.

In this example, the U.S. led the development of the global technical regulation only to amend its provisions as a result of comments received during the domestic rulemaking process. A disconnect between NHTSA's work in WP.29 and the domestic procedure resulted in the need to return to WP.29 despite the U.S. having been the sponsor of the original GTR. The U.S. automotive industry was evidently not fully aware of or engaged in the GTR development process and subsequently raised substantive concerns that NHTSA felt obliged to address.

B. Forward Crash Avoidance

In 2012, NHTSA formed the Forward Crash Avoidance and Mitigation (FCAM) team to pursue the safety potential of forward crash warning, collision imminent braking, dynamic brake support, and pedestrian crash avoidance and mitigation technologies. In an April 2013 overview of this activity presented to the SAE International World Congress, not a single reference was made to any research or regulatory effort underway outside the United States nor to any U.S. effort to explore the existence of such research or regulatory work. At this time, however, WP.29 had just finalized several years of effort in a new UN Regulation on Advanced Emergency Braking Systems (AEBS) involving *exactly* these same issues and technologies.

In this case, the European Union, Japan, and other nations, *including the United States*, had been involved in a crash mitigation effort based upon automatic braking technologies for several years under the auspices of the World Forum. Nonetheless, the FCAM appears to be addressing this same issue from a purely domestic U.S. viewpoint rather than building off of the WP.29 effort. Presumably, a working knowledge of the efforts and decisions that went into finalizing the AEBS UN Regulation (including the EU project upon which the UN Regulation is based) would at a minimum provide helpful insight into the challenges, and reduce the potential for a U.S. regulation unnecessarily divergent from the EU directive.

C. Back-up Accident Prevention

In 2007, the Cameron Gulbransen Kids Transportation Safety Act directed NHTSA to issue a final rule on rear-view mirrors to improve the ability of a driver to detect pedestrians in the area immediately behind a vehicle and thereby minimize the likelihood of a vehicle's striking a pedestrian while moving in reverse. The legislation set a deadline of no later than 30 months from its enactment for the establishment of a new standard provided that the Secretary of Transportation ''deter-

[21] Nonetheless, the Forum continues to reside under the purview of the UN Economic Commission for Europe, again underscoring how globalization has blurred national and regional lines. In 2012, WP.29 decided to remove ''UNECE'' from the name of its regulations in favor of the current usage, ''UN Regulation.''

[22] In 2008, John Creamer launched *www.GlobalAutoRegs.com* in an effort to render the complex work of harmonizing vehicle regulations worldwide more accessible to all stakeholders in automotive safety and environmental impact. He serves as its Managing Director.

[23] Dan Malone discussed this matter at length in an earlier article, *see*, Malone, Akiba & Klindt, ''Global Technical Regulations: No Panacea, But A Meaningful Step Towards Harmonization,'' SAE International (2009-01-1662).

mines such safety standards are reasonable, practicable, and appropriate.''[24] Following its unanimous passage by the House and Senate (yes, that still does happen on occasion), President Obama signed the act into law in February 2008, effectively setting the deadline as August-September 2010 for the new regulations.

At this same time, the Netherlands and Germany were proposing efforts to enable the replacement of rear-view mirrors with ''camera-monitoring systems.'' Specifically, the Netherlands was proposing a substantial strengthening of the procedures for measuring the performance of video camera systems in order to promote their use as a safety device.[25]

NHTSA's subsequent investigations suggested that, in the near term, the only practical solution available to fulfill its congressional mandate would involve a rear-mounted video camera and an in-vehicle visual display. And the ''Camera-Monitoring Systems Informal Group'' determined that the critical hurdle obstructing a UN Regulation on these systems was the lack of international (ISO) standards relevant to the performance of these systems.[26]

In this case, the domestic U.S. rulemaking process, the UN Regulation process towards a *type-approval only* regulation, and the ISO standard project have been going on in parallel; however, no proposal to consolidate these efforts within a Global Technical Regulation with worldwide application has been presented. While none of the efforts have been finalized, the absence of a single project to draft a single set of performance requirements exposes the automotive industry to the possibility of significant variations between the eventual U.S. and UN standards.

D. Low Sound Emitting Vehicles

The advent of mainstream electrified vehicles[27] has offered a number of environmental advantages. However, one apparent advantage—their relative silence—has proven to be a significant safety issue for visually impaired pedestrians, cyclists, and other vulnerable road users. In short, vehicles running in electric mode are so quiet that people cannot always hear them coming.

After this issue was first raised by the National Federation of the Blind (NFB), the EPA brought their concerns to the Working Party on Noise (GRB), a subgroup of WP.29, in 2008. Subsequent NFB presentations to WP.29 resulted in its decision to explore the feasibility of a GTR regarding the establishment of minimum sound levels for new electric and hybrid electric vehicles. At the same time, NHTSA began exploring the issue domestically. By spring 2009, NHTSA had created a research plan pursuant to one public hearing held with interested stakeholders the previous June.[28]

In March 2009, WP.29 authorized the formation of a ''Quiet Road Transport Vehicle (QRTV) Informal Working Group'' with a mandate to determine the feasibility of acoustic alerting devices that would warn pedestrians and other vulnerable road users of such vehicles without adversely impacting the environment.[29] In parallel the expert group began development of a global guidance document that could be used by those governments and organizations that wished to move forward with warning devices prior to a GTR.

