

COMPENSATING THE WORLD'S LANDMINE VICTIMS: LEGAL LIABILITY AND ANTI-PERSONNEL LANDMINE PRODUCERS*

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I. INTRODUCTION: A BUSINESS ACTIVITY AND ITS CONSEQUENCES

Manufacturing anti-personnel landmines is a business activity designed to accomplish the same fundamental goal as any other business—to maximize profits. Landmine producers have always tried to sell their products for a profit in a competitive market. They have carefully researched and designed their products to maximize effectiveness and to minimize costs.

The producers' efforts and this competitive business environment contributed to making landmines¹ extremely cost-effective for buyers. Prices for some of the most popular and copied models were as low as three dollars,² about the same cost as a pack of

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¹ In this Article, the terms “landmines,” “mines,” or “APMs” refer to anti-personnel landmines, as distinguished from anti-tank mines, water mines, or unexploded ordnance. This usage is purely a matter of convenience. This Article does not explore liability arguments for this latter group of weapons.

² HUMAN RIGHTS WATCH, LANDMINES: A DEADLY LEGACY 56 (1993) [hereinafter

cigarettes or a McDonald's Chicken McNugget Happy Meal.³ Unlike these inexpensive, consumable products, however, landmines were built to last, often beyond their original purpose, which may only be measured in weeks or days. Decades after buyers deploy a landmine, it can still function as effectively as the day it was made.⁴

These selling features—effectiveness, low cost, and long life—not only increased sales and profits, but also unfortunately took the products beyond their intended use and directly caused an enormous number of deaths, injuries, and economic losses for unintended victims. Further, their proliferation and durability have left an astonishing sixty to seventy million landmines still hidden underground in as many as ninety-three countries.⁵ They remain a

DEADLY LEGACY]. Conventional landmines from Western countries range from as low as \$5.80 for a mine from Quimica Tupan, which is in Brazil; to \$6.15 per unit for a Valsella plastic, “non-detectable” mine from Italy; to \$6.70 per unit for a Giat Industry mine from Belgium. *Id.* at 56-57. Non-Western mines often sell at or below the low end of this range, including less than \$3.00 for the Chinese Type 72 mine. *Id.* at 56. On the higher end, the popular Claymore mine—first developed in 1960 and the last mine produced in the U.S. without a self-destruct mechanism—sold about ten years ago at \$27.47 per unit. *Id.* at 56, 65-66. “An estimated seventy percent of Claymores will remain effective for more than twenty years in any climate”; they can kill “within a fifty-meter radius and may incapacitate within 100 meters.” *Id.* at 66. “The Claymore made up eighty percent of all U.S. landmine exports during the 1980s.” *Id.* at 65. According to the International Campaign to Ban Landmines (ICBL), the lowest cost anti-personnel landmines can sell for as little as \$3 each. International Campaign to Ban Landmines, at <http://www.icbl.org> (last visited Mar. 22, 2001) (on file with author). A United Nations report states that average anti-personnel landmine prices range from \$3 to \$15 per unit including, for example, a Brazilian model at \$5.80, a Belgian model at \$6.70, some Chinese models at \$3 to \$4, and a U.S. sale of one million mines at a unit price of \$11.21. *See* DEADLY LEGACY, *supra*, at 62. One of the authors, interviewing a former soldier who laid landmines during the Bosnian War, was told that some mines during that war could be purchased for the equivalent of \$0.60 each. Interview by Richard Murray with Senad, a former Bosnian soldier in Banja Luka, Republika Srpska, Bosnia-Herzegovina (Aug. 18, 1998). By comparison, the same U.N. report notes that some of the more sophisticated anti-tank mines from the United States and Europe can sell for thousands of dollars each. Welcome to the United Nations, at www.un.org/english/ (last visited Mar. 3, 2001) (on file with the author).

³ This comparison was confirmed by a survey conducted by the authors on March 24, 2001 of prices at a Chicago area Walgreen's drug store, where a pack of cigarettes sold for \$4.39, and a McDonald's restaurant, where a Chicken McNugget Happy Meal sold for \$3.14.

⁴ Some experts estimate that landmines have an average life of 50 to 100 years. HUMAN RIGHTS WATCH, EXPOSING THE SOURCE: U.S. COMPANIES AND THE PRODUCTION OF ANTIPERSONNEL MINES 6 (1997) [hereinafter EXPOSING THE SOURCE]; *see also* DEADLY LEGACY, *supra* note 2, at 66 (stating that approximately seventy percent of U.S. Claymore landmines, one of the most widely produced landmines in the world, “remain effective for more than twenty years in any climate”).

