From Brussels with Love: The Transatlantic Travels of European Law and the Chemistry of Regulatory Attraction

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U.S. scholarship and U.S. courts have in recent years been gripped by the question of whether and in what circumstances it might be appropriate to rely on foreign, comparative, and international law. Along with a number of other scholars, this paper suggests that the intensive focus on that question, despite its undeniable scholarly and constitutional interest, has led to a tendency to overlook or ignore many of the crucial ways in which foreign law has entered and influenced U.S. law and policy. Using the example of the European Union’s Regulation on Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH), this paper examines the ways in which individual states and a wide range of private actors, including NGOs, have drawn upon and used EU law in reforming the U.S. chemicals regime. The paper tells a story of law’s migration, highlighting the impact that foreign law can have in the United States and identifying the routes it travels to find its way in. It argues that this regulatory influence is not one way and that the EU regime is structured in such a way that reciprocal learning from the United States is also highly likely.

INTRODUCTION

In 2006, the European Union adopted an ambitious new framework, Regulation on Registration, Evaluation, Authorisation and Restriction of Chemicals, known as REACH. Although the federal government of the United States vigorously opposed the adoption of this law, it has provoked strong interest among a wide variety of actors in the United States. This paper argues that REACH is serving

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as both a catalyst and a resource for regulatory reform in the United States, and that it has the capacity to alter the U.S. business practice even in the absence of any such reform. It suggests that the arrival of REACH in the United States represents an example of "law's migration," and that it has much to teach us about how and why this migration occurs. It argues that in this setting law's migration is not only one-way, and that we see the beginnings of an on-going, reciprocally beneficial exchange of ideas and information about chemicals and their regulation. We see this taking place not only across state lines in the United States, but also across international borders. This process is likely to continue as various actors in the United States build positively upon REACH and articulate important lessons about how to improve it. The paper concludes with the suggestion that the story of law's migration told in this paper is also a story about globalization, and about the ways in which globalization can serve both to entrench and re-configure power within a nation-state.

The REACH Regulation was adopted in 2006, and represents one of the most ambitious and complex pieces of legislation to emerge from the European Union. Published on 280 closely printed pages, it entered into force on June 1, 2007.

REACH is particularly concerned to address “the burden of the past,” arising from the fact that little is known about the tens of thousands of “existing chemicals” placed on the European market before 1981. Before the arrival of REACH, new chemicals had to be tested before being placed on the market, but existing chemicals did not have to be. At the heart of REACH is the concept of industry responsibility. It is for companies to provide rich data about the effects


3. This term is defined in the glossary of the Commission’s White Paper (White Paper: Strategy for a Future Chemicals Policy) (COM (2001) 88 final) [hereinafter White Paper] in the following way: “Burden of the Past: The 30,000 ‘existing’ chemicals estimated to be on the EU market, for which little or no information is available, in particular about their long-term effects on human health or the environment.”

4. Existing substances represent more than ninety-nine percent by volume of the total substances on the market. See the Commission’s White Paper, id., at Section 2.1.

5. This was required by Directive 67/548, on the approximation of laws, regulations and administrative provisions relating to the classification, packaging and labeling of dangerous substances, 1967 O.J. (L196) 8, for substances placed on the market at or above a 10 kg volume threshold.
of old and new chemicals on human health and the environment. There will be no need for any prior finding of risk for this requirement to bite. As the regulation bluntly puts it: “[n]o data, no market.”

The federal government of the United States campaigned vigorously against REACH, both in Europe and internationally. It argued that REACH would be unnecessarily costly and complex, and possibly unworkable in practice. It thus comes as something of a surprise to discover that many in the United States have welcomed the new regulation. As a result, this foreign law is having, and will continue to have, important effects on the development of policy and on the functioning of markets in the United States. Even those who have no intention of doing business in Europe will feel these effects.

A variety of factors help to explain the welcome REACH received in the United States. The sheer size of the European market for chemicals is one factor and so too is the multinational nature of commercial enterprise in this sphere. It is also clear that the adoption of REACH not only served to feed dissatisfaction with existing U.S. chemicals policy but it also constitutes an important and evolving resource for those pursuing reform. As will be seen, it serves as a source of ideas and of inspiration, and also as a valuable repository of information about chemicals.

Also key in explaining the impact of REACH is the disaggregated nature of power within the United States. Whereas the United States speaks only with the voice of the federal government in foreign policy, a multitude of voices ring out at home. Most obviously, in a system of polyphonic federalism, individual states can serve as pol-

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6. REACH, art. 5.
7. See the report by the United States House of Representative Committee on Government Reform—Minority Staff Special Investigations Division, A Special Interest Case Study: The Chemical Industry, the Bush Administration, and European Efforts to Regulate Chemicals, Apr. 2004, prepared for Rep. Henry A. Waxman. This, and related documents, can be accessed at http://oversight.house.gov/story.asp?ID=427. It not only charts these efforts in some detail, but also reveals the very close connections between The American Chemistry Council and the U.S. government in organizing these efforts.
8. This language is found in a message written by the then Secretary of State, Colin Powell, and addressed to thirty-six U.S. diplomatic missions in Europe, instructing them to oppose REACH. For copies of this and other such documents, see http://oversight.house.gov/story.asp?ID=427. This language also found its way into the U.S. submissions to the Technical Barriers to Trade Committee (TBT Committee) of the World Trade Organisation (WTO). See, for example, G/TBT/M/33, para. 37.
9. For example, one of the most important international arenas for discussing REACH was the TBT Committee. This committee comprises representatives of WTO Member States, and certain international inter-governmental organizations are admitted as observers. Non-governmental actors, including, for example, consumer or environmental groups, are not allowed access to these meetings.
10. See, for the classic article on polyphonic federalism, Robert A. Schapiro, Polyphonic Federalism: State Constitutions in the Federal Courts, 87 Cal. L. Rev. 1409 (1999). In polyphonic federalism, states and the federal government enjoy concurrent
icy entrepreneurs. We see examples of this in relation to chemicals and a willingness on the part of states to look to and learn from REACH. A range of non-governmental actors have assisted them in their ambition.

More generally, non-governmental organizations (NGOs) have seized upon REACH in their efforts to provoke behavioral change on the part of producers and consumers of chemicals in the United States. They have joined European and global networks of activists engaged in similar campaigns and have exploited core concepts in REACH, including the headline grabbing concept of “substances of very high concern” (SVHC).11

This paper consists of five sections. The first sets the scene for the discussion of chemicals regulation and offers a very brief overview of REACH, and of the deficiencies inherent in its U.S. predecessor, the Toxic Substances Control Act (TSCA).12 Much has been written about both elsewhere.13 The aim here is simply to provide enough background to make sense of the discussion that follows.

The second section charts REACH’s role as a catalyst in prompting and shaping chemicals policy reform at both the state and the federal level in the United States, while the third examines the impact that REACH is having, and may be expected to have, on the behavior of producers and consumers of chemicals in the United States, thanks in large measure to the activism of environmental NGOs.

The fourth section examines elements of the governance framework constructed by REACH and the opportunities that this provides for the participation of interested parties based abroad, while the fifth introduces the concept of “law’s migration.”14 Here, the paper considers what the arrival of REACH in the United States can contribute to our understanding of this idea. It illustrates the

powers, and polyphonic federalists consider it unwise and unrealistic to try to separate their respective powers. For a similar argument in an environmental context, see Kirsten H. Engel, Harnessing the Benefits of Dynamic Federalism in Environmental Law, 56 EMORY L.J. 159 (2006).

11. This concept will be introduced in the next section of this paper. The concept derives from REACH, art. 57.


14. Supra note 1.
multiplicity of “ports of entry” into the United States\textsuperscript{15} and helps us to understand the drivers and reasons for law’s migration. It argues that NGOs play a crucial, and hitherto largely unnoticed, role. It has much to teach us about globalization, the importance of regulatory diversity, and the disaggregation of power within the nation-state.

I. INTRODUCING TSCA AND REACH

It is crucial at the outset to make a few points about the chemicals industry and about the scale of the threat that chemicals pose to their producers and consumers. This is not to deny the positive benefits of the global chemicals industry but to remind ourselves that a fair, well-informed, and transparent system for the regulation of chemicals is still, for many, an urgent necessity, and for the less fortunate and not-so-few, a matter of life and death.

In California alone, an estimated 1,900 people are said to contract preventable diseases from workplace exposure to chemicals every month.\textsuperscript{16} Another 540 Californians are said to die each month as a result of chronic disease linked to chemical exposures in the workplace.\textsuperscript{17}

Children too are thought to be at particular risk from chemicals.\textsuperscript{18} Biomonitoring programs show the presence of high levels of chemicals in their bodies, including chemicals which are known to cause adverse effects in experiments on animals.\textsuperscript{19} Lead poisoning, asthma, cancer, and neurobehavioral disorders are among the child-

\textsuperscript{15} The language of “ports of entry” is drawn from the title of Resnik’s article, Law’s Migration, supra note 1.

\textsuperscript{16} Michael P. Wilson with Daniel A. Chia & Bryan C. Ehlers, Green Chemistry in California: A Framework for Leadership in Chemicals Policy and Innovation, (California Policy Research Center, 2006); Executive Summary, at xii, 32-35, at http://www.ucop.edu/cprc/documents/greenchemistryrpt.pdf [hereinafter Executive Summary]. This also highlights the environmental justice dimension of this issue, reporting that in California, lower-income groups and minority populations are at an increased risk of exposure to hazardous chemicals and chemically induced disease (at 26).

\textsuperscript{17} Id.

\textsuperscript{18} Id., at 26-28 for an overview of the evidence.

\textsuperscript{19} See the results of the Centers for Disease Control and Prevention, Third National Report on Human Exposure to Environmental Chemicals, (CDC, 2005) and the discussion id. See also the recent report by the Environmental Working Group on Fire Retardants in Toddlers and their Mothers, (2008) at http://www.uspirg.org/uploads/l9/cC/9cCFr7aXSv8Tm70PpkiLQ/Fire-Retardants-in-Toddlers-and-Their-Mothers.pdf. It established that children in the United States have much higher levels of chemicals known as PBDEs (Polybrominated diphenylethers) in their blood than their parents, and that they have among the highest levels in the industrialized world (Executive Summary, at 3). The U.S. Environmental Protection Agency (EPA) acknowledges that “[t]here is growing evidence that PBDEs persist in the environment and accumulate in living organisms, as well as toxicological testing that indicates these chemicals may cause liver toxicity, thyroid toxicity, and neurodevelopmental toxicity” (see http://www.epa.gov/oppt/pbde/).
hood illnesses that are believed to arise as a result of their exposure to chemicals.\textsuperscript{20}

The chemicals industry is a big and growing business\textsuperscript{21} in the United States.\textsuperscript{22} Its annual turnover is over $600 billion, and more than $135 billion of this figure is exported. The industry directly employs 868,700 people (6.2\% of U.S. manufacturing employees) and it is said to lend indirect support to almost five million jobs outside of the chemicals sector. The European Union (EU) is also a big player in chemicals production.\textsuperscript{23} Twelve of the world’s biggest thirty chemicals companies are headquartered there, with a combined annual turnover of around €577 billion. EU exports of chemicals to the NAFTA region amount to €35.3, while NAFTA chemicals sales in Europe are valued at €26.1 billion.\textsuperscript{24}

The production of chemicals is also a very multinational business. For this paper, the most salient feature of this characteristic is the fact that European companies have large production sites in the United States and U.S. companies have large production sites in the EU. The largest firms operate in both the United States and in Europe. For example, the two leading chemicals companies, BASF and Dow, headquartered in Germany and the United States respectively, had respective sales and staff numbers in 2007 of €89 billion and 96,924 staff and $57.5 billion and 46,000 staff. Around fifteen percent of BASF’s staff was employed in chemicals production in the United States and around thirty percent of Dow’s workforce was employed in the EU.\textsuperscript{25}

Current chemicals regulation in the United States is principally determined by the Toxic Substances Control Act 1976 (TSCA).\textsuperscript{26} The passing of TSCA was heralded as a major advance in the regulation of harmful chemicals. It is comprehensive in its scope and far-sighted

\textsuperscript{20} Executive Summary, \textit{supra} note 16, at xii and 29.

\textsuperscript{21} World wide sales in 2007 are said to have amounted to €1820 billion, an increase of four percent over the previous year. \textit{See} http://www.cefic.be/factsandfigures/ level02/profile_index.html. This also points to the rise of Asia (including China and India) as a manufacturer of chemicals.