Encouraged by the response of EPA and NHTSA as well as by work undertaken by the Society of Automotive Engineers (SAE) to develop vehicle sound measurement procedures, the NFB successfully lobbied Congress to produce the Pedestrian Safety Enhancement Act (PSEA) of 2010 which President Obama signed into law in January 2011.[30] The new law directed NHTSA to establish minimum sound requirements for quiet motor vehicles.

The efforts of the United States, Japan, and WP.29 to address this safety issue through a global technical regulation coalesced in July 2012 when the original QRTV group of experts issued their findings and recommendations for the development of a GTR. Soon after a second expert group was formed to develop the GTR. The draft GTR is expected by November 2014.

This latter case highlights the disjointed relationship between U.S. and global rulemaking. Although the United States *initiated* the initial discussions on quiet vehicles within WP.29 in 2008, the U.S. and World Forum efforts to develop a mutually acceptable regulation did not converge until 2012. This delay was in part due to the somewhat restrictive U.S. domestic rulemaking process that precluded an open and timely exchange of technical information outside the several formally issued U.S. technical reports.

In addition, the U.S. limitation of formal public exchanges with stakeholders to a single hearing seems shallow given the complexity of the problem and possible remedies. Indeed, the proposed U.S. domestic rule is even now subject to further refinements based upon public comments received following the Notice of Proposed Rule Making (NPRM).

Nonetheless, this example also offers reason to be encouraged. Research into appropriate countermeasures to protect the blind and other vulnerable road users included information sharing with Japanese counterparts.[31] Domestically, NHTSA and SAE were pursuing related parallel efforts regarding the measurement

[24] *See,* ''Cameron Gulbransen Kids Transportation Safety Act of 2007,'' Public Law 110-189, 110th Congress, Section 2, para. (a), subpara. 2.

[25] ''Proposal for draft amendments to Regulation No. 46,'' document GRSG-93-05, 93rd session of the Working Party on General Safety of the World Forum for the Harmonization of Vehicle Regulations.

[26] The International Organization for Standardization (ISO) is presently finalizing the ISO 16505 standard regarding minimum safety, ergonomic and performance requirements for Camera-Monitor-Systems as an alternative to the currently mandatory inside and outside mirrors for road vehicles. ISO anticipates adoption of the new standard in May 2014.

[27] Electrified vehicles include all types of vehicles that can run in an electrically powered mode, including hybrid internal combustion/electric motor vehicles.

[28] *Quieter Cars and the Safety of Blind Pedestrians: A Research Plan,* National Highway Traffic Safety Administration, April 2009.

[29] Ken Feith chaired this WP.29 Working Group.

[30] On January 14, 2013, NHTSA published a Draft Environmental Assessment (Vol. 78, Number 9; FR Docket Number 2013-00361; NHTSA-2011-0100) to evaluate the potential environmental impacts of a proposed rule establishing a Federal Motor Vehicle Safety Standard setting minimum sound requirement for hybrid and electric vehicles and an NPRM (Vol. 78, Number 9; FR Docket Number 2013-00359; NHTSA-2011-0148) setting minimum sound requirements for hybrid and electric vehicles.

[31] *Quieter Cars and the Safety of Blind Pedestrians: Phase I,* National Highway Traffic Safety Administration, April 2010.

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of minimum sound levels. There appears to have been limited but constructive communication between the two groups during the process. The final FMVSS regulation and the GTR are under development concomitantly where the opportunity now exists for each to contribute to the final form of the other, thereby increasing the probability for compatibility. In sum, the likely outcome of the QRTV efforts looks to be much improved over the sobering experience with the first GTR on door locks. And these improvements result from a series of qualitative changes in cooperation and coordination with foreign partners and domestic stakeholders that *in no way* call into question the fundamental principles of U.S. rulemaking.

IV. Encouraging Developments in the U.S.

The previous examples highlight the failure to pull in the same direction when it comes to U.S. involvement in international and domestic rulemaking even as they hint at how this discontinuity is being addressed on an *ad hoc* basis. However, there are signs that international cooperation, cost reduction through resource sharing, and the need for a more coherent response to the domestic versus global conundrum resonate with high-level U.S. policymakers.

A. Executive Orders

On January 18, 2011, President Obama signed an Executive Order aimed at promoting a ''21st–century regulatory system,'' and directed that regulations strive for balance between protecting public health and safety while not placing unreasonable burdens on business.[32] While broader in scope than automotive, it nonetheless recognized the need for and support of regulatory reform.

On May 1, 2012, President Obama issued a second Executive Order entitled ''Promoting International Regulatory Cooperation,'' which also directs the elimination of unnecessary regulatory differences between the United States and other nations.[33] At both the domestic and international levels, therefore, President Obama recognizes the need for balance between competing interests and, to the extent possible, international harmonization when it comes to automotive safety and environmental regulations. Ultimately, however, these Executive Orders only direct that agencies *consider* the possibility of international cooperation during the rulemaking process.

B. Agency Leadership

NHTSA and the EPA have clearly become more active in leveraging global coordination. As noted in the quiet vehicles example, NHTSA has moved much closer to a fully coordinated global and domestic effort through their role as Chair of the GTR work group.

At the same time, the United States is being more assertive in ensuring that global technical regulations meet U.S. requirements. In November 2013, the U.S. abstained from approving a pole side-impact protection regulation over its divergence (without clear safety benefits) from the existing U.S. regulation. The next month, the U.S. signaled that it would not support proposed amendments to regulations on head restraints (for whiplash protection) or new test procedures for pedestrian safety absent data-driven cost-benefit analysis to justify the changes. Paradoxically, this vocal opposition is a positive sign that the U.S. expects and will push to ensure that global technical regulations emerging from WP.29 can be applied within the United States.