⁵ HUMANITARIAN DEMINING PROGRAMS, TO WALK THE EARTH IN SAFETY 4 (1999) [hereinafter TO WALK THE EARTH IN SAFETY] (asserting that ninety-nine countries are

threat to kill or maim more innocent civilians, waste agricultural land, and disrupt economic and social recovery in some of the world's poorest states.⁶

In fact, before the average person can read this Article, a landmine will explode because an innocent civilian—perhaps a farmer or a child—will have accidentally come in contact with it.⁷ He will be severely traumatized by the loss of a limb, burns, blindness, deafness, shock, and/or infection.⁸ Emergency medical care, if accessible, will be rudimentary by U.S. standards, and long-term medical care and psychosocial therapy will likely be unavailable. He will find it difficult or impossible to earn a living. He and his family, who were likely struggling before the explosion, will be devastated.⁹

This may seem to be another horrible and sad event that occurred in a distant place, the unfortunate aftermath of a previous

burdened with uncleared antipersonnel landmines and unexploded ordnance problems, and estimating the number of uncleared landmines at sixty to seventy million); see also DEADLY LEGACY, *supra* note 2, at 3 (estimating 85 to 100 million landmines deployed in at least 62 counties; *id.* at 10 n.15 (noting the similarities between uncleared mines and unexploded ordinances).

⁶ Most recently, in an effort to assess worldwide progress at resolving the landmine crisis, and specifically to monitor the implementation of the 1997 Mine Ban Treaty, the ICBL has begun researching and publishing annual reports, the "Landmine Monitor Reports." See generally HUMAN RIGHTS WATCH ET AL., LANDMINE MONITOR REPORT 1999: TOWARD A MINE-FREE WORLD: INTERNATIONAL CAMPAIGN TO BAN LANDMINES (1999) [hereinafter MONITOR]; SHAWN ROBERTS AND JODY WILLIAMS, AFTER THE GUNS FALL SILENT: THE ENDURING LEGACY OF LANDMINES (1995) [hereinafter ENDURING LEGACY]; U.S. DEP'T OF STATE, BUREAU OF POLITICAL-MILITARY AFFAIRS, OFFICE OF INT'L SEC. OPERATIONS, HIDDEN KILLERS: THE GLOBAL PROBLEM WITH UNCLEARED LANDMINES, A REPORT ON INTERNATIONAL DEMINING (1993) [hereinafter HIDDEN KILLERS].

⁷ With a total of 26,000 victims annually, there is one landmine victim every twenty minutes. See ENDURING LEGACY, *supra* note 6, at 3.

⁸ *Id.* at 8-9; see also DEADLY LEGACY, *supra* note 2, at 4.

⁹ DEADLY LEGACY, *supra* note 2, at 4; see also ENDURING LEGACY, *supra* note 6, at 9.

war that was little reported or understood in the United States. The landmine, it might be assumed, was supplied by a radical or former Communist government, or by some mysterious foreign arms producer. Neither the event nor its causes seem to involve the United States, although on a humanitarian level, there may be some comfort in knowing that U.S. funds support various relief agencies that will try to ease the suffering of this poor victim and his family.

The involvement of U.S. entities in this tragedy, however, might shift U.S. perception of this event. What if that landmine was built in Wisconsin or California, or its parts came from Illinois? What if the producer was a well-known U.S. corporation, with its stock traded on the New York Stock Exchange and an annual report that listed profits generated, in part, from the sale of that landmine? What if that corporation, when it had decided to participate in the landmine industry, knew or should have known its product was more likely to harm civilians after a war than combatants during the war? Further, what if producers had known about an alternative design for their products that could have greatly reduced the risk of such grievous injuries to unintended victims yet still served the buyers' needs? What if producers, to achieve more sales and greater profits, chose the cheaper and more dangerous product design?

In sum, this Article will discuss whether and how landmine producers should be held legally liable when their products have directly caused foreseeable, and possibly avoidable injuries to innocent civilians. The Article will begin, in Part II, with a review of the relevant facts and background, including statistics regarding the size of the landmine industry, the entities that make up the industry, and the innocent civilians who have been victimized by landmines. Next, Part III will provide a legal discussion on the right of injured civilians to recover damages for their losses, including a review of the viability of the various available causes of action. Finally, Part IV will offer a summary and conclusion.

II. BACKGROUND AND RELEVANT FACTS

In the 1990s, documentation on global landmine production, trade, and use, and the resulting impact on innocent civilians finally began to emerge.¹⁰ The discussion that follows includes a brief review

¹⁰ Most of this information, and its public dissemination, is largely due to the extensive work of the ICBL and its component organizations. Much more information regarding the history of the mine action movement and the formation and continuing activities of the ICBL and related organizations is available through the annual Landmine Monitor Reports and the ICBL itself.

of the staggering numbers and life-altering injuries suffered by innocent citizens who are the victims of the landmine crisis. More importantly, however, it also catalogues some of the sources and factors instrumental in creating this global crisis, thereby providing a basis for the subsequent legal discussions.