\textsuperscript{22} The figures for the United States are taken from the American Chemistry Council, “US Chemistry Industry Profile” at http://www.amERICANchemistry.com/s_ acc/bin.asp?CID=473&DID=1596&DOC=FILE.PDF. The American Chemistry Council is the principal trade association in the United States, representing the leading chemicals companies. For further details, see its website at www.amERICANchemist ry.com/. The data relate to the year 2006.

\textsuperscript{23} The figures for the European Union are taken from the European Chemical Industry Council Website (CEFIC) at www.cefic.be/factsandfigures/. This is the industry association representing the European chemical industry. These figures relate to the year 2007.

\textsuperscript{24} The figures on EU/NAFTA imports and exports comes from the CEFIC site, \textit{id}.


\textsuperscript{26} Toxic Substances Control Act, \textit{supra} note 12.
in its commitment to the generation of better information about chemicals and to the prevention, as opposed to the remediation, of environmental harm. Nonetheless, subsequent to the passing of TSCA, there has been growing criticism of the regulatory framework which it establishes. This criticism has come from all quarters, with state and federal government bodies being prominent among the critics. One recent report summarizes the problems succinctly. It points to three principal weaknesses of design and implementation. TSCA, it argues, gives rise to a data gap, a safety gap, and to a technology (innovation) gap.

The data gap arises because of the limited capacity of TSCA to generate adequate information about chemicals. This is true for both new and existing (pre-1979) chemicals. While new chemicals are subject to a pre-market notification requirement, this does not force manufacturers to present a specified data set. As a result, “EPA lacks sufficient data to ensure that potential health and environmental risks of new chemicals are identified.”

Matters are even worse for chemicals on the market before 1979. Here, the federal Environmental Protection Agency (EPA) bears the burden of justifying a request for safety data. It must show either that the chemical in question may present an unreasonable risk to human health or the environment, or that the chemical is produced or imported in substantial quantities and either that it enters the environment in substantial quantities or that there is, or may be, significant or substantial human exposure to it. The EPA must also show that existing information about the chemical is insufficient. As elsewhere in this statute, the EPA is required to support its findings with “substantial evidence” upon judicial review. As a result of these

27. Applegate, supra note 13, offers an excellent account of the TSCA’s promise and limitations. The discussion here draws heavily on his account.
28. See Applegate, supra note 13, and the references therein. A variety of NGOs have also been vociferous critics. This is especially true of the Centre for International Environmental Law (for details of its Chemical Program, see http://www.ciel.org/Chemicals/chem_program.html) and the Environmental Defense Fund (for details of its work on chemicals, see http://www.edf.org/page.cfm?tagID=90). Richard Denison is a Senior Scientist at Environmental Defense. See Richard Denison, Not that Innocent: A Comparative Analysis of Canadian, European Union and United States Policies on Industrial Chemicals (Environmental Defense, 2007), at http://www.chemicalspolicy.org/downloads/6150_NotThatInnocent_ExeSum.pdf.
30. Executive Summary, supra note 16.
31. Wilson, supra note 16, at ch. 3.
32. There are around 62,000 existing substances.
constraints, the EPA has required the testing of fewer than 200 existing chemicals.\footnote{34}

While voluntary approaches to chemicals regulation are said by some to fill the gap,\footnote{35} it is clear that these too are deficient in important respects. There is still a lack of publicly available data,\footnote{36} even for the chemicals covered, and serious concerns have been expressed about the coverage of these voluntary programs,\footnote{37} and their quality control.\footnote{38}

The TSCA’s safety gap arises from the high evidentiary burden that the EPA must satisfy before it can act to restrict or ban a chemical. To do so, the EPA must provide “substantial evidence” that the chemical presents or will present an unreasonable risk to health or the environment, that the benefits of regulation outweigh the costs, and that it has chosen the least burdensome way to eliminate the unreasonable risk.\footnote{39} As a result of this, the EPA has taken steps to ban or restrict the production or use of only five chemicals (or chemical classes) under the TSCA.\footnote{40} Famously, even its efforts to regulate asbestos were struck down.\footnote{41}

\footnote{34. Applegate, \textit{supra} note 13, at 13. Applegate points out that only 140 of these were imposed by rule, rather than undertaken with the consent of the manufacturer.}

\footnote{35. James W. Conrad Jr., \textit{Open Secrets: The Widespread Availability of Information About the Health and Environmental Effects of Chemicals}, \textit{69 LAW \& CONTEMPORARY PROBLEMS} 141 (2007). For an overview of these programs in the chemicals sectors, see \textit{GAO, 2005, supra} note 29, at 40-43. The most important voluntary initiative is the High Production Volume (HPV) Challenge Program. It provides for the voluntary submission of data on chemicals which are produced or imported at high volume (the threshold is set at one million pounds or the equivalent of 500 metric tons). There are around 2,800 chemicals in this category. For more details about this program, see http://www.epa.gov/HPV/.

\footnote{36. Applegate, \textit{supra} note 13, at 14. Applegate discusses in particular the HPV program, offering an overview of various studies of it. He concludes that they “paint a remarkably consistent picture of the lack of data (publicly available data, to be sure, but the existence of private data cannot be verified) concerning HPV chemicals, the chemicals that one would expect to support the greatest amount of risk research.”}

\footnote{37. \textit{See GAO, 2005, supra} note 29. Many concerns arise in relation to these voluntary programs, in particular the HPV program. One is that volume is not a good proxy for risk. Also, information has not been provided for a significant number of high production volume chemicals (around 300). Even when it is provided, doubts have been expressed whether the information is adequate to allow the EPA properly to assess risks.


\footnote{39. This standard applies to existing chemicals and to new chemicals which have been included in the TSCA inventory. The EPA has additional powers to restrict new chemicals before they are marketed, and has done so in around ten percent of cases. Bearing in mind the data deficit that exists even in relation to new chemicals, these powers are not sufficient to close the safety gap.

\footnote{40. These are polychlorinated biphenyls (PCBs), fully halogenated chlorofluoroalkanes, dioxins, asbestos, and hexavalent chromium.

\footnote{41. \textit{See Corrosion Proof Fittings, Inc. v. EPA}, 947 F.2d 1201 (5th Cir. 1991).}
The TSCA also contributes to a technology (innovation) gap. It provides for differential treatment of new and existing chemicals and its requirements are more relaxed in relation to the latter. As such, it creates an incentive for the continued use of existing substances and to suppress “industry motivation to invest in green chemistry technology innovation.”

It is against this backdrop that REACH enters the stage. This regulation represents an attempt to improve on prior EU law in this area, and to do so in light of lessons from TSCA. Previously, European law shared many of TSCA’s faults. It was complex and fragmented. It gave rise to a data deficit, placed an excessive burden on public authorities, and resulted in relatively few decisions to restrict even dangerous substances.

REACH establishes a number of mechanisms to address these concerns. These mechanisms seek both to generate better information about chemicals and to ensure that this information is put to good use in protecting the environment and public health. Among the most important mechanisms are those establishing procedures for the registration, authorization, and restrictions of chemicals. Each of these will be briefly considered in turn.

**Registration:** REACH imposes an informational burden on industry and, as already noted, it establishes a default rule: “no data, no market.” Chemical substances manufactured or imported at or above a one-ton threshold must be registered with the new European Chemicals Agency. These include substances on their own or in preparations (mixtures of chemicals such as detergents) and sometimes even substances included in articles (consumer products for

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43. As John Applegate puts it, “[w]hile neither the White Paper nor the Explanatory Memorandum that accompanied the actual legislation mention TSCA by name, it is hard to read them as anything other than an effort to be everything that TSCA was not,” *supra* note 13, at 19. Applegate also points out how important the development of new environmental principles has been over the last decade.

44. See *supra* note 3, and in particular Section 2:1, for a discussion of the problems inherent in the existing legislative framework and necessitating the adoption of REACH.

45. REACH, art. 5.

46. REACH, art. 6(1). Note the elaborate provisions laid down in the regulation relating to data sharing between companies, particularly in respect of data deriving from studies involving tests on vertebrate animals (REACH, arts. 25-27 and arts. 29-30). Note also the important and complex provisions on joint registration in cases where a given substance is to be manufactured in the EU, or imported into the EU, by more than one company (REACH, art. 11). This joint registration requirement has led to the establishment of industry registration consortia. See, by way of example, the Ethanol REACH Association, at http://www.etho-reach.com/templates/mercury.asp?page_id=1492. There are 3,374 companies that pre-registered ethanol.

47. REACH, art. 6(1). The definition of a preparation is given in REACH, art. 3(2). It is a mixture or solution composed of two or more substances.
The intensity of the informational burden imposed by REACH is variable. The basic requirement rests on an open-ended standard, rather than a rule. This requires that each registrant must submit a technical dossier, which must include all physicochemical, toxicological, and ecotoxicological information that is relevant and available to the registrant. This standard is accompanied by more specific rules setting out the minimum information to be included, even where this information has not previously been available. In the main, the nature of this minimum will be determined by reference to volume. For registered substances, more information is demanded as production volume increases. The 10 ton threshold is key, because at this level, an obligation to include a Chemical Safety Report (CSR) as part of the registration process arises.

Authorization: Certain chemicals will require authorization before they can be used in the EU, or placed on the market. These are known as Substances of Very High Concern (SVHC). For these chemicals, authorization will be required even below the one-ton threshold. Authorization will be granted on a use-specific basis. Certain categories of chemicals, exhibiting certain hazard traits, will automatically require authorization. These categories are listed in

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48. REACH, art. 7(1). This is subject to the one ton threshold. An article is defined in art. 3(3) REACH. The object which during production is given a special shape, surface or design which determines its function to a greater degree than its chemical composition. Application of this definition to specific products has proved controversial. See the relevant Chemical Agency guidance document at http://reach.jrc.it/docs/guidance_document/articles_en.pdf.

49. REACH, art. 12(1). A guidance note on information requirements is set out in Annex VI but does little to build upon this. It does make it clear that registrants have to be somewhat proactive in collating information by, for example, undertaking a literature search.

50. There is one exception. More information has to be submitted for Annex III phase-in substances than for non-Annex III phase-in substances. For the latter, no toxicological or ecotoxicological information is required, but only physicochemical information in accordance with s. 7 of Annex VII. Annex III substances include category 1 and 2 carcinogens, mutagens, and reproductive toxicants (CMRs), those which are persistent, bioaccumulative and toxic (PBT) or very persistent and very bioaccumulative (vPvB) and meet Annex XIII criteria, as well as substances with dispersive or diffuse effects for which it is predicted that they are likely to meet the classification criteria for any human health or environmental effects endpoints under Directive 67/548, supra note 5.

51. For the lowest tonnage (up to 10 tons) the standard requirements in Annex VII will apply. Every time a new tonnage threshold is met (10 tons, 100 tons and 1000 tons), an additional annex will apply, imposing additional informational demands.

52. See REACH, art. 14 and also Annex I containing general provisions for assessing substances for preparing Chemical Safety Reports (CSR). A CSR must include human health, environment, and physicochemical hazard assessments, as well as an assessment of whether the substance may be characterized as PBT or vPvP. For dangerous substances and those which are PBT/vPvP, an enhanced CSR will be required, to include an exposure assessment and risk characterization.

53. REACH, art. 56.
Article 57. Other categories of chemicals may also be subjected to the authorization requirement over time, if there is scientific evidence of probable serious effects to human health or the environment, and if this gives rise to a level of concern which is equivalent to that raised by the established categories. A “candidate list” of substances meeting the criteria for authorization will be drawn up to be followed in time by a final list. These lists are provisional and may be supplemented or amended over time. The criteria for authorization are laid down in the regulation. In most cases, authorization will only be granted where the socio-economic benefits of the chemical outweigh the risks to human health or the environment, and where there are no suitable alternatives available. For an alternative to be considered suitable, it must not only be safer, but recourse to it must also be technically and economically feasible for the applicant. Alternatives for authorization must contain the information specified, and the design of the legislation clearly places the burden of demonstrating safety on the applicant. Here, as elsewhere, the thresholds for action will be construed in the light of the European version of the precautionary principle. This allows for the adoption
of protective measures, even in the absence of conclusive scientific evidence establishing the existence of risk.\footnote{62} However, the EU institutions reach the limits of their discretion under the precautionary principle when they seek to guard against a “purely hypothetical” risk, the existence of which is “founded on mere conjecture which has not been scientifically verified.”\footnote{63}

Restrictions: Annex XVII REACH contains a list of restrictions on the manufacture, placing on the market, and use of specified chemicals.\footnote{64} This list is a provisional one. It may be supplemented or amended where there is a finding that a substance presents an unacceptable risk to human health or the environment and where this risk needs to be addressed on a Community-wide basis. Any such decision shall take into account the socio-economic impact of a restriction, including the availability of alternatives.\footnote{65} While the burden will lie with the regulator to show that there is an unacceptable risk, again this burden will be construed in the light of the precautionary principle,\footnote{66} and the regulator will have at its disposal information submitted as part of the registration and authorization processes.