NHTSA and the EPA are also involved with WP.29 efforts on alternative energy vehicles including electric vehicles, hybrids, and hydrogen fuel cells. The United States was a co-sponsor of the hydrogen fuel-cell safety GTR established in June 2013. In addition to work on pedestrian safety and whiplash injury prevention, the United States is involved in WP.29-sponsored efforts to harmonize test dummies, and in updating emissions, fuel economy, and related environmental regulations to address hybrid and electric vehicles.

These efforts suggest that greater international cooperation is both desirable and feasible, but moving from an *ad hoc* approach to an efficient, systematic, and institutional process will require firm commitment and deliberate effort.

C. 2025 Fuel Economy and Emissions Standards

In July 2011, President Obama and the EPA announced the largest mandatory fuel-economy increase in history, raising the Corporate Average Fuel Economy (CAFE) threshold to 54.5 mpg by 2025. Shortly thereafter, Chrysler-Fiat CEO Sergio Marchionne remarked on the new requirements, ''It will be a huge boost for the industry. It's like walking into a toy store, and you can use any toy off the shelf to get you there.''[34]

Taking into account that the automakers were involved in lawsuits opposing such new standards just five years earlier, this outcome represents an enormous shift in how government regulators and the automotive industry interacted.[35]

Two studies recently analyzed this outcome and concluded that two factors played major roles.[36] First, the automotive industry, far from being opposed to improving vehicle fuel efficiency and emissions performance, has developed a wide range of technologies that can be applied towards this end. And rather than focusing on transformational technologies such as electric or fuel-cell vehicles, the bulk of these innovations involve incremental advances across virtually every major vehicle sub-system. Second, the stakeholders agreed to establish *long-term* targets, allowing the automotive industry to understand the ultimate objectives and plan for the

[32] *See*, Executive Order 13563 (Improving Regulation and Regulatory Review), Jan. 18, 2011.

[33] *See*, Executive Order 13609, May 1, 2012. Cass Sunstein, then Administrator of the White House Office of Information and Regulatory Affairs, highlighted the details in a Wall Street Journal Op Ed. *See,* C. Sunstein, ''The White House v. Red Tape,'' Wall Street Journal, Apr. 30, 2012; *see also,* ''U.S. Chamber Welcomes Executive Order on International Regulatory Cooperation,'' U.S. Chamber of Commerce release May 1, 2012 (landmark Executive Order ''paradigm shift,'' international cooperation now assuming a central role in good domestic policy). These Executive Orders advance the goals previously set forth in President Bill Clinton's Executive Order 12866.

[34] Crain's Detroit Business, ''CAFE serves suppliers a large role in pump-passing cars,'' Aug. 14, 2011.

[35] The New York Times, ''Challenge to emissions rule is set to start,'' April 10, 2007.

[36] Nicholas Lutsey, ''New Automobile Regulations Double the Fuel Economy, Half [sic] the CO2 Emissions, and Even Automakers Like It,'' Access, Number 41, Fall 2012.

smooth integration of technologies into vehicle designs and production lines over time.

The result reinforces continued investment in vehicle technologies that will strengthen U.S. competitiveness, generate billions of dollars in new business, and expand employment, including not only factory jobs but also in research and engineering.[37]

D. Transatlantic Trade and Investment Partnership

The United States and the European Union have initiated negotiations toward reaching an agreement that would remove trade barriers and make it easier to buy and sell goods across the two markets. Regulations and compliance regimes are a central topic for discussion. As the EU puts it, ''On top of cutting tariffs across all sectors, the EU and the U.S. want to tackle barriers behind the customs border—such as differences in technical regulations, standards and approval procedures. These often cost unnecessary time and money for companies who want to sell their products in both markets. For example, when a car is approved as safe in the EU, it has to undergo a new approval procedure in the U.S. even though the safety standards are similar.''[38]

The U.S. and EU acknowledge that their respective systems have resulted in high levels of vehicle safety and environmental performance. Moreover, the automotive industries of the two markets share many of the same automakers and component suppliers. General Motors and Ford, for example, are major automakers in both markets, and Fiat played the central role in the rescue of Chrysler from collapse during the 2009 financial crisis. The focus here is not about fairness (as has usually been the case in trade negotiations), but about bridging differences across two systems in order to promote commerce.[39] When discussing free trade agreements, one tends to think tariff reduction (or elimination) and bilateral agreement. In the on-going TTIP negotiations, the most critical issue of this regional trade agreement will likely be regulations and how to reconcile differences.