A. The Landmine Industry and Trade

No one knows exactly how much money companies and government agencies have made producing and distributing landmines. It is estimated, nonetheless, that the trade has involved billions of dollars.¹¹ By the late 1980s and early 1990s, landmine production totaled approximately five to ten million units per year.¹² Around the world, an estimated 100 companies and government agencies competed for \$50 to \$200 million of annual business,¹³ eventually designing more than 340 models of landmines¹⁴ and selling an estimated 190 million units during the period from 1968 to 1993.¹⁵

At the industry's peak, no single entity could rely on landmines as a primary product line because so many companies and agencies were involved.¹⁶ In addition to competition, the fact that the cheapest models dominated the market also limited a single entity's ability to rely solely on landmine production.¹⁷ These "dumb" mines, so named because they have no self-destruct or self-deactivation mechanism,¹⁸ account today for virtually all of the sixty to seventy million landmines hidden underground and the 250 million stored

¹¹ While hundreds of millions of cheap landmines generated \$3 to \$15 each of revenue, resulting in total revenues of over one billion dollars, the newer and more sophisticated landmine models and systems involve considerably larger sums. For example, one leading U.S. landmine producer and its subsidiary received \$486 million in APM and anti-tank contracts between 1985 and 1995. United States Department of Defense records show that Alliant Techsystems (Hopkins, Minnesota) and its subsidiary, Accudyne Corporation (Janesville, Wisconsin), won contracts in this amount for production. *EXPOSING THE SOURCE*, *supra* note 4, at 3.

¹² *MONITOR*, *supra* note 6, at 5; *see also* *DEADLY LEGACY*, *supra* note 2, at 57.

¹³ *DEADLY LEGACY*, *supra* note 2, at 36.

¹⁴ *Id.*

¹⁵ *MONITOR*, *supra* note 6, at 5.

¹⁶ *See* *DEADLY LEGACY*, *supra* note 2, at 35-37.

¹⁷ "Blast" landmines that explode from pressure are the most frequently encountered landmines around the world. These fall into the category of so-called "dumb" landmines. *MONITOR*, *supra* note 6, at 6.

¹⁸ *DEADLY LEGACY*, *supra* note 2, at 65-69. Prime examples of dumb landmines are the Russian PMN, the Chinese Type 72, the U.S. Claymore, and similar landmines based on the Claymore from other producers. *Id.*

in warehouses.¹⁹

B. Producers and Exporters

With profits near the billions and several hundred thousand victims worldwide, the question becomes—what entities produced and profited from the sale of these landmines? This question, not surprisingly, is difficult to answer because of the complexity of the industry, the large number of landmine producers, and the high rate of landmine exportation.

During the past two decades, the landmine industry has become as complex and international as most other major manufacturing industries. Typically, production involved several companies including, those that supplied components and others that completed assemblage.²⁰ Approximately 100 private corporations and

¹⁹ MONITOR, *supra* note 6, at 11, 14-15. Stockpiles are not of immediate concern for the purposes of this Article, but it should be noted that the 250 million figure is based on data collected by the *Landmine Monitor Report* in 1999 and is far higher than the previous common estimate of 100 million stockpiled landmines. These are stored in 108 countries and, while the United States ranks fourth with eleven million mines, it is well behind China, which has 110 million; Russia, which has sixty to seventy million; and Belarus with tens of millions. *Id.* at 11. In one of the most hopeful events since the enactment of the 1997 Mine Ban Treaty itself, the *Landmine Monitor Report* reported that although the total stockpile was much greater than previously believed, the number of APM producers has dropped, more than twelve million stockpiled mines have been destroyed, and, during 1998 and early 1999, no large scale use of landmines was found even though there was not a concurrent decrease in the level of armed conflict in the world. *Id.* at 11. The stockpiles are predominantly dumb mines, and it must be hoped that they will either eventually be destroyed, as contemplated in the Treaty, or at the least never deployed. For further discussion on the destruction of landmine stockpiles, see Mary Wareham, *Antipersonnel Landmine Stockpiles and their Destruction: Landmine Monitor Factsheet*, HUMAN RIGHTS WATCH (Dec. 1999).

²⁰ This circumstance has caused some corporations, who are publicly identified with landmine production, to object that they are being unfairly connected to landmines since their role was limited to supplying components. EXPOSING THE

government agencies, in fifty-nine countries, have contributed to the production of landmines. Of that total, producers in thirty-four countries exported their products around the world (*see Table 1*).²¹

The leading landmine producers and exporters include the United States, but only up until the mid-1980s; China; Italy; and the former Soviet Union.²² Of the sixty to seventy million currently uncleared landmines, approximately nine to ten million originated in the United States²³—a significant share considering fifty-nine

SOURCE, *supra* note 4, at 2. It should be noted that virtually every component of a landmine is necessary to make it the product that is so dangerous to innocent civilians.

²¹ The *Landmine Monitor Report* identifies fifty-nine current and former landmine producing countries, and names thirty-four past exporters. *See* MONITOR, *supra* note 6, at 5-10; *see also* DEADLY LEGACY, *supra* note 2, at 36 (discussing “48 countries which have manufactured more than 340 types of anti-personnel landmines”). It should be noted that very few of the exporting countries suffer from concentrations of uncleared landmines, just as most of those countries suffering the worst concentrations have never exported or even produced landmines.

²² DEADLY LEGACY, *supra* note 2, at 36.