The regulatory framework constituted by REACH is dauntingly complex. This has not, however, prevented it from provoking widespread interest in the United States. It is to the transatlantic impact of REACH that this paper will now turn.

II. U.S. CHEMICALS REFORM AND THE IMPACT OF REACH

This section of the paper analyzes the changing regulatory scene in the U.S. with regard to chemicals. We will begin by looking at individual state’s moves to improve chemicals regulation in the light of the weaknesses of federal regulation through the TSCA, and in view of the emergence of REACH as a new way of “doing” chemicals regulation. This is followed by a brief examination of proposed regulatory changes taking place at the federal level.

At both the federal and the state levels, economics, information, and consumer and environmental protection have combined to drive chemical reform initiatives forward. The size and importance of the EU market for American manufacturers, and the obligation that they comply with REACH when they do business in Europe, creates a

\begin{footnotes}
\footnote{63} Id., para. 143.
\footnote{64} This should be read along with Article 67(1), REACH which provides that no substance may be manufactured, placed on the market or used, except in accordance with these restrictions. It also contains a scientific research and development exception.
\footnote{65} REACH, art. 68(1).
\footnote{66} Especially in accordance with the constraints imposed by the European Court of First Instance in Pfizer, supra note 62.
\end{footnotes}
strong incentive for comparable standards to be introduced at home. In addition, at both the state and federal levels, there is a clear awareness of the capacity of REACH to provide an ongoing epistemic resource which can assist in the design and implementation of U.S. reform. Add to this an intense appreciation of the shortcomings of the TSCA, and of the data, safety and technology gaps to which it gives rise, and it seems likely that the pressure for reform will continue to build.

A. State Level Reform and REACH

The TSCA only pre-empts state level action in so far as the EPA has already exercised its powers under the act by regulating a substance or by issuing a rule requiring that it be tested. Even then, a number of exceptions exist. States may still move to ban entirely a chemical already regulated at the federal level, and they may introduce or maintain restrictions with the permission of the EPA. Despite concerns about the impact of regulatory fragmentation on business, state level initiatives continue to flourish in this sphere.

67. Toxic Substances Control Act, supra note 12, § 2617.
68. Id. § 2617(a)(B).
69. Id.§ 2617(b). Conditions apply including a requirement that the state level law achieve a significantly higher degree of protection than federal law and that it not impose an undue burden on commerce. For a detailed discussion of pre-emption, see PREEMPTION CHOICE: THE THEORY, LAW AND REALITY OF FEDERALISM’S CORE QUESTION (William W. Buzbee ed., 2009).
70. It is relevant here to note that the phenomenon under discussion in this paper is in large part a result of polyphonic federalism and the existence of overlapping powers at the state and federal levels in the United States. Ironically perhaps, the EU’s conception of “federalism” is somewhat different in relation to REACH. That it takes the form of an exhaustive harmonisation measure is made clear by the free movement clause in REACH, Article 128. As such, Member States are in general precluded from adopting standards which are stricter than those laid down by REACH. There is a narrow safeguard clause in REACH, Article 129. While this permits emergency measures by Member States when urgent action is required to protect human health or the environment, any Member State measure must be confirmed or abrogated by the EU within sixty days. It is also true that individual Member States enjoy certain agenda setting privileges under REACH. For example, individual states can push for new substances to be added to the list of SVHC (REACH, art. 59(3)), or for new restrictions on specific chemicals to be introduced (REACH, art. 69(4)). Hopefully, these agenda setting privileges will allow for information and experience from individual Member States to feed in and shape EU-level decision-making, and to sustain learning from the Member State to the EU level. Whether or not this turns out to be true in practice remains to be seen. Be that as it may, at a conceptual level it is important for the EU to note that the United States does not share its presumption that product regulation should, in general, take the form of exhaustive harmonization in order to ensure the proper functioning of an integrated market, but that, on the contrary, in the United States, polyphonic federalism can find expression even in relation to product regulation such as the TSCA.
71. Three examples of this will be offered. In a recent report, the Lowell Center for Sustainable Production at the University of Massachusetts, notes in its report, Options for State Chemicals Policy Reform: A Resource Guide (January 2008), at http://www.chemicalspolicy.org/downloads/OptionsforStateChemicalsPolicyReform.pdf, that “recent discussions and actions in at least eight states have raised the pros-
As is so frequently the case in environmental law, California leads the field.

**California**

California offers the clearest, and most developed, illustration of the capacity of REACH to prompt and give direction to domestic chemicals reform. In 2004, the California Senate Environmental Quality Committee and the California Assembly Committee on Environmental Safety and Toxic Materials commissioned a report on “Green Chemistry.” Among the reasons cited for doing so was the committee’s interest “in the implications for California of chemical policy developments in the European Union.” The report acknowledges the European Union’s sweeping new policy reforms, and finds that this is expected “to lead to a long-term E.U. competitive advantage in this arena.” In a detailed examination of REACH, the report argues that four issues are of particular concern to the Californian chemicals industry.

- First, it is anticipated that REACH will impact positively on the commercial viability of cleaner technologies, including green chemistry. As such “the need for green
chemistry science and technology innovation could improve in the near term, and California could take steps to attract investment in this sector of the chemical industry.\textsuperscript{75}

- Second, REACH is seen to present a unique regulatory burden for small and medium sized chemical producers. If they do not comply with REACH's onerous regulatory conditions, they risk losing export market share and, subsequently, profitability. The report observes that these firms would benefit from support and information on the technical aspects of REACH, as well as on alternatives to substances requiring authorization under REACH.\textsuperscript{76}

- Third, the report views REACH as an opportunity for California to access information on the intrinsic and toxicological properties of chemicals registered under REACH. It also notes that for this information to be useful, California would have to gather data on chemicals sales within the state.\textsuperscript{77}

- And fourth, the report identifies the danger of a relative worsening of worker and consumer protection in the United States if production or sale of non-REACH compliant chemicals is shifted to the United States, or continued in the United States once banned in the EU.\textsuperscript{78}

In sum, the report concludes by calling on California to respond proactively to developments in the EU, through the establishment of a Chemicals Policy Task Force and by drafting comprehensive chemicals legislation.\textsuperscript{79} It suggests that, “[i]n light of developments in the European Union and among some large U.S. businesses, a chemicals policy that induces this [technological] transition in California could also position the state to become a global leader in green chemistry technology innovation.”\textsuperscript{80}

Following the publication of this report, California launched a “Green Chemistry Initiative,”\textsuperscript{81} that among other things requested the California Department of Toxic Substances Control (DTSC) to lead a broad public process to generate ideas to address the data, safety, and technology gaps, and to identify overall goals and policy

\textsuperscript{75} Wilson, supra note 16, at 63.
\textsuperscript{76} Id.
\textsuperscript{77} Id., at 63-64.
\textsuperscript{78} Id., at 64.
\textsuperscript{79} Executive Summary, supra note 16, at xv.
\textsuperscript{80} Wilson, supra note 16, at 92.
\textsuperscript{81} The Green Chemistry report (id.) was published in 2006 and this initiative was launched in April 2007. See http://www.dtsc.ca.gov/PollutionPrevention/GreenChemistryInitiative/index.cfm.
options. Among other activities, an inter-disciplinary Science Advisory Panel was created which reported on “Green Chemistry Options for the State of California” in May 2008. This report presents thirty-eight options to advance green chemistry in California and it makes ample reference to REACH. See, for example:

Option 22 requires a policy to identify chemicals of concern, and suggests that specific criteria be developed for this purpose. REACH is cited as one of several potential sources of relevant criteria, in particular with regard to SVHC.

Option 26 requires chemicals manufacturers and importers to provide specific information about the hazards and uses of their products, and suggests that California could “borrow” the “no data, no market” requirement established by REACH.

Option 27 requires companies to provide chemical information that they submit to one regulatory authority to other authorities. As the report says, “[o]ne of the most compelling reasons for this option is that many companies that manufacture chemicals used in California will soon submit information to the European Chemicals Agency as they register substances under REACH.

The pace of regulatory change in California, and the pervasive influence of REACH kept up when, on September 29, 2008, Governor Schwarzenegger signed a bi-partisan bill, amending California’s Health and Safety Code in relation to hazardous materials (California Chemicals of Concern). This requires the California Department of Toxic Substances Control (DTSC) to establish a process for identifying, prioritizing, evaluating, and regulating chemicals of concern in consumer products, as well as exploring the existence of safer alternatives

In doing this, the DTSC is mandated to:

... reference and use, to the maximum extent feasible, available information from other nations, governments, and authoritative bodies that have undertaken similar chemical

83. Even where the report does not explicitly refer to REACH, the parallels can be obvious. See, by way of illustration, options 25, 28, 29, 30, and 35.
84. Supra note 82, at 36-37.
85. Id., at 42.
86. Id., at 44. It notes that California exported $2.4 billion in chemicals to the EU, roughly ten percent of the state’s $26 billion total exports to that region.
prioritization processes, so as to leverage the work and costs already incurred by those entities and to minimize costs and maximizes benefits for the state’s economy.\textsuperscript{88}

By contrast to an earlier initiative,\textsuperscript{89} in this amendment the EU and REACH are not singled out as pre-eminent sources of information. However, given the intensity of the information burden imposed by REACH, in practice the EU seems certain to be an important point of reference for the DTSC in maximizing its information base.\textsuperscript{90} Among the EU information that would be relevant and available are the data submitted as part of the registration process, and those concerning the listing of SVHC.

On the same day as Schwarzenegger signed the California Chemicals of Concern bill, he also signed a bill providing for the establishment of a Toxics Information Clearinghouse in California.\textsuperscript{91} This likewise requires that the California DTSC consult with other states, the federal government, and other nations in order to identify available data related to hazard traits and environmental and toxicological end-points, and to facilitate the development of regional, national, and international data sharing arrangements.\textsuperscript{92}

Lastly, December 2008 saw the publication of a final Green Chemistry Initiative Report, to include recommendations to establish a policy framework for a Green Chemistry Program in California.\textsuperscript{93} Among the policy recommendations put forward is a plan to create an online, searchable, product ingredient network in order to disclose ingredients included in products sold in California.\textsuperscript{94} The final report notes that “no other state or national government has developed a

\textsuperscript{88} § 25252(b)(2), id., California Chemicals of Concern (emphasis added).

\textsuperscript{89} In February 2007, Senator S. Joseph Simitian introduced a chemicals bill S.B. 578, 2007-08 Leg., Reg. Sess. (Cal. 2007) (High Production Volume Chemicals). The bill did not succeed. It would have required the submission by manufacturers of information about high production volume chemicals. Among the data to be submitted was “environmental health information.” This was defined a meaning the information required under Annex X of REACH (§ 25430(c)).

\textsuperscript{90} This picks up on the suggestion in the Lowell Report (supra note 71) that states may be able to take advantage of the chemical information submitted to European governmental authorities under REACH (at 6), and also on policy option 22 from the California Green Chemistry Report (supra note 82) laid out above.


\textsuperscript{92} California Clearing House, id. § 25256.3.


\textsuperscript{94} Id., at 25-26. While according to this recommendation, only non-confidential information would be publicly available; confidential business information should still be accessible to a designated state agency. The final report notes that “[u]sing the online product ingredient network, businesses can avoid selecting the toxic ingredients which could otherwise injure their reputation, create toxic tort liability, endanger worker protection, or result in costly waste management or clean-up liabilities” (at 26).
product ingredient disclosure system for consumer products,95 and, as will be discussed in more detail below, this recommendation would go further than REACH in ensuring the availability of such information for consumers.

Two other policy recommendations relate directly to chemical safety. The first concerns the establishment of an Online Toxics Clearinghouse,96 in the form of an online database on chemical toxicity and hazards. This would build on “efforts by other governments and authoritative bodies worldwide,” and be populated with data from existing sources first.97 To this end, it is recommended that California enter into data sharing agreements with governments and international organizations. In the case of the EU, this would be necessary to permit access to data which would otherwise be withheld on grounds of confidentiality.98

The second recommendation proposes an acceleration of the quest for safer products,99 including in relation to the evaluation of chemicals of concern and alternatives to them. It recommends that California move beyond its current ad hoc approach of banning specific chemicals, in favor of a comprehensive framework.100 The two recent legislative enactments previously discussed already respond to these two latter recommendations.