Aligning the two regimes in some manner so as to facilitate trade presents daunting challenges. As explained above, the self-certification system under which the U.S. operates differs fundamentally from the type-approval system pioneered in Europe. In addition, although U.S. and EU regulations are similar, they are not often identical. In some cases, the differences are highly technical involving test procedures while in others, they result from specific policy decisions reflecting particular issues confronting regulators.[40] Moreover, manufacturers invest in product design, testing, and production to meet specific regulatory requirements. As a result, an apparently innocuous change to harmonize two regulations could require manufacturers to invest significant resources in new test equipment or product design changes *without any increase in product safety or environmental performance*. These challenges are not insurmountable as evidenced by the recently signed Canada–European Union Free Trade Agreement, which has yet to be ratified. Clearly, the devil will be in the details (e.g., what critical terms actually mean). But the regional trade negotiations alone present a historic opportunity to advance regulatory cooperation.[41]

What is fundamentally encouraging in the initiation of these negotiations is that the United States and the European Union, perhaps for the first time in history, will be required to analyze two regulatory systems and bodies of regulations, each of which is committed to safeguarding free market competition, in search of solutions to facilitate trade. In short, the trade negotiations will invariably center on the effects of regulations on global competition and competitiveness. What is decided between them will undoubtedly have ramifications beyond the two markets.[42]

V. Policy Recommendations

This article has covered a lot of territory in a relatively short space. It illustrates how two successful American traditions—promoting free trade and improving the safety and environmental performance of motor vehicles—have operated at cross purposes, effectively ''pulling in opposite directions.'' At the same time, the article has highlighted a number of recent encouraging trends underscoring that U.S. automotive regulators

[37] US Department of Commerce, International Trade Administration, Office of Transportation Machinery, ''On the Road: U.S. Automotive Parts Industry Annual Assessment, 2011,'' p. 20.

[38] ''In Focus—The Transatlantic Trade and Investment Partnership: The Biggest Trade Deal in the World,'' *http://ec.europa.eu/trade/policy/in-focus/ttip/*.

[39] In addition, other fundamental differences exist between the two ''systems'' themselves, *see generally*, G. Friedman, ''The Next Ten Years,'' Doubleday (2011) at 150-155.

[40] For example, tire-pressure monitoring systems were regulated in the US in response to catastrophic tire failures in sport-utility vehicles (i.e., a safety issue), while EU regulations are focused on the impact of tire under-inflation on emissions and fuel economy (i.e., an environmental issue). The different objectives are related to differences in vehicle types, tire designs, and driving speeds in the two markets.

[41] Currently, the U.S. is negotiating another comprehensive proposed regional trade agreement known as the Trans-Pacific Partnership (''TPP''). Negotiations continue among 12 nations; and China and South Korea are seriously considering participating as well. *See* ''TPP v. RCEP—Korea, China Likely to Join US–led Trans-Pacific Trade Pact,'' Business Korea, Dec. 2, 2013; T. Stangarone, Korea Moves Towards Joining the Trans-Pacific Partnership, Korea Economic Institute (Dec. 2, 2013). In pertinent part to this article, American TPP negotiators seek to model a commitment to harmonize approaches to regulations after the Korea—U.S. Free Trade Agreement (KORUS FTA). *See generally*, ''The Trans-Pacific Partnership Negotiations and Issues for Congress,'' I. Fergusson, W. Cooper, R. Jurenas, & B. Williams, Congressional Research Service, Aug. 21, 2013 at 40–41.

[42] *See*, U.S.–EU Free Trade Deal Could Drive Global Vehicle Safety Standards, Carmen Paun, WardsAuto (July 25, 2013). Parenthetically, even if negotiators find common ground, the agreements will need to be approved by the U.S. Congress. On December 13, 2013, U.S. House and Senate negotiators reached an agreement to accelerate congressional approval of foreign trade pacts like TTIP and TPP. The legislation may contain language that directs U.S. trade negotiators to consider ''currency issues.'' ''Fast track authority'' authorizes the White House to bring trade pacts before Congress for an ''up-or-down'' vote *without* amendments, *see*, ''Lawmakers Reach Deal to Speed Approval of Trade Pacts,'' WSJ, Dec. 14, 2013, at A5. While surely helpful to the approval of these deals, approval remains uncertain. *See, e.g.*, ''Tea-Party Resistance Clouds Risk for Major Trade Pacts,'' WSJ, Dec. 16, 2013 at A3. *But see*, ''Automakers call for back-up in quest to align EU, U.S. safety standards,'' G. Nelson, Automotive News Europe, Dec. 18, 2013 (auto industry—10 percent of all U.S./EU trade, vocal supporters of TTIP).

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and trade negotiators are increasingly responding to the reality that, to function efficiently, the global automotive industry requires a globally coherent regulatory system.

Absolute harmonization of regulations or regulatory systems is neither realistic nor desirable. Individual markets will always have characteristics that will mandate particular responses to particular needs. Saudi Arabia is no more likely to demand extensive snow testing than Finland is to require protection against sandstorms. But as the US–EU TTIP and other negotiations (such as the Trans-Pacific Partnership talks) bring into focus, some substantial measure of, if not harmonization, then at least harmony is imperative if we are to expand opportunities for trade and the jobs they bring while safeguarding public health and safety.

Beyond expanding trade in general, the U.S. faces a particular challenge with significant implications for American automotive competitiveness. The European Union, Japan, and other adherents of the type-approval regulatory regime are engaged in the establishment of a global regulatory system, interconnected and interdependent through the commitment to mutual recognition of approvals.[43] As a nation committed to self-certification, the United States cannot directly participate in this emerging regulatory order. But the U.S. can play its full role in the development of the technical regulations used by this system, and in ensuring the appropriate alignment of U.S. standards with global counterparts. Failure to play this role will result in the *de facto* abdication of global rulemaking authority to other automotive powers.

Accordingly, we propose the following eight recommendations.[44] They are *simpatico* with current trends even if these trends are evident only in *ad hoc* efforts or nascent initiatives lacking clear directions. Consider them ''nudges'' towards harnessing various strands into a strong cord where international leadership and cooperation in automotive regulatory affairs intertwine to strengthen U.S. policymaking.