²³ Based on estimates by the United States Department of State, just less than fifteen percent of the uncleared landmines in the world originated in the United States, equal to 9 to 10.5 million of the 59.7 to 69.4 million landmines currently

countries have produced landmines.

The exportation process adds to the identification problem because of its own complexities, often being conducted through intermediaries. In addition, to avoid regulations or public opposition, some producers shifted production away from Western countries, once again making identification more difficult.²⁴

Further complicating the identification task is the fact that landmines have been a relatively small component of the highly secretive arms industry. During the past decade, however, several dedicated and persistent non-governmental organizations (NGOs) have researched and published information about the landmine trade.²⁵

For the purposes of this Article, producers can be divided into three groups: foreign government agencies, foreign private corporations, and U.S. corporations (*see Table 2*).

1. Foreign Government Agencies

Foreign government agencies include state factories and state-owned corporations primarily in communist or formerly communist countries, including China, Russia, Federal Republic of Yugoslavia, Vietnam, and the former Eastern Bloc. Although their landmine products are well documented, little is known about the manufacturing entities or their operations.

2. Foreign Private Corporations

More information is available about some larger and more well-known foreign corporations. In 1993, The Arms Project, a division of

uncleared in the world. MONITOR, *supra* note 6, at 14; *see also* DEADLY LEGACY, *supra* note 2, at 62. Based on their field experience, some demining experts attribute to the United States a greater percentage of uncleared landmines than does the State Department's estimates. DEADLY LEGACY, *supra* note 2, at 62.

²⁴ The United Nations reported that, as public opinion began to mount against mines in Western countries, producers increasingly shifted assembly to local or regional subsidiaries. See www.un.org (last visited Apr. 20, 2000). As an example, the report noted that French and Italian producers had shipped their explosives to Singapore for assembly there. *Id.* These subsidiaries were also used for credit, financing, shipping and other aspects of manufacturing. *Id.*

²⁵ Primary researchers and publishers include Human Rights Watch, Vietnam Veterans of America Foundation (VVAFA), Physicians for Human Rights, ICBL, and some related organizations. Working both separately and cooperatively, these organizations have published reports, which have been printed and often posted on their websites, listing producers, exporters, their products, and sometimes facts from procurement contracts or interviews with corporate leaders or spokespersons. *See, e.g.*, MONITOR, *supra* note 6; EXPOSING THE SOURCE, *supra* note 4; ENDURING LEGACY, *supra* note 6; DEADLY LEGACY, *supra* note 2.

Human Rights Watch, and Physicians for Human Rights collaborated to investigate and publish their findings in *Landmines: A Deadly Legacy*, which includes a list of anti-personnel landmine types and, when known, their specific producers.²⁶

3. U.S. Corporations

The United States was a leading world producer and exporter of landmines during the 1960s and 1970s. It extensively used landmines in Southeast Asia during the Vietnam War.²⁷ Between 1969 and 1992,

²⁶ DEADLY LEGACY, *supra* note 2, at app. 17 (charting anti-personnel landmine types and their producers).

²⁷ DEADLY LEGACY, *supra* note 2, at 17. The entire industry actually developed first with anti-tank mines after World War I, which were then used extensively during

the United States exported at least 4.4 million landmines to thirty-two countries.²⁸ The United States has always led the world in its variety of landmine types, offering thirty-seven models compared with most other countries offering typically five to fifteen models.²⁹ Manufacturing of landmines in the United States took place in twenty-three states.³⁰ In 1975, annual exports peaked at approximately 1.4 million units, and then declined to very low numbers by 1982 and thereafter.³¹

After the Vietnam War, the United States continued to produce and export “dumb” mines, but non-Western producers who could sell their products cheaper than the generally higher priced U.S. models

World War II when they were often combined with anti-personnel mines (APMs). *Id.* at 16. APMs were subsequently used on a large scale during the Korean and Vietnam Wars. HUMAN RIGHTS WATCH ARMS PROJECT, IN ITS OWN WORDS: THE U.S. ARMY AND ANTIPERSONNEL MINES IN THE KOREAN AND VIETNAM WARS 4, 7 (1997) [hereinafter IN ITS OWN WORDS]. The high rate of American casualties from U.S. mines in those wars raised strong debate about their military effectiveness. *See, e.g.*, EXPOSING THE SOURCE, *supra* note 4, at 8 n.18 (quoting retired Marine Corps Commandant General Alfred Gray Jr. as arguing “[w]e kill more Americans with our mines than we do anybody else. We never killed many enemies with mines . . .”). An estimated ninety percent of the mines and booby traps used against U.S. troops in Vietnam were either United States made or included U.S. parts. *Id.* Sixty-five to seventy percent of United States Marine Corps casualties in Vietnam were from mines and booby traps. DEADLY LEGACY, *supra* note 2, at 18. While maintaining its position as a leading producer and exporter of conventional APMs, the Vietnam experience in particular prompted the United States to increase its efforts at becoming the world leader in landmine technology. For more detail, see IN ITS OWN WORDS, *supra* note 27.