Massachusetts

One of California’s principal concerns in responding to REACH was economic. Another was the compliance burden it would impose upon small and medium sized businesses seeking to sell in Europe. Trade relations have thus emerged as a key factor in generating interest in REACH. This seems to be true elsewhere as well, notably in Massachusetts. A leader among states in chemicals regulation for some time, a bill is in this state for A Healthy Massachusetts: Safer

95. Id., at 26.
96. Id., at 27-29.
97. Id., at 27. The EU is cited, along with Canada and Japan as an example of potential sources.
98. See, in particular, REACH, art. 120 which would permit the European Chemicals Agency to disclose data to any government or national authority of a third country with which it has entered into an agreement, subject to compliance with two conditions. The purpose of the agreement must be cooperation on the implementation or management of legislation concerning chemicals covered by REACH, and the third party must protect the confidential information as mutually agreed. While REACH refers to the possibility of concluding an agreement with a national authority in third country (such as the state of California), the relevant treaty provision (art. 181a(3)) only refers to the possibility of the European Community entering into agreements with third countries and competent international organizations. It would be necessary to read “third country” here as permitting the conclusion of an agreement with a sub-national actor.
99. Id., at 30-32.
100. Id., at 31.
Alternatives to Toxic Chemicals. One of the background findings presented as justifying the policy reform is expressed as follows:

That the European Union and other countries have already adopted more restrictive policies regarding the use of toxic chemicals and more health protective requirements for products, and over 37% of Massachusetts trade is with the European Union’s Member States...

It is striking that the reference here is to the scale of Massachusetts’ trade with Europe across the board and not only in relation to chemicals. This reflects the pervasive impact of REACH, which is due to its application not only to chemicals exported on their own, but also to those included in preparations and articles.

The Massachusetts bill resembles REACH in that it provides a framework for identifying substances of high concern. The criteria for identifying such substances are drawn in a way which is virtually identical to REACH in its definition of a SVHC. Additionally, when it categorizes chemicals, the Massachusetts Science Advisory Board is required to rely on “published government lists,” including, but not limited to, those specifically identified in the bill. Among those identified is the EU’s list of Substances of Very High Concern. Over a five year period, all substances of high concern are to be regarded as priority substances. Such priority substances are to be phased out where recourse to safer alternatives is feasible and comparable in cost.


102. For another example, see S. 292, 2007-2008 Leg., Reg. Sess. (Vt. 2008), proposed in Vermont. The preamble to the proposed Vermont law acknowledges the international context by stating: “(4) Other countries have already adopted policies—such as the European Union Directive on General Product Safety and the European Union Scientific Committee on Consumer Products—that are focused on consumer health and safety and that are more restrictive regarding the use of toxic chemicals.”

103. §25(A), An Act for a Healthy Massachusetts, supra note 101. Also, the ten substances identified as priority substances in Section 24, Senate No. 558 (An Act for a Healthy Massachusetts) are to be categorized as of high concern.

104. Recall the criteria listed in art. 57. PBTs are not included in the Massachusetts list, in contrast to REACH. But endocrine disruptors are included, while under the EU scheme they appear only in art. 57(0) and hence require special justification to be included in the candidate or final list of substances requiring authorization.

105. § 25(A), An Act for a Healthy Massachusetts, supra note 101.

106. § 35, id., which states that all chemicals of high concern used in Massachusetts must be put on the list of priority toxic substances within one year from the publication of the Refined Chemicals Classification List. § 25(B) provides that this list is to be published within four years of the publication of the Preliminary Chemicals Categorization list.

107. A person manufacturing or distributing a product in Massachusetts containing a priority substance will be required to file a notice (§ 25A). This information will
Given how this bill is framed, both in terms of its criteria for chemicals of high concern and in terms of the specific role anticipated for the EU’s list of Substances of Very High Concern, it seems highly likely that, over time, those chemicals which require prior authorization in the EU will also be treated as priority substances in Massachusetts. As such, they will be phased out as quickly as possible, subject to feasibility and cost constraints. The effect of this would be to diminish greatly the need for products manufactured in the state of Massachusetts to obtain prior authorization before being sold in the EU. When a particular priority substance is not entirely phased out in Massachusetts, due to feasibility or cost constraints, it will in all likelihood require prior authorization in the EU. Even in this situation, at least the authorization burden would still be greatly diminished, in view of the information that will already have been gathered in Massachusetts, including especially information about the feasibility and cost of recourse to a safer alternative.

Maine

The willingness of California, and the potential willingness of Massachusetts, to exploit the informational resources made available under REACH is echoed in the state of Maine. In December 2007, Governor John E. Baldacci’s safer chemicals taskforce produced a report that acknowledged the inadequacy of the TSCA as a framework for consumer protection in relation to chemicals, and provided an overview of reform initiatives elsewhere in the United States, Canada, and the EU. In April 2008, the work of the taskforce led to the passing of an Act to Protect Children’s Health and the Environment from Toxic Chemicals in Toys and Children’s Products.

The law is more focused and narrower in scope than REACH in that it only applies to children’s products. The concept of a children’s product is defined not only in terms of products intended for use by
children, but also including any consumer product containing a chemical of high concern to which a child or fetus is likely to be exposed during use or disposal.\footnote{\textsuperscript{111}} Like REACH, and like the proposed Massachusetts law, the Maine statute seeks to set in train a process for identifying, listing, and prioritizing chemicals of high concern. The Maine law will identify priority chemicals from among this list. The information disclosure requirements will apply to these priority substances. Also, products containing a priority chemical substance may be banned when it results in the direct or indirect exposure of children and vulnerable populations, and if a safer alternative is available at comparable cost.\footnote{\textsuperscript{112}}

The Maine law's approach to prioritization involves two steps. The first step is to draw up a list of chemicals of high concern. A chemical may be included in this list if, on the basis of credible scientific evidence, it is known by an authoritative governmental agency as a carcinogen, a reproductive or developmental toxicant, an endocrine disruptor, or as PBT or vPvB.\footnote{\textsuperscript{113}} The Act refers to a range of classifications by various governmental entities that may be considered in drawing up an initial list of chemicals of high concern. Among these are classifications operating at an international level.\footnote{\textsuperscript{114}} It is striking that EU classifications under REACH are relevant. In particular, chemicals of very high concern under REACH, listed in Annex XIV as endocrine disruptors or vPvBs, are singled out as among the classifications to which departments may refer.\footnote{\textsuperscript{115}} The clear implication here is that EU bodies are among those which can count as authoritative governmental entities, and to which the state regulator may look in drawing up its list.

Not all substances of high concern will eventually be classified as priority chemicals. Chemicals may be designated as priority chemicals during the second stage when any one of a range of criteria is found to be satisfied.\footnote{\textsuperscript{116}} Significantly, and contrary to the drift of the general argument in this paper, while the fact that the sale or use of the chemical, or of a product containing the chemical, has been banned in another state is included in the specified criteria,\footnote{\textsuperscript{117}} the
fact that it has been restricted or even banned in the EU is not.\textsuperscript{118} There is thus a greater willingness to learn from experience in other parts of the United States than from experience in other nations. But this distinction is not clear-cut. We have already seen, both in relation to California and Massachusetts, that state level reform has been, and will continue to be, shaped by developments in the EU. In looking west to California, or south to Massachusetts, the state of Maine will also by implication be looking east to the EU.

B. \textit{Federal Level Reform and REACH}

On May 20, 2008, two identical bills, each known as the “Kid-Safe Chemicals Act,” were brought before the Senate and the House.\textsuperscript{119}

These bills have been brought forward against a backdrop of heightened awareness of the TSCA’s limitations and of reform initiatives in the EU and elsewhere. In 2005, the Government Accountability Office (GAO) produced a report reviewing options for chemicals reform in the United States.\textsuperscript{120} This included a review of EU and Canadian chemicals legislation, and included among its recommendations that the TSCA be amended to require chemicals companies to submit to the EPA such information concerning the environmental and health effects of chemicals that these companies submit to foreign governments.\textsuperscript{121}

This report was followed by a second one, issued at the request of two of the Senatorial bill’s sponsors (Senators Boxer and Lautenberg). This second report is expressly framed as a comparison between the TSCA and REACH.\textsuperscript{122} It highlights important differences between the two systems, particularly in relation to the provision of information on chemical substances, the placing of the burden of proof in demonstrating risk, and public access to information. This was picked up by Senator Barbara Boxer, Chair of the Senate Environment and Public Works Committee. At a hearing on

\textsuperscript{118} See also § 1696(2), \textit{id}. While a safer alternative will be presumed to be available if it is sold in the United States, the same is not true if it is being sold in the EU. Also, a safer alternative will be presumed to be available if the priority chemical has been banned by another state in the EU, but the same is not true if it has been banned by the EU.

\textsuperscript{119} The Senate Bill was sponsored by Senator Frank Lautenberg and five co-sponsors: Senators Boxer, Clinton, Kerry, Menendez, and Whitehouse (S3040). The House Bill was sponsored by Representatives Solis, Lee, Miller, and Waxman (H.R.6100). The Senate Bill is currently before the Senate Committee on Environment and Public Works. The House Bill is currently before the House Subcommittee on Environment and Hazardous Materials. A similar bill had already been introduced in 2005.

\textsuperscript{120} GAO, 2005, \textit{supra} note 29. It did so in response to a request by two of the Senatorial bill’s sponsors (Senators Jeffords and Lautenberg), along with Senator Leahy.

\textsuperscript{121} \textit{Id.}, at 37.

\textsuperscript{122} GAO, 2007, \textit{supra} note 29.
federal control of toxic substances she noted that “REACH puts the burden on the chemical industry—where it should be—to show that their chemicals are safe . . . We must strengthen our toxics laws to ensure that chemical companies are responsible for proving that their products are safe.” It is in the light of this background that the Kid-Safe Chemicals Act has been widely reported as representing a U.S. version of REACH.

Though the Kid-Safe Chemicals Act does not refer explicitly to REACH, the international context is apparent in the Preamble which notes:

(10) there is significant global trade in the chemical sector and many of the companies that conduct business in the United States must also comply with chemical safety regulatory programs in other countries; and
(11) the data that is generated to comply with these other regulatory programs would be useful in understanding hazards presented in the United States.

The substance of the bills builds upon these considerations and picks up on the suggestion in the first GAO report that information on chemicals submitted to foreign governments could be useful in the United States. The bills would require chemicals manufacturers to submit all reasonably available information in their possession or control regarding the physical, chemical, and toxicological properties of the chemical substance. Additional information must be made available upon request. Information submitted during the registration or authorization phases of REACH would clearly be deemed to be reasonably available. Similarly, information submitted as part of a REACH consultation exercise, for example, in relation to a substitution analysis, would likewise be covered. REACH places a heavy emphasis on transparency and demands that almost all information held by the European Chemicals Agency be made publicly available,

123. http://epw.senate.gov/public/index.cfm?FuseAction=Hearings.Hearing&Hearing_ID=78361662-802a-23ad-48ec-4d86b5e5337. See also the testimony of the Honorable James B. Guilliford, Assistant Administrator, Office of Prevention, Pesticides and Toxic Substances at the EPA who refers to on-going chemical assessment and management efforts outside of the United States and to the fact of on-going consultations with Commission officials dealing with REACH and with OECD countries. He believes that “it is vitally important to invest in this coordination, to the greatest extent possible, so that our efforts and the international efforts to assess and manage chemicals are utilized to leverage work, avoid duplication, and improve protection of public health and the environment, both at home and abroad” (at 5-6).

124. See, for example, http://www.nexreg.com/regulatorynews/index.php/category/agency/kids-safe-chemical-act/ “on a bill that sounds an awful lot like the EU’s REACH.”

125. GAO, 2005, supra note 30, at 37. This is also reflected in the California Green Chemistry report (supra note1) and in the Lowell Center report (supra note 94).

126. Supra note 142, § 502(a)(2).

127. Id., § 506.
free of charge, over the internet. As a result, the incentive to conceal any such information is much reduced.