1. Promote Trust and Cooperation

The United States has a history of acrimonious confrontations among regulators, industry, and special interest groups over safety and environmental regulations. Think Ralph Nader's 1965 book ''Unsafe at Any Speed.'' This legacy has resulted in a culture of wariness among stakeholders that manifests itself in the rulemaking process. Sensitive to avoid perceptions of bias or ''regulatory capture,'' NHTSA and the EPA generally restrict interaction with stakeholders to scheduled periods when public comments are solicited and to meetings, duly noted in the public record.[45] Industry has tended to respond defensively to each regulatory pronouncement. And safety and environmental groups often claim that neither industry nor government is doing enough.

As the outcome of the 2025 CAFE standards demonstrates, however, this latent culture of wariness and resistance can evolve into a more cooperative relationship without undermining the fundamental independence or authority of the regulatory agencies.

Regulations are not necessarily about correcting bad behaviors or imposing restrictions. Regulations invariably impact competition and competitiveness. Regulations can support U.S. innovation, technology leadership, and employment growth provided their development includes a long-term perspective, and an appreciation of the practical difficulties industry and the driving public face in adopting new technologies.

While independence and confrontation are desirable within the rulemaking process, these aspects have limits beyond which they become injurious to a successful outcome. Therefore, we believe that stakeholders, including at the highest levels, should be convened to consider ways to improve the U.S. regulatory environment.

With this in mind, the European Commission's ''Competitive Automotive Regulatory Systems for the 21st Century'' (CARS-21) initiative offers a reference point. Launched in 2005, CARS 21 (in the words of the European Commission) ''aims to make recommendations for the short-, medium-, and long-term public policy and regulatory framework of the European automotive industry. This framework enhances global competitiveness and employment, while sustaining further progress in safety and environmental performance at a price affordable to the consumer.''[46]

The initiative initially brought high-level stakeholders together to develop recommendations for improving the European regulatory system. Over dozens of meetings across multiple working groups between 2005 and 2007, the participants developed proposals that ultimately resulted in a major streamlining of the regulatory process. The initiative was so successful that the European Commission repeated the effort in 2010 to make further policy recommendations to support the competitiveness and sustainable growth of the European automotive industry. The initiative is now in a third generation under the ''CARS 2020'' program.

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[43] In particular, the EU and Japan are leading an initiative within the World Forum/WP.29 to establish an ''International Whole Vehicle Type Approval'' system that would facilitate trade and reinforce cooperation in setting global regulatory standards.

[44] The United States should implement the reforms herein pursuant to four guiding principles. First, in light of the speed and frequency of automotive technological developments, *consistent with safety and the environment*, the rulemaking process should be streamlined. Second, **transparency** is critical to procedural credibility. In light of the emergence of Super PACs and lobbyist/government relations, registration should be mandatory and transparency enforced. Third, brevity, to the extent possible, is urged. When rulemaking, get to the point; and stay focused! ''[L]onger bills . . . [can] reflect a more open form of corruption. Complex systems reward those who know how to navigate them'' (bracket added). The Economist, Nov. 23, 2013, at 32. Finally, *listening* and persuasion are critical characteristics of every iterative process. *See generally*, John Jenkins, ''Persuasion as the Cure for Incivility,'' Wall Street Journal, Jan. 8, 2013, A11 (effective leaders).

[45] Regulatory capture refers to a process whereby a regulating agency comes to be dominated by the industry it regulates. *See*, George Stigler, ''The Theory of Economic Regulation,'' (Rand Corporation 1971). *See also,* Kindy, ''Analysis Finds Uneasy Mix in Auto Industry and Regulation,'' Washington Post, March 9, 2010, A01; Fareed Zakaria, ''The Root of Washington's Ills: The K Street Lobbyists,'' Investors.com (Aug. 2, 2013) (''Bills have become so vast because they are qualified by provisions, exceptions, and exemptions put in by the very industry being targeted, . . .'').

[46] *See,* ''Competitive Automotive Regulatory System for the 21st century,'' http://ec.europa.eu/enterprise/sectors/automotive/competitiveness-cars21/cars21/.

2. Commit to Continuous Consultation

Motor vehicle regulations are increasingly complex in line with the growing sophistication of vehicle technologies. These technologies do not appear overnight, however. To the contrary, they result from often decades-long incremental increases in capabilities based upon extensive investments in research and development.

Automotive R&D efforts would benefit from greater insight into evolving public policy directions and priorities. Conversely, policymaking would benefit from greater insight into evolving technologies and industry directions. Implicit in this *quid pro quo* is the capacity to have open and candid discussions of policy, technology, and market *options and trends* in addition to the near term policy mandates or product commercialization issues.

Such early and regular interaction would both inform government policy directions, promote a more rapid response to congressional mandates, and ultimately decrease the prospects for subsequent legal or political challenges that slow the regulatory process.

A decade ago, anyone paying attention to the various R&D directions knew that the automotive industry was heading towards greater use of automated driver-assistance systems and of electrical and electronic technologies to improve vehicle performance.[47] Given the array of technologies under development, including vehicle-to-vehicle communications, automated driving systems, and increase in vehicle and driver communication systems, stakeholders need to interact in a more open, transparent, and flexible environment. And given the global competitive stakes, the United States simply cannot afford to segregate stakeholders in a highly compartmentalized regulatory process that fosters circumspection, doubt, and even mistrust.

Therefore, we propose the establishment of one or more standing forums where regulators can explain their current priorities and activities (including participation in WP.29 and other international regulatory efforts) and engage stakeholders in these efforts.