²⁸ Exports have included: 2.5 million landmines to Iran, 622,000 to Cambodia, 437,000 to Thailand, 300,000 to Chile, and 102,000 to El Salvador. MONITOR, *supra* note 6, at 328; DEADLY LEGACY, *supra* note 2, at 65. American mines have been sold to Afghanistan, Angola, Cambodia, Iraq, Laos, Lebanon, Mozambique, Nicaragua, Rwanda, Somalia, Vietnam, and other countries. DEADLY LEGACY, *supra* note 2, at 65; *see also* MONITOR, *supra* note 6, at 328-29. Other purchasers of U.S. mines have included: Australia, Belize, Brunei, Canada, Columbia, Denmark, Ecuador, El Salvador, Ethiopia, Greece, Indonesia, Jordan, South Korea, Kuwait, Lebanon, Malaysia, Morocco, the Netherlands, New Zealand, Oman, Peru, the Philippines, Saudi Arabia, Singapore, Somalia, Switzerland, Taiwan, Thailand, Turkey, and the United Kingdom. DEADLY LEGACY, *supra* note 2, at 65.

²⁹ DEADLY LEGACY, *supra* note 2, at 54. After the United States, Italy has the second largest variety of landmines with thirty-six models. *Id.*

³⁰ According to *Exposing the Source*, companies receiving prime contracts from the Pentagon for at least \$1 million of landmine production between 1985 and 1995 were located in: Minnesota (\$336 million), California (\$164 million), Wisconsin (\$150 million), Florida (\$62 million), New York (\$62 million), Pennsylvania (\$51 million), Illinois (\$45 million), Kansas (\$22 million), Indiana (\$20 million), New Jersey (\$18 million), Connecticut (\$18 million), Alabama (\$15 million), Iowa (\$10 million), Ohio (\$8 million), Tennessee (\$8 million), Maryland (\$5 million), Michigan (\$4 million), Texas (\$4 million), and Virginia (\$1 million). EXPOSING THE SOURCE, *supra* note 4, at 13. This list does not include subcontractors. *See id.*

³¹ DEADLY LEGACY, *supra* note 2, at 64, 105, 106.

increasingly supplied this market.³² United States producers then turned their attention to the more lucrative “smart” mine technology and production, and invested billions of dollars in corporate research and development.³³ These new systems often involved “scatterable” models that could be dropped from aircraft or fired from artillery or launchers.³⁴ Specifically, the United States Department of Defense spent \$1.68 billion on scatterable landmine systems between 1983 and 1992,³⁵ and stockpiled an estimated \$5 billion worth of these systems by 1993.³⁶

Although reliable NGOs have identified U.S. companies in the landmine business, no information is available that can connect specific companies to their respective market shares during the highest period of U.S. use and export. Some U.S. corporations, however, were identified in a 1993 report by Human Rights Watch

³² *Id.* at 38-39. By the early 1990s, the newer “scatterable” models were being built in wholly private facilities, but reportedly the conventional landmines were only being manufactured in the United States by private firms under contract to operate government-owned facilities. *Id.* Conventional mine export sales efforts were made almost entirely by non-Western producers, based on a survey of arms trade advertising, brochures, and trade shows. *Id.* at 39.

³³ EXPOSING THE SOURCE, *supra* note 4, at 8.

³⁴ *Id.*

³⁵ *Id.* at n.16; *see also* United States Army, *Anti-Personnel Land Mine Procurement and Production*, at UNITED STATES ARMY INFORMATION PAPER (1992).

³⁶ EXPOSING THE SOURCE, *supra* note 4, at 9.

entitled, *Landmines: A Deadly Legacy*.³⁷ Human Rights Watch continued its investigations after that 1993 report and, in 1997, published “*Exposing the Source: U.S. Companies and the Production of Antipersonnel Mines*.”³⁸ This report was able to provide more details regarding the involvement of U.S. corporations in the landmine industry as a result of more information from government and private sources (see Table 3).

C. Intended Uses, Actual Uses, and Design of the Product

Landmines have provided a number of uses—from advancing strategic military operations to targeting and terrorizing innocent civilians—for their different buyers. For example, military landmine buyers, including both regular and irregular armies, typically used landmines for conventional military purposes. These purposes were predominantly defensive and tactical, such as establishing a defensive perimeter, slowing an advancing enemy army in order to facilitate a retreat, and “channeling” the movement of enemy troops.³⁹ Landmines’ deterrent affects also benefited these buyers; the mere threat of landmines alone was often enough to deny the passage through or use of land.⁴⁰ Other, typically non-military buyers, however, intentionally used landmines to injure and terrorize civilians, depopulate regions, and cripple economic and social structures. They targeted agriculture, transportation, and even schools and water sources.⁴¹

Whether or not landmine producers specifically knew how their products would be used, they did know what the buyers wanted their product to accomplish. Producers designed their products to kill or, more effectively, severely maim people who then required others to

³⁷ DEADLY LEGACY, *supra* note 2, at 72-73.

³⁸ *Id.* at app. A.

³⁹ ENDURING LEGACY, *supra* note 6, at 4

⁴⁰ *Id.* at 4-5 (describing the military perspective on landmine use).