While the fate of these federal initiatives is by no means clear, current circumstances seem propitious for reform. The sponsors of the two bills are Democrats, and a number are now in positions of considerable authority. Representative Henry Waxman, one of the sponsors of the House bill recently ousted Robert Dingell as Chair of the influential committee on Energy and Commerce, while Senator Frank Lautenberg has been appointed Chairman of the Environment and Public Works Subcommittee on Superfund, Toxics and Environmental Health. Hearings on re-visiting the TSCA have already begun in the House Subcommittee on Commerce, Trade and Consumer Protection.

III. LEVERAGING REACH: NGO ACTIVISM AND ITS IMPACT IN THE UNITED STATES

The previous section of this paper argued that European chemicals regulation has a significant impact on regulatory debate and reform in the United States. This section of the paper examines the way in which NGOs in the United States and the EU are attempting to leverage and push forward toxicity disclosure under REACH to influence consumer and producer awareness and behavior.

Before looking at the role of a number of NGOs, it is worth recalling the nature and limits of information disclosure under REACH. It will be recalled that the primary mechanism for generating, collecting, and disseminating information is the registration process. It is important to be aware that registration requirements apply to all chemicals manufactured in the EU, imported into it or exported from the EU.

128. See esp. REACH, arts. 118-19.
129. At least one campaigning group has realized that this seems a good time to push hard for reform. See the letter to President Obama calling upon his administration to reform U.S. chemicals policy by, among other things, aligning it with REACH, at http://www.louisvillecharter.org/whatsnew.obama.shtml. It was penned by the Louisville Charter for Safer Chemicals, A Platform for Creating a Safe and Healthy Environment through Innovation.
132. The Subcommittee on Commerce, Trade and Consumer Protection re-visited the subject of reforming the TSCA at a hearing on Feb. 29, 2009. In his opening statement, Rep. Henry Waxman noted: “We will learn from what has been done in the states and in other countries to create a more effective system of protecting against the dangers of toxic Chemicals.” (http://energycommerce.house.gov/Press_111/20090226/hawopen_ct.pdf).
Richard Denison who played a central part in bringing the “SIN-List I” to the United States in his role of senior scientist at the Environmental Defense Fund testified at these hearings, calling careful attention to the reforms introduced in the EU as a result of REACH (http://energycommerce.house.gov/Press_111/20090226/testimony_denison.pdf).
133. REACH, arts. 5-7.
it. Additional information is made available regarding substances included on the candidate list for SVHC. For these substances, an additional notification requirement applies for substances in articles. This notification requirement pertains to SVHC, even when the substance in question is not intended to be released, although still a number of threshold requirements and exceptions apply. Information submitted as a result of registration or notification is available on the Helsinki-based European Chemical Agency’s database. It is also possible, in relation to substances included on the candidate list of SVHC, for consumers to request that the supplier of an article containing such a substance provide “sufficient information, available to the supplier, to allow safe use of the article.” This must include, as a minimum, the name of the substance concerned. This information must be made available, upon request, even when the substance is neither intended to be released nor actually released. There is nothing in the text of the regulation to suggest that consumers outside of the EU are precluded from entering a request for this information, so long as the entity supplying the article is based inside the EU.

While REACH does unequivocally increase the global pool of information available about chemicals, there are important limits and shortcomings in how it does so.

First, and self-evidently, the informational obligations under REACH do not apply to chemicals that are neither manufactured in Europe nor imported into it. Manufacturers in the United States will not be required to comply with these requirements except when they

134. See REACH, Recital 7, Preamble, which makes it clear that in so far as obligations under REACH apply to the manufacturing of substances, they also apply if substances manufactured in the EU are exported.

135. REACH, art. 7(2). Additional information will also be generated during the authorization processes for substances included on the final list of substances requiring authorization.

136. It does not apply, for example, when the producer or importer can exclude exposure to humans or the environment during normal or reasonably foreseeable conditions of use, including disposal. The burden to demonstrate this will rest on the producer or exporter, and the data will be read in the light of the precautionary principle. See art. 7(3) and supra note 89.

137. REACH, arts. 118-19.

138. Art. 33(2) refers to art. 59(1) of REACH, which concerns the candidate and not the final list. This is subject to the exception highlighted in supra note 136.

139. Art. 33(2), REACH. This is subject to a concentration threshold of 0.1% w/w. The obligation in art. 33(2) is not, however, subject to the one-ton volume threshold which applies to registration and notification requirements, including the notification requirement relating to SVHC in articles (see art. 7(2)).

140. In contrast to most of the terms used, the concept of a consumer is not defined by reference to geographical location. Other concepts, also highly relevant in determining the extent of the various information burdens arising under the Regulation, are defined to exclude those who are not established in the EU. This includes references to downstream users which must, be definition, be established in the EU (art. 2(13)) REACH.
want to do business in Europe. This will also be true for companies headquartered in Europe but manufacturing elsewhere. Thus, a U.S. or European manufacturer producing and selling a consumer article in the U.S. will have no obligation under REACH to provide information about the presence of a SVHC.

Second, and less obviously, while REACH is generating a vast array of information, the data do not always come in a form that is easily accessible to or readable by everyday consumers. Especially when it comes to labeling, it can be argued that REACH does not go far enough. Both the EU and the United States are committed to implementing the Globally Harmonised System of classification and labeling of chemicals.\footnote{For information on the Globally Harmonised System, see http://www.unece.org/trans/danger/publi/ghs/ghs_welcome_e.html. For a useful discussion of the background to this in the EU, see http://ec.europa.eu/enterprise/reach/docs/ghs/ghs_further_background_en. For the EU proposal, see OM(2007) 355. For the U.S. situation, see http://epa.gov/oppfead1/international/globalharmon.htm. This page includes links to the EPA and other relevant agencies detailing implementation in the United States.} While this requires hazard warnings to be affixed to dangerous substances and preparations (mixtures), it does not extend to the labeling of substances contained in articles.\footnote{There is one minor exception. Note also that Annex XVII REACH restrictions may impose additional labeling requirements. When they do, labeling requirements should be treated as manufacturing requirements, and hence as applying also in the case of exported goods. Note though that a proposal is pending to ensure that the EU “eco-label” may not be attached to any product containing a substance of very high concern (http://chemicalwatch.com/1814).} By contrast to the most innovative and effective experiments in regulation through information, such as California’s Proposition 65,\footnote{For a discussion, see Clifford Rechtschaffen & Patrick William, The Continued Success of Proposition 65 in Reducing Toxic Exposures, 35 ENVIR. L. REV. 10850. Rechtschaffen and Williams offer many examples of companies, confronted with a labeling requirement, choosing instead to reformulate their products. In one example, having reformulated the product, the company began to advertise it as lead-free. The authors also offer examples, in which the introduction of labeling requirements led, over time, to the withdrawal of the product from the market, sometimes nationwide. Among the many rich details emerging from this account is the important role that NGOs have played in exploiting Proposition 65’s potential.} REACH does not require consumer warnings to be issued, even where the substances are intended to be released, and even where they are SVHC. While in many situations, consumers will be able to obtain information about the presence of SVHC in consumers products from the Chemical Agency’s database, in cases where they cannot, the consumer will be obliged to register a specific request that the supplier provide this information in accordance with Article 33(2).\footnote{Recall that this will be the case when one of the thresholds for registration or notification of substances in articles in art. 7 is not met, or when a manufacturer has succeeded in discharging its burden of proof under art. 7(3) in relation to SVHC, and has demonstrated that exposure to humans or the environment will be excluded during normal or reasonably foreseeable conditions of use.}
It is in the light of these limitations that consumer and environmental organizations in the United States can play a critical role in accessing, disseminating, and making accessible the information that REACH makes available.

One interesting example of how REACH has been leveraged by environmental NGOs occurred in the context of the publication of the so-called chemicals “Sin List 1.0.” This list was drawn up by the Gothenburg-based NGO, the International Chemical Secretariat (ChemSec).145 This NGO signalled its objective to make the benefits of REACH accessible to non-EU NGOs through the publication of a report, “Using Reach Outside Europe,” in November 2008.146 This report offers a straightforward description of the REACH system, including details about how to access the information generated by REACH. The report asks “What you [NGOs outside Europe] can get from REACH?”147 It demonstrates how REACH can be used “as a showcase and a model when campaigning on the creation or development of policies in other countries,”148 and suggests that the data generated by REACH can be used by NGOs in specific campaigns.149 ChemSec encourages campaigners to use REACH to expose the “double standards” of multinational companies which continue to use or produce chemicals in the rest of the world that they no longer use in Europe.150 It also suggests that the right to request information from suppliers about SVHC in consumer products represents “a great step forward.”151 and that the candidate list of SVHC provides a useful tool, especially in campaigns focusing on specific substances, products or companies.152

European environmental NGOs have expressed frustration and concern with REACH.153 In particular, NGOs have been frustrated

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145. For the website of the Swedish-based NGO, see http://www.chemsec.org/. The International Chemical Secretariat is a non-profit organization “dedicated to working towards a toxic-free environment.”
146. See also the recent report published by this group entitled, Campaigning Against Toxics: Using REACH Outside Europe (2008), at http://www.chemsec.org/downloads/?filename=using_reach_outside_europe.pdf.
147. Id., at 12.
148. Id., at 19.
149. Id., at 20.
150. Id., at 20-22. The first California green chemistry report offers the example of BASF which continues to produce and sell the chemical DEHP in the United States even though it has been banned and replaced with a safer substitute in Europe (Wilson, supra note 16, at 64). DEHP is used in the production of PVC and is classified in the United States as a probable human carcinogen. See http://www.epa.gov/ttn/atw/hltheqeth-phth.html.
151. Supra note 146, at 16.
152. Id., at 20.
153. Even the ChemSec report discussed above includes a section outlining its shortcomings (supra note 146, 11). This focuses on the limitations in its scope in terms of the chemicals it regulates, the weakness of the substitution requirement in relation to SVHC, and the confidentiality exception when it comes to public access to information on the Chemicals Agency database.
by what they see as the snail pace of REACH implementation, particularly with regard to the initial listing of candidates for SVHC status. Indeed, REACH only released its first candidate list of fifteen SVHCs on October 28, 2008.\textsuperscript{154}

As a spur to this slow progress, the ChemSec drew up and published its own list of potential SVHCs on September 17, 2008 at a Substitution Conference in Brussels, Belgium.\textsuperscript{155} The document was dramatically titled the SIN list 1.0 where SIN stood for “Substitute It Now” and “1.0” suggested a first iteration of an ongoing process of SVHC identification. It was developed as a “self avowed tool for phasing out chemicals of high concern.”\textsuperscript{156} The production of this list of 267\textsuperscript{157} chemicals appears to have been scientifically rigorous and used the criteria laid down by REACH for identifying SVHC. In the publication of their methodology, the authors of the report were candid about the limitations of their work and to the possibility that some of the chemicals on their list might not finally be judged to be SVHCs. On the other hand, the authors also note that it is likely that some SVHC that did not get through the strict screening for Sin List 1.0 might end up on REACH’s candidate list for SVHC.\textsuperscript{158}

ChemSec has been active in promoting its SIN List in the United States, with its representatives speaking at conferences there.\textsuperscript{159} One of the topics on their agenda is how the SIN List can be used to advance state and federal chemicals assessment and management legislation.


\textsuperscript{155} In order to ensure an early start and proper execution of this vital process, ChemSec in collaboration with leading NGOs in the EU and beyond is developing the REACH SIN* List. The aim of this project is to ensure that Authorisation is an effective tool to fast-track the most urgent Substances of Very High Concern for substitution, and to facilitate toxic use reduction by businesses.


This was done in collaboration with an NGO advisory Committee consisting of the European Environmental Bureau, the WWF European Policy Office, Friends of the Earth Europe, the Greenpeace European Unit, the Instituto Sindical de Trabajo Ambiente y Salud, the European Consumers Organisation, Women in Europe for a Common Future, the Center for International Environmental Law, and the Health and Environment Alliance.

\textsuperscript{156} See http://www.chemsec.org/documents/081021_what_is_the_sin_list.pdf.

\textsuperscript{157} For the full list and searchable database, see http://www.chemsec.org/list/database/index.php.

\textsuperscript{158} http://www.chemsec.org/documents/080917_SIN_List_methodology.pdf.