In 1999, NHTSA set forth the practices and activities that it proposed to follow to ensure that the U.S. public had the information and opportunity necessary to follow the development of global technical regulations under the 1998 Agreement *and* beginning at the earliest stages, to comment regarding those regulations.[48] The EPA has considered a similar policy. Recognition of the need for greater consultation exists, but the implementation to date has fallen short.

As with the European CARS 21 initiative, the European Commission provides a precedent in its Technical Committee—Motor Vehicles (TCMV) which exists to advise the Commission's automotive regulators. The TCMV meets regularly as part of the Commission's regular deliberative procedures and has frequently been instrumental in highlighting technical requirements that would facilitate the implementation of regulatory measures and avoid time-consuming delays. The EU has also established a number of focus working groups on areas such as vehicle emissions and hydrogen.

We believe that similar bodies could be established to strengthen the U.S. regulatory processes by regular and productive engagement among stakeholders. The public record of these discussions would inform the automotive industry of policy directions before they reach advanced stages where modifications become more difficult while providing the regulatory community with greater insight into perceived needs and technological directions.

3. Integrate International Cooperation Into U.S. Rulemaking

The United States should make international cooperation an essential element in the development of its automotive safety and environmental regulations. The absence of a U.S. proposal to pursue rear-view camera systems as a global technical regulation provides a case in point. There is global interest in developing this technology to enhance the safety performance of motor vehicles. The prospect that U.S. and European regulators may produce divergent legislation can be eliminated by pursuing a GTR.

When the United States determines that a new regulation is warranted, NHTSA and/or the EPA should be required to propose the initiative as a possible new global technical regulation within the World Forum for the Harmonization of Vehicle Regulations. This requirement does not prevent the United States from ''going it alone'' should the participants in WP.29 decline the opportunity for cooperation nor does this preclude parallel international and domestic efforts in case of acceptance. What this requirement does achieve is to increase the probability that the U.S. regulation will be established also as a global regulation, ensuring alignment across all nations. In positive cases, the U.S. will benefit from the support of other nations in conducting research and drafting the provisions, reducing resource burdens while improving the final results.

Moreover, once a regulation has been established, the costs to manufacturers in adapting to significant modifications rises exponentially. U.S. regulators have an obligation to ensure that U.S. regulations adhere as closely as possible with international counterparts and this can only be achieved if new regulations begin on the basis of establishing a common global standard through a GTR.

In this regard, *in cases where the United States votes to adopt a global technical regulation*, U.S. legislation should require the transposition of the GTR into American law within a reasonable statutory period. The current system fosters uncertainty by leaving the implementation of any GTR to an unknown future date (if at all). This ambiguity induces unwarranted doubts over the U.S. commitment to global cooperation and harmonization while minimizing the incentives for American industry to take a keen interest in these global activities. This result weakens American influence within the emerging global regulatory systems.

[47] For example, the technological path from cruise control to intelligent cruise control to collision avoidance systems was well established by the year 2000.

[48] *See*, ''Agency Priorities and Public Participation in the Implementation of the 1998 Agreement on Global Technical Regulations'' (Docket No. NHTSA-98-4956), following the adoption of the 1998 Agreement. National Highway Traffic Safety Administration, Docket No. NHTSA-98-4956, Notice 1, RIN 2127-AH29.

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4. Ensure Global Standards Meet U.S. Requirements

The United States must ensure that UN Global Technical Regulations are consistent with its domestic regulatory requirements. As stated by NHTSA's Office of the Chief Counsel, ''The chances that NHTSA will be able to adopt a GTR quickly and fully as an FMVSS is increased if the GTR meets the substantive requirements for an FMVSS and the written report . . . recommending the establishment of the GTR contains the information needed for an NPRM and its accompanying economic analysis.''[49]

This necessity implies that U.S. regulatory agencies must ensure the direct involvement of their legal and technical experts in the development of American positions on global regulatory initiatives. U.S. delegations to the World Forum need complete backing to ensure that the final form of each Global Technical Regulation meets American requirements for a smooth transposition into U.S. law.

In addition, U.S. assertiveness in this regard counterbalances the risk of unwarranted regulatory burdens being imposed not based upon evidence, but rather as precautionary measures that may or may not be justified.

5. Require Global Impact Assessments

NHTSA and the EPA should incorporate a mandatory assessment of foreign regulations into their rulemaking procedures as part of this internationalization. Indeed, over time, the agencies should develop a robust awareness of regulations in use and under development across the major automotive markets of the world and the degree to which they align with U.S. interests. A mandate from the U.S. Congress is not a necessary precursor for the regulatory agencies to conduct both technology and economic assessments of foreign markets. Not only do the agencies have the latitude to require such assessments, but they should recognize the need to conduct such analysis as a key element in their normally extensive pre-rulemaking analysis. U.S. rulemaking must take into account the impact of proposed regulations on U.S. global competitiveness, build from preceding regulatory efforts where applicable, and if appropriate, push for the establishment of new global regulations or the harmonization of existing regulations in accordance with American needs.

6. Pledge Unequivocal Commitment to WP.29

The global automotive industry needs global rules to function efficiently across borders and markets. The United States cannot make the World Forum a core element in its rulemaking if the World Forum cannot meet U.S. requirements, including time frames for producing regulatory requirements to meet national needs. This prerequisite is not restricted to the United States. All participants in WP.29 need the Forum to be responsive and adapted to their needs.