⁴¹ See Shawn Roberts, *No Exceptions, No Reservations, No Loopholes, The Campaign For The 1997 Convention on The Prohibition of the Development, Production, Transfer, and Use of Anti-Personnel Mines and On Their Destruction*, 9 COLO. J. INT’L ENVTL. L. & POL’Y 371, 375-76 (1998). These latter uses clearly violate the requirements of proportionality and discrimination between military uses and civilian consequences under international law. Nevertheless, whether or not such uses of the product conform with established international laws, they mostly occurred during wars and armed conflicts. The very idea of regulating warfare—agreeing to “acceptable” methods and conditions for killing and wounding humans—is a relatively recent phenomenon of civilization that, unfortunately, has not yet found either effective or consistent enforcement. Further, in the use and misuse of landmines, the actors were the armies. *Id.* at 376.

care for them.⁴² Of course, none of these products could distinguish between combatants and civilians, and most landmine producers made no effort to reduce the threat to post-conflict civilians by including simple and readily available⁴³ mechanisms to self-destruct or self-deactivate the landmines after a certain time period reasonable for their intended uses.

Is it possible that most of the sixty to seventy million unexploded landmines currently threatening civilians around the world could have been manufactured to self-destruct within a few days or weeks after their original military use? Such a safer alternative could have avoided the vast majority of civilian injuries, as well as the associated human suffering and medical costs. In addition, a host of other direct and indirect landmine damages, including the economic and societal costs due to the loss of land use, might have been greatly reduced if self-destruct technology had been employed earlier.

Indeed, self-destruct technology has been available since the early days of U.S. involvement in the Vietnam War, first to U.S. landmine producers and shortly after to foreign producers.⁴⁴ Although these first mechanisms were relatively primitive, they did not interfere with the landmines' intended military uses. Some experts might even argue that self-destruct landmines could have enhanced U.S. military effectiveness in Vietnam because the U.S.

⁴² Examples of landmines designed specifically to maim but not kill include the British Ranger scatterable mine, Spanish P-4-A, Swedish LI-11, United States M14, and the Pakistani P4 MK2. DEADLY LEGACY, *supra* note 2, at 22. Regarding this latter model, a Pakistan Ordnance Factories brochure, "Technical Specifications for Mine Anti-Personnel (P4 MK2)," states,

This mine has been designed with a view to disable personnel. Operating research has shown that it is better to disable a man than to kill him. A wounded man requires attention, conveyance and evacuation to the rear, thus causes disturbances in the traffic lanes of the combat area. Also, a wounded person has a detrimental psychological effect on his fellow soldiers.

EXPOSING THE SOURCE, *supra* note 4, at 5.

⁴³ For a discussion on the early availability of technology for self-destructing landmines, see *infra* PART III.

⁴⁴ The BLU 42/B mine included a primitive, electrical self-destruct mechanism and was used by the United States in Vietnam in 1966, but was available as early as 1964. Interview with Mark Hiznay, Senior Researcher, Human Rights Watch (Jan. 8, 2001). This mine, usually dropped by aircraft in a cluster bomb, was also used in Laos and Cambodia. *Id.* Another U.S. self-destructing landmine used in Vietnam was the "gravel mine" which had a canvas casing and included a chemical self-destruct mechanism. *Id.* Over time, two vials inside the mine would chemically dissolve and neutralize the device. *Id.* This mine was also dropped from airplanes, but its use was discontinued due to the difficulty of keeping the mines chilled prior to their use. *Id.*

“dumb” landmine, which was taken by opposing forces and used against U.S. troops, was the greatest single cause of U.S. casualties in Vietnam.⁴⁵

The availability of self-destruct technology more than thirty-five years ago, before the majority of the sixty to seventy million landmines now threatening civilians were manufactured,⁴⁶ raises an obvious question: If that technology could have prevented so many unintended civilian injuries and related costs, while still providing the products’ intended military uses, why was this safer alternative largely ignored? It is difficult to imagine that the marginal cost of including self-destruct technology was prohibitive, especially when compared to the easily foreseeable grievous injuries and immense costs from not including any self-destruct technology.

D. Landmine Victims and Their Needs

“Landmine victims” include many individuals harmed in ways other than direct injury from a landmine explosion. For instance, landmine infestation has rendered enormous amounts of land useless and those property owners have suffered economic loss.⁴⁷ Even worse, such loss of useful land has displaced thousands of civilians, who then may have become internally displaced citizens or refugees.⁴⁸ It also has deterred the return of others.⁴⁹ Competition for mine-free land can interfere with post-conflict resettlement efforts, as well as cause over-grazing and even accelerate deforestation.⁵⁰ The focus of

⁴⁵ For example, in Vietnam during the year 1965, between sixty-five and seventy percent of U.S. Marine Corps casualties were the result of landmines and booby traps. DEADLY LEGACY, *supra* note 2, at 18. Another report found that ninety percent of all mine and booby-trap components used against U.S. troops in Vietnam were of U.S. origin. EXPOSING THE SOURCE, *supra* note 4, at 6. These and related data are discussed more fully later in the “Government Contractor Defense” section of this Article. See *infra* PART III.G.3.