\textsuperscript{159} For the program of the San Francisco workshop, see SIN List Initiative Spreads Influence to USA, at http://chemicalwatch.com/1661 and http://sinlist.eventbrite.com/. It is entitled “Substitute it Now: Understanding the Origins and Exploring the Potential of ChemSec’s Bold List of “Bad Actor” Chemicals.” The program for the RAPRA workshop (consultants to the rubber and plastics industry) can be found at http://www.rapra.net/products_and_services/Conferences/REACH_HOUSTON_2009.asp. The discussion of the SIN List is just before lunch on day three.
Also, the publication of Sin List 1.0 had been much anticipated and, within two weeks of its launch in Europe, a major U.S.-based NGO, the Environmental Defense Fund had produced and published a report entitled, “Across the Pond: Assessing Reach’s First Big Impact on US Chemicals and Companies.” This report married the European Sin List 1.0 chemicals with publicly available Environmental Protection Agency data released in 2002 to produce a detailed mapping of the production and import of the chemicals on the Sin List 1.0 in the United States. Among its finding the report noted that:

- “Many, and likely most, SIN List chemicals [were] in active commerce in the U.S.”
- “At least 85 SIN List chemicals [were] produced annually in amounts of one million or more pounds, and at least 14 [exceeded] one billion pounds annually.”
- “Only about one-third of the SIN List chemicals on the TSCA Inventory [had] been subject to testing or other data development programs under TSCA.”
- “Only two SIN List chemicals [had] been subject to any regulation under TSCA, and even these only under narrow conditions.”

Overall, the report concluded that:

Taken together, our findings suggest that REACH’s focus on SVHCs can be expected to have a major impact on chemical production and use in the U.S. and on the companies that make, export or import chemicals. Hundreds of companies in the United States produce or import hundreds of chemicals designated as dangerous by the European Union (EU), and hence will be directly impacted by controls imposed on such chemicals under the EU’s new chemicals regulation.

The author of the report, Richard Denison, a senior scientist at the Environmental Defense Fund, warned that the extent of production of chemicals in the United States “designated as dangerous by EU

160. Note also the various campaigning activities of the Center for International Environmental Law, which was a member of the Advisory Committee for the development of SIN List 1.0, and in particular the work of Daryl W. Ditz, a Senior Policy Advisor at CIEL. For an example, see Daryl W. Ditz, Targeting SVHCs: A Sneak Preview of the CHEMSec “SIN List, at http://www.reach-usa.com/presentations/REACH2008-session%202d-ditz.pdf. This campaigning work is directed not only at consumers but also at suppliers, retailers, and investors.


162. Id., at 6.

163. Id., at 3.

164. Id., at 4.

165. Id., at 16.
Denison also urged regulatory reform:

Scrutiny of these chemicals is only going to grow, so chemical companies should support efforts to modernize the decades-old U.S. chemicals policy that has shielded chemicals from needed testing and appropriate control.167

While the Environmental Defense Fund report does not engage directly in the task of revealing which of the hazardous substances concerned are included in which products present on the U.S. market, this would seem to be a logical, if arduous, next step. It would imply an expansion of existing initiatives such as the “healthy toys” database, which provides information on the presence and levels of six substances in children’s toys.168

It is interesting to see, then, the way that an EU-based NGO’s response to REACH was picked up by (or more likely co-ordinated with) a U.S. NGO to identify the production, location, and ownership of possible SVHCs in the United States.

Not surprisingly, the publication of the EDF report provoked a response from the American Chemistry Council, the US chemicals trade association. Rather than engaging with the substance of the report, the ACC argued in a press release that non-governmental public interest groups had “created wish-lists and reports which distract attention from efforts to effectively implement the law, and that could undermine the law’s effectiveness” and that the EDF report compounded “the potential for confusion in chemical value chains” and created “the potential for unwarranted public concern.”169

It is difficult to assess the overall impact of NGO activism in the field of U.S. chemicals production, consumption, and regulation. Nor is it easy to establish direct causal links between specific NGO initiatives and changes in either consumer concerns and behavior or changing industry practices. But we can offer some interesting exam-
ples that appear to show some direct and indirect linkages to U.S. NGOs leveraging REACH and changes in consumer behavior.

With regard to consumer concerns and consumption, the U.S. campaigning group, “MomsRising,” took part in a November 2008 submission to the (then) President Elect, Barak Obama, through his website that had been set up to garner input to the new administration. The submission was from a group of scientists, physicians, health advocates, and parent groups and asked to bring to a halt to “the urgent chemical exposure crisis in the US.” In announcing the submission, Joan Blades, co-founder of MomsRising tellingly said,

Our members don’t want to have to feel like they have to be research chemists to buy products for their children. Chemical regulatory reform is past due. It is outrageous more and more parents look for labels that say items meet European regulatory standards, because American standards are not to be trusted. We want our families protected from chemical exposure.

In October 2006, Walmart, the biggest retail chain in the United States, announced that it was establishing a Preferred Chemicals Policy “to establish a clear set of preferred chemical characteristics for product ingredients.” According to the company, the purpose of this initiative is to drive the development of more sustainable products for “mother, child, and the environment.”

Although Walmart’s initiative predated the emergence of the first REACH SVHC candidate list and the ChemSec Sin List 1.0 in 2008, the emergence of these lists (and of further future additions to them) gives them a headline-grabbing potential in a media world sensitized to toxic scares. One U.S. consultancy which works with

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170. Http://www.momsrising.org/node/1204. This now defunct website was previously found at http://change.gov/ and was the precursor to the still live http://www.obamaschange.com/.


172. See http://www.greenbiz.com/news/2006/10/31/wal-mart-use-preferred-substances-chemical-intensive-products and Walmart’s Chemicals Intensive Products Fact Sheet, at walmartstores.com/download/2341.pdf. Walmart is by no means alone in this. It has been reported that major businesses from virtually every downstream sector are taking action on chemicals of concern. Whether it is Wal-Mart and Marks & Spencer in the retail sector, Nokia and HP in the ICT sector, Volvo and Volkswagen in the automotive sector, or Nike and the Gap in the apparel sector, all of these companies have identified chemicals of concern and are seeking to screen them from their supply-chains.

business and advocacy organizations seems to have this possibility in mind when it reports that the “media and NGO scrutiny is likely to attract public awareness and concern—even when authorization [of a Substance of Very High Concern] is agreed.” And U.S. industry observers have likewise warned of a “chemical of the month” pattern emerging, whereby “NGOs continuously exploit information available under REACH to raise awareness of the potential impact of chemicals in consumer products.” There is also evidence from Europe that substance lists, such as the candidate list of SVHC, come to be treated by some downstream users as lists of substances which must be excluded from products. The behavior of firms varies, of course, but for companies manufacturing consumer goods, especially branded goods, the “announcement effect” associated with the adoption of a list of this kind can be compelling.

U.S. environmental NGOs such as Environment Defense Fund have clearly appreciated and developed the important leverage that the emergence of REACH has made possible. Thus they have constructed an important “information brokering” role seeking to maximize the impact of information by presenting it in a way which is contextualized, relevant, media savvy, and meaningful both for firms and for individuals.

Establishing the causality between this leveraging activity and changing consumer behavior is clearly difficult but when retailers, producers, and consumers make clear reference to European standards and the adoption of REACH, it would seem that the NGOs’ targeted and timely activism has not been in vain. Additionally, it suggests that law’s migration can work in many ways even if it does not result in regulatory reform.

173. Id. (SustainAbility article).
174. Id. (SustainAbility article).
176. See David. W. Case, Corporate Environmental Reporting as Informational Regulation: A Law and Economics Perspective, 76 U. C. L. Rev. 379 (2005). Case points to the important role of well organized and well resourced environmental groups in inducing “beyond-compliance” environmental performance. He emphasizes the crucial role that mandatory information disclosure requirements can have in facilitating the performance by these groups of their monitoring function (pp. 420-22).
177. A prominent and systemic example in the United States is the “Scorecard” initiative at http://www.scorecard.org/. Based on data compiled under the Toxic Release Inventory, this allows internet users to find out about pollution in their community. It is possible to search by postal code and also by company, location, chemical, or sector. It is also possible to ascertain “[w]ho’s polluting?” “[w]here is the worst pollution?” and to “[c]ompare communities and states.” TRI does not, however, collate information on the presence of substances in consumer articles, but is rather concerned with releases to the environment.
IV. JOURNEYING EASTWARDS: REACH PROVIDES A FRAMEWORK FOR COMPETITION-BASED REGULATION

So far, this paper has focused on the actual and possible effects of REACH in the United States. This section looks in the other direction and highlights the way in which REACH invites the participation of interested parties in the course of its implementation. This includes interested parties from outside the EU. At certain crucial junctures in the course of its implementation, REACH not only invites participation, but actually generates an economic incentive in favor of it. It will be argued below that REACH gives rise to a form of “competition-based regulation,” and that U.S. actors can participate in this competition.

Interested parties may, for example, submit comments on a proposal to restrict the manufacture, marketing or use of a particular chemical. They may similarly submit comments on proposals to add a substance to the candidate list of substances requiring authorization. These comments must be taken into account. The concept of an interested party is nowhere defined, and it is sufficiently open-ended to embrace a wide range of entities, including industry, non-governmental associations, and even individual scientists. Experience teaches that it is sufficiently broad to encompass entities outside the EU. Companies or NGOs based in the United States, or government agencies such as the EPA, could therefore all participate in this way.

The participatory possibilities to interested parties become particularly interesting and important when it comes to the authorization of chemicals of very high concern. It will be recalled that SVHC require use-specific authorization. For most of these substances, authorization will only be granted where no suitable alternatives exist. Suitability will be assessed in light of the rela-

178. Art. 69(6) REACH.
179. Art. 59(4) REACH.
180. See, for example, art. 64(3), 70 and 71(2) REACH.
181. Electronic forms are provided on the ECHA website in order to facilitate submission of comments and information, making it easy to participate regardless of geographical location. The recorded minutes of the 3rd meeting of the Member State Committee September 30, 2008, record that a number of interested parties participated in the consultation process in relation to the sixteen dossiers submitted to encourage the inclusion of certain chemicals on the list of substances of very high concern. While the identity of these interested parties is not disclosed, the record states that “[a]ll proposals have been commented. Comments have been received from seven Member States, national and international NGOs, industry associations, companies, national authorities as well as individual persons from EU, US and Japan.” This clearly attests to the possibility for third country actors to participate. See Item 11, at http://echa.europa.eu/doc/about/organisation/msc/meet_min_msc_3_20080903.pdf.
182. Recall again the discussion in Section 1, in relation to the conditions for authorization of SVHC.
tive risk profile of the alternative, and of the economic and technical feasibility of substitution for the applicant chemical.\textsuperscript{183}

It is for the applicant to show that the conditions for authorization have been met, including the absence of suitable alternatives.\textsuperscript{184} As a result, the applicant is required to present an alternatives analysis. However, the applicant’s claims do not go unchecked. The Agency Committee on Risk Assessment issues an opinion on the risks associated with alternatives, and the Agency Committee on Socio-Economic Analysis issues an opinion assessing the technical and economic feasibility of substitution. In preparing these opinions, the Agency is obliged to take into account information on alternative substances or technologies submitted by interested third parties.\textsuperscript{185} The draft opinion of the Committee on Socio-Economic Analysis must also include an analysis of these third party contributions.\textsuperscript{186} Moreover, the Agency is not entirely passive in waiting for information to arrive. The Committee for Socio-Economic Analysis may, for example, solicit additional information on alternatives from the applicant, and also from third parties.\textsuperscript{187} Further, the applicant enjoys an opportunity to submit comments on the committees’ draft opinions, and these comments too must be taken into account in the formulation of the final opinions.\textsuperscript{188}

While there is no moment the applicant and interested third parties will confront each other directly in an adversarial process, there is an adversarial process of sorts nonetheless. It is overseen by the Chemicals Agency. Starting with the applicant, there is a back and forth of information and argumentation about the availability and suitability of alternatives. The applicant’s claim for authorization rests upon its ability to demonstrate the absence of suitable alternatives. Interested third parties are empowered to contest its claims. The applicant has a further opportunity to respond. The role of interested third parties allows competitor companies to stake a claim to the superiority and substitutability of their product. They will have a strong economic incentive to do so, given that success will imply that the application for authorization of the substance of very high concern will automatically be denied when a suitable alternative is found to exist.