At the same time, one can hardly expect WP.29 to evolve if its participants pursue selective use of this option. The World Forum must be challenged to meet the needs of regulators and industry worldwide. Perhaps WP.29 will fail to rise to the occasion at times, but the United States and other participants should at least afford the Forum the opportunity to try.

As a United Nations body, WP.29 adheres to time-tested procedures for ensuring its neutrality in meeting the needs of the sovereign Contracting Parties of which it is composed. WP.29 does not impose requirements on its members, but rather seeks only to enable governments and other stakeholders to cooperate in reaching agreement on common regulatory requirements. And this is as it should be.

The neutrality of the Forum Secretariat and United Nations staff, however, places the burden of ensuring that WP.29 functions efficiently *on the Contracting Parties*. The United States, along with the other Contracting Parties, must ensure that WP.29 fulfills its objectives in a manner satisfactory to each party's needs. For example, the initial project to establish worldwide test procedures for vehicle emissions and fuel-efficiency was sponsored by the United States and included a tight deadline for reaching agreement by 2014. Given the procedures of the World Forum and the sheer scope of the regulation, many participants viewed this deadline as improbable; however, the contributors succeeded in meeting their main goals. Regrettably, the United States withdrew from its lead role in the development of the new regulation (although it continued to participate in this work) due to the domestic priority for reaching the new U.S. CAFE standards.

While this example displays the domestic versus international tug-of-war in the U.S. regulatory system, the example also highlights that the Contracting Parties determine the effectiveness of WP.29. Indeed, the expert groups formed to prepare regulatory proposals have the flexibility to get things done. While the top level of WP.29 continues to meet according to its traditional schedule, following agendas designed to ensure consensus on all its decisions, the technical expert groups use global web-conferencing in between face-to-face meetings, break their work down into multiple specialized subgroups and task forces, and designate principal drafters to prepare the regulatory language in order to meet their commitments.

The World Forum can only be as effective as its participants make it. The United States needs to commit to making the Forum work to its satisfaction. And this cannot happen if the United States opts out of the global system because of a domestic system that views international harmonization as an optional requirement.

Related to this view, the United States trade negotiators should include WP.29 within their scope. The U.S. has engaged in a number of free trade agreements, most notably NAFTA, where one or more partners do not participate in the World Forum. Given the importance of regulations to fair trade, U.S. trade negotiators should stipulate contracting to the 1998 Agreement and/or the 1958 Agreement to ensure that the automotive markets of its trading partners are at least nominally within the global regulatory system.

In this regard, the U.S. should not shy away from supporting the development of the 1958 Agreement even though the U.S. is not a party to the agreement. The type approval system has spread beyond Europe and the U.S. needs this system to operate harmoniously

[49] ''National Highway Traffic Safety Administration Rulemaking and the GTR,'' as presented by Jesse Chang for the Office of the Chief Counsel during the April 22-25, 2012, session of the Electric Vehicle Safety Informal Group of the WP.29 Working Party on Passive Safety in Washington, DC.

with the GTR and self-certification regimes. Under its current structure, the EU's block of 28 votes (corresponding to the 28 individual countries that comprise the union) affords the European Union an electoral dominance that dissuades non-European countries from joining the 1958 Agreement. The U.S. should support efforts to see the 1958 Agreement evolve into a fully global system as part of promoting fair trade among its trading partners.

7. Commit to Bridging the Type-Approval and Self-Certification Systems

The 1998 Agreement was created because the global automotive industry needs global regulations and the type-approval system (embodied in the 1958 Agreement) cannot realistically apply to all markets. The TTIP effort to expand transatlantic trade underscores that little can be accomplished without addressing both technical differences within U.S. and European regulations and legal differences in how these regulations are applied.

Self-certification can no more be the universal regime than type-approval can. The TTIP negotiations present an opportunity to assess the potential for bridging the two systems in some fashion. In effect, the U.S. system relies on a manufacturer's responsibility for its products (e.g., product liability). This dynamic breaks down if a manufacturer can transfer such responsibility to a third-party testing service and/or government approval agency. Consequently, the United States cannot simply accept a European type-approval certification *as is*. Similarly, the European system relies upon independent testing and the prospect of losing government accreditation to conduct such testing to ensure scrupulous behavior. The EU cannot simply accept the in-house certification of a U.S. supplier or automaker without undermining the entire system of independent verification.

But this does not preclude the facilitation of trade through some ''bridging mechanism.'' What such a mechanism might be goes well beyond the scope of this article.[50] Nonetheless, we suspect that a mechanism could be agreed such that a European manufacturer would fulfill some objective criteria for a U.S. presence, and declare its liability for the performance of its products alongside its presentation of a type-approval certificate. And we suspect that some mechanism could be agreed whereby American test procedures and results could be integrated within the European type-approval system of third-party validations under certain conditions.

We do not assume that reaching such an agreement would be simple. Rather, we hold out the prospect that such an effort could result in an agreement that would set forth objective criteria by which global manufacturers could participate in a regime that would expand transatlantic trade. Moreover, we submit that such a regime could be established as a new global agreement under the United Nations through which any nation and/or manufacturer could participate in the regime by fulfilling its terms and conditions. And this prospect would strengthen the development and use of UN Global Technical Regulations by establishing a global regulatory framework in much the same way as ''mutual recognition'' underpins the interest in the continuous development of UN Regulations in an international type-approval system.