⁴⁶ *The Enduring Legacy* estimates that more than sixty-five million landmines were laid during the period between 1980 and 1995. See ENDURING LEGACY, *supra* note 6, at 3. After allowing for additional mines and demining since 1995, this estimate indicates that the majority of the sixty to seventy million mines currently endangering civilians were placed since 1980. No data is available on the manufacturing dates for these mines, but presumably most were manufactured after 1964.

⁴⁷ Accord Roberts, *supra* note 41, at 375-76.

⁴⁸ *Id.* (discussing depopulation of entire geographic areas).

⁴⁹ Even the threat of mines can displace civilians. As an example, in 1996 a Mozambique village was abandoned by its entire population of 10,000 due to alleged mine infestation. MONITOR, *supra* note 6, at 15. Subsequent demining efforts uncovered a total of four landmines. *Id.*

⁵⁰ ENDURING LEGACY, *supra* note 6, at 11.

this Article, however, is civilian landmine victims who have suffered personal injuries directly caused by landmines during post-conflict periods.

The actual number of landmine victims in the world is unknown at this time. Accurate data from affected countries is difficult to obtain due to lack of funding as well as political or military influences.⁵¹ Nevertheless, the number is very large. The United Nations has estimated the total number of civilian landmine victims at 300,000, and in 1994, reported the number of landmine-disabled people, in particular amputee mine victims that require prosthetics care, at 250,000.⁵² Landmine explosions causing injuries, sometimes referred to as “incidents” or “events,” presently occur worldwide at a rate of 26,000 per year, equal to about seventy each day or one every twenty minutes.⁵³ These figures, in addition to being somewhat dated, may underestimate the total because not all landmine injuries are reported due to the remote locations of such events and other factors.⁵⁴

Another complicating factor is the fact that these civilian victims are located in many countries.⁵⁵ Examples of some of the countries with the worst landmine infestation and civilian impact include Angola, where one in 334 inhabitants are amputees and roughly fifty percent of the country is infested with an estimated six million mines.⁵⁶ Many of these mines are concentrated around infrastructure, schools, churches, water supplies, and healthcare facilities.⁵⁷ In Cambodia, littered with four to six million landmines, one of every forty-five Cambodians are amputees and more than fifty

⁵¹ See MONITOR, *supra* note 6, at 24.

⁵² *Assistance in Mine Clearance: Report to the Secretary-General*, 49th Sess., Agenda Item 22, at 6, U.N. Doc. A/49/357 (1994). In 1999, the *Landmine Monitor Report* estimated the number of landmine survivors in the world at 300,000. MONITOR, *supra* note 6, at 28.

⁵³ This rate is the most commonly quoted from numerous sources but originated with the United States Department of State. HIDDEN KILLERS, *supra* note 6, at 1; see also ENDURING LEGACY, *supra* note 6, at 3. In some subsequent instances the annual rate of 26,000 is noted as referring to all injuries while other sources quote that figure for the number of deaths and note that thousands of non-lethal injuries also occur.

⁵⁴ While recognizing that more accurate data may be very important for planning and implementing victim assistance programs, this Article uses the estimate of 250,000 to 300,000 civilian landmine victims to approximate scale.

⁵⁵ This is not surprising because landmines and other unexploded ordinance currently are located in ninety-three countries. TO WALK THE EARTH IN SAFETY, *supra* note 5, at 4.

⁵⁶ *Id.* at 7.

⁵⁷ *Id.*

new casualties are added each month.⁵⁸ Central America's most mine-infested country is Nicaragua. In that country, civilians comprise eighty-five percent of all landmine injuries and eighty-seven percent of landmine deaths.⁵⁹ It should be noted that each of these three countries is infested with U.S. mines⁶⁰ and are all receiving U.S. financial aid for demining efforts and victim assistance.⁶¹

Landmine victims often suffer loss of limbs, burns, blindness, deafness, and a wide variety of other physical injuries. Extensive blood loss and infection are also common, in part, because landmine explosions destroy blood vessels over large areas of the body and they typically drive dirt, bacteria, clothing, and other foreign matter into tissue and bone.⁶² Reported death rates from landmine injuries range from 3.7 percent to fifty-nine percent,⁶³ depending greatly on the type of mine, the delay between injury and emergency medical care, and the quality of that medical care.⁶⁴

The delay for many landmine victims in reaching proper medical care, which can be hours or even days, is an especially aggravating circumstance. Immediate evacuation and prompt surgical care for landmine victims are critical to minimizing related deaths and disabilities. Military personnel during a conflict may have access to trained medics, helicopters, and well-equipped medical facilities, but civilians injured by mines in post-conflict areas generally do not have such support. A 1991 study conducted in Cambodia, for example, found that injured civilians from rural areas waited an average of twelve hours after their injuries to reach a hospital with

⁵⁸ *Id.* at 18. It is worth noting that this new casualty rate is a marked reduction from 1991 when Cambodia was suffering 300 to 700 amputations per month or an annual amputation rate of about 1 per 1,500 Cambodians. Asia Watch & Physicians for Human Rights, *Landmines in Cambodia: The Coward's War*, at HUMAN RIGHTS WATCH 36 (1991). By comparison, in 1989 the amputation rate in the United States from all traumatic injuries was about 1 per 22,000 Americans. Eric Stover & Dan Charles, *The Killing Minefields of Cambodia*, NEW SCIENTIST, Oct. 19, 1991, at 27.