Of course, the concept of an interested third party is not confined to competitor companies, and there may be other individuals or entities with a public as opposed to a commercial interest in intervening. Independent scientists may use the procedure to contest what they

\textsuperscript{183} Art. 60(5) REACH.
\textsuperscript{184} As discussed supra in section 2. See also arts. 60(2) and 60(4).
\textsuperscript{185} Art. 64(3) REACH.
\textsuperscript{186} Art. 64(4)(b), REACH.
\textsuperscript{187} Art. 64(3), REACH.
\textsuperscript{188} Art. 64(5), REACH.
regard as misleading claims on the part of industry. Governmental agencies inside and outside the EU may step in. Organized civil society may likewise choose to play a role. To take just one example, the Lowell Center for Sustainable Production, based in Massachusetts, runs a well respected chemicals policy initiative that includes a stream on alternatives assessments. It brings professionals together to share information on existing assessment methods, and to draft protocols for performing alternative assessments. Individuals from this Center, or from its associated networks, could play a valuable role in criticizing the alternatives analysis put forward by a company as part of its application for authorization under REACH. Though based in the United States, the chemicals policy initiative lists among its aims to “assist in the development of sustainable chemicals management outside of the United States.”

This invitation for interested parties to participate can be considered a framework for competition-based regulation, operating along the lines proposed by Wendy Wagner, though not in a manner which is identical to her proposal. According to Wagner, a competition-based approach would encourage a chemicals manufacturer to petition the regulator for a finding that its product is superior to that of a competitor. A finding of superiority would be made when one product is shown to be “significantly safer to public health or the environment than a competitor product for an identified use.” According to Wagner’s scheme, a finding of superiority could confer a range of advantages upon the competitor company. It could offer a marketplace advantage by permitting the labeling of a product as superior, or by the linking of government procurement decisions to superiority determinations of this kind. Similarly, its position on the market could be drastically improved as a result of a decision by the regulator to ban or restrict the inferior competitor substance. Wagner offers the example of coal-tar based asphalt sealants. Though shown to leach high levels of very toxic substances, and though less risky alternatives are available at similar cost, these coal-tar based sealants have not been banned by the EPA. Under a competition-based approach, a manufacturer of the less risky sealants would be empowered to petition the EPA for a superiority finding. The information disclosed in the course of the adversarial procedure might even lead the EPA to conclude that the coal-tar based sealants pre-

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189. See http://www.chemicalspolicy.org/.
190. See http://www.chemicalspolicy.org/about.shtml.
191. Wendy E. Wagner, "Using Competition-Based Regulation to Bridge the Toxic Data Gap" 83 IND. L. J. 609 (2008). It should be noted that Wagner expresses disappointment with REACH for not going down this road (at 641). My argument here is that there is a stronger element of competition-based regulation than she suggests.
192. Id., at 642.
193. Id., at 643.
sent an unreasonable risk, and thus to ban their use. Wagner also observes that other entities, such as cities or NGOs, could also be empowered to petition the regulator in this manner.\footnote{Wagner observes that other entities, such as cities or NGOs, could also be empowered to petition the regulator in this manner.}

Wagner argues that a competition-based approach would offer a number of advantages, compared to more traditional command, control, and information-based approaches to chemicals regulation. At the heart of her argument is the capacity of competition-based regulation to generate rich and reliable data about chemicals.\footnote{Wagner argues that a competition-based approach would offer a number of advantages, compared to more traditional command, control, and information-based approaches to chemicals regulation.} It will be for industry to provide this data, and its incentive to do so comes in the form of a competitive advantage. Whereas a manufacturer of a chemical would prefer not to disclose information about risk, competition-based regulation creates an incentive for a competitor to do so. The reliability of the information gleaned in this way can, Wagner suggests, be ensured through an appropriate adversarial process, overseen by a body such as the EPA.\footnote{The reliability of the information gleaned in this way can, Wagner suggests, be ensured through an appropriate adversarial process, overseen by a body such as the EPA.}

Wagner is by no means blind to the potential problems inherent in her favored approach. Among the issues she anticipates is the danger of “underutilization.”\footnote{This could arise because the costs of participation might be perceived as outweighing the potential benefits.} In an adversarial process, there is also always a danger that information might be disclosed which makes the position of the petitioning company worse rather than better. This information might provoke the attention of the regulator, or “generate dreaded tort liability.”\footnote{Also, Wagner’s proposal is explicitly premised upon a strategy of industry divide and rule. But it is “unclear as a political matter whether manufacturers will actually fracture or whether they will instead remain united against regulatory or legislative change.”}

The REACH framework for competition-based regulation is not identical in all respects to the framework Wagner suggests. But it has enough in common with it to be a laboratory for testing the feasibility of this approach and, in particular, for assessing the willingness of competitor companies to step up to the plate to do the “dirty work” that Wagner hopes they will be willing to do.

\footnote{Id., at 645.} \footnote{Id.} \footnote{Id.} \footnote{Id., at 649. The other problems anticipated by Wagner include the danger that there might not be significant safety differences between many chemical substances, the resource, and informational challenge that this approach would present to regulators in making superiority determinations, the fact that the resource demands on competitors might be excessive compared to anticipated benefit, as well as First Amendment and potential anti-trust problems with superiority certification and labeling schemes of this kind.} \footnote{Id., at 648.} \footnote{Id., at 650.}
In certain respects, REACH might be considered a rather robust instance of competition-based regulation. If a suitable alternative exists, the riskier substance will be banned. The resulting promised market-place advantage may be pronounced. Wagner proposes that a superiority certification should depend upon the competitor substance being significantly safer and available at the same cost. Under REACH, even a slightly less risky, but more expensive, alternative will be considered suitable; subject only to the proviso that recourse to it remains technically or economically feasible for the applicant.

In other respects though, REACH undeniably falls short of Wagner’s blueprint for a competition-based approach. As noted, any market-place advantage will accrue to all competitor companies and not merely to the intervening third party. This operates to reinforce Wagner’s concerns about the danger of underutilization, at least when the benefits of a ban would, in practice, be widely shared. Also, the role of competitor companies under REACH is more passive than Wagner would like. Their capacity to intervene is contingent upon a substance being defined as a substance of very high concern or, in the context of restrictions, upon a proposal to restrict the substance coming forward. While third parties enjoy an opportunity to comment on a proposal to include a substance on the candidate list for authorization, or on a proposed restriction, they are not empowered in any way to initiate a proposal of either kind. A competitor company cannot prepare a dossier to contest the boundaries of the regulation in the way that a Member State, for example, can. To return to the coal-tar example, it would not be open to a company to initiate a restrictions process in relation to this product. That prerogative rests with the European Commission and with the Member States. Similarly, even if a company has evidence to suggest that coal-tar based asphalt sealant is a substance of very high concern within the meaning of REACH, it would have to rely upon the European Commission or a Member State to petition for that substance to be included on the candidate list of SVHC.

It is clear then that REACH represents a novel, if imperfect, experiment in competition-based regulation. The competition is not confined to the EU, but is open also to entities situated elsewhere. The EU regulatory process is not parochial. Companies and consumers (or those organized to defend their interests) outside of the EU can intervene in an effort to shape regulatory outcomes. In relation to REACH, law’s transatlantic journeys are therefore two-way. There is a movement of information and ideas about chemicals, and about their regulation, in both directions. REACH has served as a catalyst for regulatory reform in the United States, and is shaping the U.S. market in chemicals. Equally though, REACH is susceptible to being shaped by information and ideas which originate abroad.
V. WHAT CAN REACH TEACH US ABOUT “LAW’S MIGRATION”? 

We see described in this paper the beginnings of an on-going, reciprocally beneficial, exchange of ideas and information about chemicals and their regulation. We see this taking place not only across state lines in the United States, but also across international borders, including in particular the border separating Europe and the United States. We see a balance emerging between the regulatory autonomy of states and nations on the one hand, and information exchange and regulatory learning on the other. Regulatory developments in other states or in other parts of the world are in effect being used as benchmarks to evaluate domestic policy and as a resource in progressive policy reform. As we will see below, this process is likely to continue, as various actors in the United States build positively upon REACH and come to articulate important lessons about its improvement.

Professor Judith Resnik has suggested a framework which is useful in exploring and evaluating the developments described in this paper. In particular, she develops an account of “law’s migration.” She seeks to document the fact of law’s movement across international borders and to show, in the United States, that states constitute important “ports of entry” for foreign law. Arguing that law’s migration is inevitable, Resnik also counsels against efforts to curtail it. She seeks, in part, to show that an openness to foreign law need not run counter to a commitment to democratic federalism. When state legislatures decide to invite foreign law in, democratic federalism may in fact require that federal courts desist from striking

200. This paper can therefore be viewed as having much in common with the democratic experimentalist literature. For a brief overview in the environmental sphere, see Charles Sabel et al., Beyond Backyard Environmentalism (2000). Here the authors confine their discussion to the United States and describe what they call a “rolling-rule regulation.” This combines regulatory autonomy at the local level, information pooling between localities, and benchmarking of performance and revision of minimum standards on the basis of the actual performance of the best performing localities. This, they argue, offers a fruitful combination of localism and the benefits of regulatory decentralization on the one hand, and the discipline of national coordination on the other. Of course, what this paper describes is more ad hoc and spontaneous than the institutional framework for experimentalist federalism put forward by these authors. Nonetheless, there are common elements. This paper illustrates some of the benefits that the authors identify, in particular the importance of regulatory experimentation and the resulting possibility for regulatory learning.


202. Law’s Migration, supra note 1.
their decisions down. Resnik’s arguments reflect her preference for “polyphonic federalism” and her associated belief that the existence of “multiple sites of conflict about social norms” can make a positive contribution to the democratic life of the United States. Resnik is a critic of federal preemption, and of its tendency to shut down the legislative autonomy of states.

Using Resnik’s terminology, this paper attests to the reality of law’s migration. It both re-enforces Resnik’s account and allows us to build upon it in important ways. The paper rests on three main arguments the lessons from each of which will be drawn out later.

Section two of this paper explored the catalyst function of REACH in prompting domestic chemicals reform in the United States. In keeping with Resnik’s account, this example shows that state level legislatures have indeed become important points of entry for foreign law.

Crucially, this section also demonstrates the key role that non-governmental actors have played in bringing REACH to the attention of state officials, and in rendering comprehensible its lengthy and complex precepts and terms. The Lowell Center, for example, has positioned itself as a resource for states in relation to chemicals reform, and as an agent for learning across state borders, also on the basis of experience abroad. This “national” organization maintains a transnational outlook, both monitoring and seeking to influence developments in other countries. Its resource guide setting out options for state chemicals reform draws heavily on REACH, and its State Chemicals Policy database serves, among other things, as a

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203. See supra note 10.
204. Foreign as Domestic Affairs, supra note 1, at 41.
206. Resnik also seeks to explore what she calls the “translocal,” a term she uses to describe translocal organizations of state officials (supra note 1, at p. 34 (Foreign as Domestic Affairs)). There is only limited evidence of this as far as REACH is concerned. Nonetheless, one organization bringing together environmental regulators from different states recently engaged in an “international dialogue on ecological policy,” in part specifically in relation to REACH. See the program for the 2007 Annual Workshop of this group at http://www.mswg.org/documents/2007/Madison/MSWG_Madison_interim_report_8-2-07.doc. The author of this paper addressed this workshop twice, each time including a discussion of REACH, and Robert Donckers from the European Commission also spoke specifically on this subject. The state officials present expressed much interest in REACH at this meeting.
207. Shaffer also places considerable emphasis upon the role of non-governmental actors, especially business and privacy advocates, in facilitating the impact of EU data privacy standards in the United States. Supra note 1.
208. Recall that as an objective of its Chemical Policy Initiative, it lists the goal to “assist in the development of sustainable chemicals management outside of the U.S.” See http://www.sustainableproduction.org/Proj.chem.abou.shtml.
209. Supra note 71, REACH is referred to seven times in the fourteen page executive summary alone.
means of disseminating information about new state initiatives, including those influenced by developments abroad. The Lowell Center also interacts with advocacy groups established in individual states including, for example, the Well Network in California, which has been active in seeking to galvanize state level chemicals policy reform.

Individuals too have used REACH to encourage domestic chemicals reform. Professor John Applegate, for example, has argued that there are strong similarities between the TSCA and REACH, and that reform based on a synthesis of the two would be “evolutionary not revolutionary,” while still greatly improving chemicals regulation in the United States. Similarly, in his “gripping new book,” the journalist Mark Schapiro speculates on the geopolitical consequences of a growing regulatory gap between Europe and the United States, taking REACH as a key example of pushing for regulatory change.

We thus see a strong interest in REACH on the part of many actors in the United States. We see an openness to being inspired by it, and a willingness to borrow from it. What we do not see, however, is any unequivocal or passive endorsement of it. There is no desire or attempt to simply transplant REACH to this new setting. Those who constitute points of entry for this foreign law choose to make selective recourse to it, and to build upon it in accordance with their own priorities and concerns.