8. Promote Equivalence Where Harmonization Will Not Do

Harmonization of regulations sounds like a reasonably straightforward goal. Slightly divergent regulations can be aligned and their differences ironed out in a new unified text.

Unfortunately, things are not that simple in the highly technical automotive world. Every regulation requires an investment by manufacturers in *strict* compliance. If a test procedure specifies a 60-mm diameter filter to capture particulate emissions, the test equipment may be designed to use a 60-mm diameter filter and *only* a 60-mm diameter filter. Products and dies are designed to reproduce markings required by each regulation. Seemingly simple changes to procedures or requirements can result in a host of unintended consequences, including costs of investing in new equipment and conferring a competitive advantage without any public benefit.

Alternatively, some national rules are so close in content that they do not merit all the effort that would be required to make them identical.

Therefore, U.S. regulators and their peers should provide for an ''equivalence'' alternative to outright harmonization. In practice, many regulations specify that alternative test methods may be used provided they can demonstrate equivalence with the prescribed procedures. We submit that the United States could advocate for a broader approach to ''harmonization'' involving a minimum of three regulatory categories.

First, the regulation of new systems and technologies should be established globally from the outset through WP.29.

Second, harmonization should focus on existing regulations that present clear opportunities for harmonization without entailing unwarranted costs. This category would include cases where technologies (either in test equipment or products) are undergoing fundamental changes that require manufacturer responses independent of the regulatory requirements. For example, lighting systems have been undergoing a technological revolution with broad implications for their regulation. Changes in the design of headlamps, tail-lamps, direction indicators, and the like may open opportunities for international agreement on testing and performance requirements.

Third, many existing regulations can demonstrate equivalence. Global braking regulations, for example, are quite similar despite the absence of a single uniform text. In these cases, we suspect that a ''declaration of equivalence,'' based upon objective criteria and validation, could provide a short-cut to facilitate trade while protecting the public welfare. In particular, this notion of equivalence would seem appropriate in the TTIP negotiations where both U.S. and EU regulators acknowledge comparable levels of safety and environmental performance despite their differences. At the same time, we repeat the earlier observation that markets will always have different regulatory needs such that equivalence would be among specific test procedures rather than entire regulations. The U.S. and EU could

[50] Many governments use variations of the self-certification and type-approval systems. The Australian vehicle approval system, for example, combines elements of both.

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determine that five of seven test procedures are equivalent while one procedure is unique to the U.S. and the other unique to the EU. The governments could declare the five tests mutually satisfactory while each maintains its unique ''supplemental'' requirement.

Individually, these eight recommendations may seem superficial. Collectively, however, they comprise a credible program for strengthening American automotive competitiveness while maintaining world-leading levels of public safety and health. They also address America's chronic gaps between international leadership and domestic policies, between national regulations and a global industry, between protecting jobs and promoting public welfare.

These goals are hardly mutually exclusive. Policies to improve public welfare can promote innovation and create new jobs. Domestic priorities can be met through international cooperation. The regulators and the regulated can be independent and still be interdependent (as indeed they cannot avoid being).

VI. Conclusion

Free trade requires fair rules. For decades, the United States tolerated predatory practices among its trading partners as the price for bringing nations together through economic interdependence. American-led globalization has now brought the world towards convergence and a recognition that regulations should facilitate rather than hinder trade.

Nonetheless, nations have long histories of managing (and manipulating) regulatory requirements as an inextricable part of promoting international competitiveness. The acceptance of fair rules to promote free trade in no way interferes with the continued belief that competitiveness and regulations are linked. Regulations can be internationally fair and still set requirements to improve health and safety in ways that encourage innovation and the jobs innovation creates.

The international policy adviser, academic, and former diplomat Kishore Mahbubani has argued that where the world once resembled ''a flotilla of more than 100 separate boats,'' nations now ''live in 193 separate cabins on the same boat.''[51] Each cabin has its own ''captain and crew,'' but no one is really behind the ship's wheel. Others have offered similar analogies.[52] If this is true, then the automotive industry benefits from having a long-standing forum where the passengers can at least agree on rules for the ship and plot its general direction. And (at the risk of abusing the analogy), the United States cannot spend too much time sitting around in its own cabin.

America will never dominate the automotive industry as it once did. This is a *good* thing, in addition to being entirely irrelevant to American economic interests. The largest automotive manufacturers, including those headquartered in the U.S., are *global* enterprises in every sense of the word. Hundreds of thousands of U.S. jobs are tied to companies whose headquarters lie abroad. The U.S. market will continue to represent a declining share of the world automotive market, which again is irrelevant to America's future. China today produces far more cars than the United States without coming anywhere close to American leadership in technology or innovation.

But this gap is closing, too. China is investing heavily in advanced technologies and playing a central role in developing the global safety and environmental regulations to govern the use of these innovations. Their goal is not to weaken international standards but to rise up to the challenge because, like the European Union, China recognizes that strong regulations and world-class competitiveness are intertwined.

American regulators and American industry are also in the thick of these global developments. Their efforts deserve to be backed by domestic policies and procedures that *''pull in the same direction'';* and the recommendations proposed herein can empower the United States to pursue a more holistic, consistent, and intelligent regulatory vision.

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[51] *See*, Kishore Mahbubani, ''The Great Convergence,'' Public Affairs Books (New York 2013).

[52] *See*, *e.g.*, Fareed Zakaria, ''The Post-American World 2.0'' at 44 (W.W. Norton 2011) New York (World economy like a race car with 125 drivers).