In California, for example, the idea of establishing a database containing information on the chemical ingredients of consumer products has been sparked by REACH. This idea has been promoted by the Well Network, an advocacy group that has been active in seeking to galvanize state level chemicals policy reform. The Well Network has called for California and New York “to drive innovation in creating a chemicals policy that protects human health and the environment, by applying lessons of the European Union where significant strides have been made.”

See, for example, its report on Taking it to the States: A Call for Action on Comprehensive Chemicals Policy Development (2006) which calls for California and New York “to drive innovation in creating a chemicals policy that protects human health and the environment, by applying lessons of the European Union where significant strides have been made” (at 4), at http://www.wellnetwork.org/well_network%20PDF%20for%20download%209-19-06.pdf. With regard to the interaction between the Well Network and Lowell, there is evidence, for example, that staff of the women-led network attended a Lowell Center Conference on Framing a Future Chemicals Policy.

Applegate, supra note 13, at 1.

This article refers to MARK SCHAPIRO, EXPOSED: THE TOXIC CHEMISTRY OF EVERYDAY PRODUCTS AND WHAT’S AT STAKE FOR AMERICAN POWER (2007).

Id., especially chap. 7. Schapiro uses arguments of global prestige and influence to press his case for regulatory change.

This is by contrast to the California RoHS example highlighted in supra note 74.

This is in view of the important critique of “rules globalization” put forward by Veerle Heyvaert, Globalizing Regulation: Reaching Beyond the Borders of Chemical Safety, 36 J. Law & Soc. 110 (2009). The author argues that the globalization of the regulation of one polity can result in a mismatch between global norms and local priorities, especially for developing countries, and thus damage regulatory diversity.
products has recently emerged.\textsuperscript{217} This would go further than REACH in making information readily accessible to consumers.\textsuperscript{218} Recall also, that while it is intended that California’s Toxics Clearinghouse be populated first with data from existing sources, including foreign sources, it is also anticipated that additional data will, when necessary, be gathered at home.\textsuperscript{219} The position of California in relation to REACH is characterized by healthy interest and respect, but unsurprisingly, there is no blind acceptance of the principles, institutions or rules which it propounds.\textsuperscript{220}

This selectivity in looking to and learning from REACH is important. We have seen that the implementation stage is vital under REACH and that the participation of interested parties, including those based abroad, is possible at this stage. In addition, the framework which REACH constructs is self-consciously provisional and is subject to formal review.\textsuperscript{221} Thus a strong possibility emerges that regulatory learning in relation to REACH will go two ways. As governmental actors in the United States look with intense interest to REACH and experiment with ways of making it better, it seems likely that important lessons will emerge for the EU as well.

The story told about the catalyst function of REACH has much to teach us about the drivers and reasons for law’s migration.\textsuperscript{222} The

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  \item \textsuperscript{217} Supra note 93.
  \item \textsuperscript{218} Recall the discussion at the beginning of section 3. Consumers can access information about which SVHC are included in articles, but they are obliged to request that the supplier provide it to them. See REACH, Article 33(3). The final green chemistry report notes almost with a sense of pride that a database of this kind would be a first for California (supra note 166, at 25).
  \item \textsuperscript{219} This is clear from both the recently adopted Californian act on Chemicals of Concern (supra note 87) and from the final green chemistry report (supra note 94, at 28).
  \item \textsuperscript{220} Even in Massachusetts, where aspects of the proposed legislation are closely modeled on REACH, the proposal departs in one important respect from it. By contrast to REACH, it chooses to treat endocrine disrupting chemicals like other chemicals of high concern (for example, carcinogens). In the EU, endocrine disrupting chemicals can only be included on the candidate or final list of SVHC where there is scientific evidence that they have probable serious effects on human health or the environment, and where this gives rise to a level of concern equivalent to that associated with the other substances included on the candidate list. See REACH, Article 57(f).
  \item \textsuperscript{221} See especially REACH Art, 138. This requires the Commission to carry out a variety of specific reviews of the provisions of REACH, in accordance with a pre-determined timetable. It refers to a number of important matters including, for example, the scope of the regulation in terms of the chemicals which it covers, the information to be submitted as part of the registration process (especially for substances in relation to which no CSR is required at present), and the scope of the supply-chain information requirements in Article 33. Also included in this list is an obligation for the Commission to review whether to amend the authorization conditions for substances with endocrine disrupting effects. Experience from abroad could clearly be valuable here especially given the situation in Massachusetts previously described.
  \item \textsuperscript{222} See also Shaffer’s account (supra note 1, at 4) of the impact of EU data privacy standards in the United States and his discussion of its reasons. There is some overlap between the reasons cited here and those highlighted by Shaffer, especially in
adoption of REACH has encouraged critical reflection about the state of chemicals policy in the United States. This has served to intensify already existing concerns about the adequacy of current policy, and to feed the impetus for reform. Fears have also been expressed that REACH could exacerbate chemical safety problems for the United States. As mentioned, the California Green Chemistry report highlighted the danger that firms might be encouraged to shift the production or sale of non-REACH compliant chemicals to the United States, subsequent to the introduction of a European ban.223

The information dimension too is crucial in explaining the impact of REACH. While this is true at both the state and federal levels, it is of particular salience for the states. Arguments of scale would tend to favor the establishment of centralized arrangements for evaluating and prioritizing chemicals, and for generating and disseminating information about the tens of thousands of chemicals currently for sale. In the absence of a centralized system of this kind, it can be daunting for states to act alone. But by prioritizing chemicals on the basis of criteria closely aligned to those set out in REACH, and by borrowing the information generated by REACH, the epistemic challenge confronting individual states is greatly reduced.

When it comes to thinking about reasons for law’s migration, the economic dimension cannot be ignored. There are those who anticipate that REACH will become the de facto regulatory standard for the United States as a whole.

With its recent expansion to 27 member states, the EU now has a population more than one and one half times as large as that of the United States and an economy of roughly equivalent size. Consequently, there is at least some potential for legislation and other policy actions taken at the EU level to create a back impact across the Atlantic in a manner that would have been unlikely as recently as five years ago.224

223. Supra note 1. This fear is also expressed by Schapiro in his book, supra note 213, at 13. He worries that the United States might become a dumping ground for products forbidden because of their toxic effects in other countries.

As noted, the scale of the European market is one factor, as is the multinational nature of business in this sphere. We saw that European companies have large production sites in the U.S. and U.S. companies have big production sites in the EU. In pursuit of economies of scale in an intensely traded sector dominated by multinational firms, it may be that producers will choose to achieve across-the-board compliance with the regulatory demands imposed by REACH.

Whether or not, over time, producers do choose to “trade up” in this way, there is plentiful evidence that the potential for REACH to impact negatively upon transatlantic trade is a key driver in prompting legislative reform. This is perhaps clearest in relation to the proposed Massachusetts reform. Acknowledging the importance of the European market for Massachusetts, this proposed legislation would come close to prohibiting the manufacture and marketing of SVHC in that state.

The third section of this paper builds on Resnik’s account of law’s migration by demonstrating that there are many ports of entry for foreign law. In particular it shows that producers and consumers of chemicals can play an important role in inviting foreign law in. They are strongly encouraged to perform this role by NGO activists who act as information-brokers, both disseminating and explaining the content and normative basis of this foreign law.

Like state governments, NGO activists have not been passive in relation to REACH. While ChemSec and the Environmental Defense Fund recognize the value of an EU list of SVHC, they remain dissatisfied with the scale of the EU’s ambition in giving content to it. While they have been willing to adopt the EU framework for priori-
tizing chemicals under REACH, they have used it to achieve starkly
different results with the enactment of the SIN-List. 229

As noted, Resnik argues that law’s migration is inevitable, and
she is critical of efforts to control it. In view of the finding here that
private, non-governmental actors play a direct role in law’s migra-
tion, 230 it is difficult to imagine how its entry could in fact be
controlled. Certain non-governmental actors play an advocacy role in
relation to foreign law. This is true, for example, of the Lowell Center
with regard to states, and of Environmental Defense with regard to
chemical producers and consumers. However, other non-governmental
actors do even more with foreign law. Some are in a position to
invite foreign law in. Producers, for example, can choose to manufac-
ture in accordance with the demands of REACH. Consumers can
make efforts to purchase only goods that are “EU-approved” or “SIN
List free.” In so doing, these producers and consumers do not ignore
the demands of domestic law, but engage in a kind of over-compliance
which would seem difficult to condemn and almost impossible to
control. 231

The fourth section of this paper examined aspects of the govern-
ance framework established by REACH. It suggested that REACH
not only provides an opportunity for interested parties to participate
in its implementation, but that it also generates an economic incen-
tive for such participation. This is especially true when it comes to
demonstrating the availability of safer substitutes for SVHC. While
the governance structures established by REACH are complex, the
basic argument here is not. It suggests that although REACH un-
equivocally remains a foreign law in the United States, it is a foreign
law which is significantly susceptible to influence from abroad. Gov-
ernmental and non-governmental actors in the United States may
play an active and important role in giving shape to it.

It will be recalled that this paper began by highlighting the ac-
tive opposition of the federal government to REACH. Operating in a
variety of transnational institutions and settings, including global in-
stitutions like the WTO, the United States government argued
against the adoption of REACH and sought to effect its being watered

229. Recall that the EU’s initial candidate list includes 15 substances and the SIN
List 267.

230. We should not assume that non-governmental actors will always organize to
promote an acceptance of foreign law. Resnik offers the example of an ad hoc private
group in the United States, set up to “oppose U.S. affiliation with the Kyoto Protocol.”
Supra note 205, at 60 (“Law as Affiliation”).

231. I say this because of the unjustifiable restrictions on freedom of expressions
that would be necessary in order to do so. Of course there are limits to the protections
offered by the First Amendment, particularly in relation to commercial speech. For a
discussion of these limits, in relation to product labeling and corporate campaigns, see
Douglas A. Kysar, Preferences for Processes: The Process/Product Distinction and the
down. Here, globalization, in the form of inter-governmental interactions, offered an opportunity for one government, acting in close consort with a powerful industry association, to push forward its de-regulatory agenda and to suppress divisions and regulatory anxieties within the United States.

But the paper then offers a very different analysis and account. It highlights the different ways in which this ambitious new law has been seized upon by advocates of regulatory change. In this account, the “national” has been transformed by the foreign. “Domestic” statutes have borrowed from abroad. “National” NGOs have acted as bridging mechanisms for the importation of foreign law, and “local” activists have made common cause with those engaged in similar struggles elsewhere.

With his customary insight, John Applegate notes that “globalization is distinct from traditional international legal order in that it involves transnational impacts in informal, non-hierarchical ways.” In addition, according to the argument of this paper, globalization not only finds expression at the global level but also within the confines of a single nation. Here, globalization, in the form of a transnational transformation of the national sphere, offers an opportunity for a wide variety of governmental and non-governmental actors to seek to destabilize the complacent power of the federal state and to expose, rather than to suppress, divisions and regulatory anxieties within the United States. The adoption of REACH fueled the voices of those who sought to resist the de-regulatory agenda of the federal government. It offered them inspiration and ideas, as well as “the threat” of a good example. More needs to be done to address the palpable shortcomings of the TSCA and REACH makes it clear that more can realistically be achieved, despite all the uncertainties that still surround its implementation. This paper is about more than chemicals regulation, it is also about power, and about the way in which globalization can serve both to entrench and to re-configure power within a nation-state. It should remind governments even in powerful nations that in an era of intense and rapid information exchange, and of global networks of like-minded activists, their regulatory failures can be exposed and challenged in light of legislative developments elsewhere.

**CONCLUSION**

Against a backdrop of intense debates about foreign law in the United States, this paper offers a striking and vivid example of law’s migration. The arrival of the EU’s REACH Regulation in the United

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232. See again the report in supra note 7.
233. Applegate, supra note 13, at 52.
States is not attributable to courts, nor is it the result of any formal hierarchy of norms. It has been seized upon by state legislatures and by a wide range of private actors who have used it as a source of inspiration, ideas, and information in pursuing and promoting regulatory and market-place reform at home. The REACH Regulation has been simultaneously embraced and transformed in the United States, creating opportunities for reciprocally beneficial regulatory learning and for an on-going exchange of ideas about chemicals and about how to regulate them. Foreign law does not always arrive with a bang. It can enter and be diffused discretely through crevices which lie beyond the gaze of the constitutional lawyer. This paper has explored these crevices and sought to map the influence and pathways of foreign law in the United States. It has done so prior to the foreign law in question becoming so submerged beneath layers of domestic adaptation that its influence is concealed and its impact hard to chart.