⁵⁹ MONITOR, *supra* note 6, at 274 (reporting a total of 423 civilian injuries versus seventy-six military injuries, and a total of forty-six civilian deaths versus seven military deaths).

⁶⁰ DEADLY LEGACY, *supra* note 2, at 104

⁶¹ TO WALK THE EARTH IN SAFETY, *supra* note 5, at 7, 18.

⁶² *Id.* at 121.

⁶³ ENDURING LEGACY, *supra* note 6, at 9. The International Committee of the Red Cross reports a mortality rate of 3.7 percent for landmine victims at hospitals, but households in Cambodia and Afghanistan have shown death rates of thirty-one percent and fifty-nine percent, respectively, suggesting that many victims do not reach hospitals and may never be reported.

⁶⁴ See ENDURING LEGACY, *supra* note 6, at 9 (presenting country-specific mortality rates and discussing heightened mortality for those victims who do not make it to a hospital, as well as the often rudimentary first aid that victims receive).

surgical care.⁶⁵ In Angola, the average wait is reportedly thirty-six hours.⁶⁶

Even if a civilian victim can reach a hospital, the available care can be limited due to the lack of supplies, equipment, and skilled personnel. Long-term care and therapy is even less likely. Countries most severely affected by landmines can provide services for only fifteen to twenty percent of the needs of the physically disabled, a category encompassing more than landmine victims.⁶⁷ These healthcare limitations inevitably lead to higher death rates and more serious long-term physical handicaps for landmine victims.

Not surprisingly, the impact on children is the worst. Their smaller bodies are less capable of surviving the extensive blood loss associated with most landmine injuries. Loss of a limb for a growing child also has greater ramifications. A child should receive a new prosthesis every six months, compared with an adult's needs of every three to five years.⁶⁸ This means that children who have lost limbs to landmines may need in their lifetimes twenty to thirty or more prostheses, which each cost approximately the average annual income of an adult in their countries.⁶⁹

These types of facts only begin to tell the story, but landmine victims' fundamental needs are well established. First, landmine victims need emergency medical care, surgeries, and physical rehabilitation. Second, amputees need prosthetics, wheelchairs, and

⁶⁵ DEADLY LEGACY, *supra* note 2, at 127.

⁶⁶ *Id.*

⁶⁷ INT'L TRUST FUND FOR DEMINING AND MINE VICTIM ASSISTANCE IN BOSNIA AND HERZEGOVINA, TO HEAL THE WOUNDS OF EARTH AND SOUL (1998).

⁶⁸ DEADLY LEGACY, *supra* note 2, at 130 (referring to estimates made by the International Committee of the Red Cross).

⁶⁹ *Id.*

crutches. Additionally, most victims need psychosocial rehabilitation and therapy, and many suffer from social stigmas in their cultures. All victims need reintegration into their societies and assistance in returning to productive lives.⁷⁰ Most of these needs are long-term, especially for the children.

The costs of fully providing for the needs of landmine victims is difficult to ascertain. No accurate estimates are available. Of mine-infested countries investigated, "families reported having to spend the equivalent of up to two-and-one-half times their annual income on immediate costs related to the mine injuries."⁷¹ This is consistent with the ICBL estimate that landmine survivors' basic needs would average \$9,000 per victim, which, when multiplied by its estimate of 300,000 victims, led to a call by the ICBL for \$3 billion in worldwide assistance for landmine victims.⁷² Restoring victims to productive lives with proper long-term care, therapy, training, and social reintegration, however, would arguably cost much more than these estimates suggest.

In sum, approximately 250,000 to 300,000 landmine victims have suffered grievous personal injuries that are often inadequately treated, and approximately seventy more civilians around the world are injured every day. Most victims experience permanent disability, loss of income, disruption of their families, and social stigma. Very few receive sufficient long-term care, rehabilitation services, or vocational training. None of them are at fault for their injuries. The financial cost of properly treating their injuries and caring for their needs is unknown but almost certainly would be measured in billions of dollars.

III. LEGAL LIABILITY FOR LANDMINE PRODUCERS UNDER UNITED STATES LAW

A. *Introduction*

As discussed in Parts I and II, landmines have caused the serious injury or death of hundreds of thousands of civilians around the world. The injuries of civilians and their right to recover will be the

⁷⁰ MONITOR, *supra* note 6, at 25.

⁷¹ ENDURING LEGACY, *supra* note 6, at 9.

⁷² In April of 1998, the Victim Assistance Working Group of the ICBL, based on its members' own field experience and survey results from WHO, UNICEF, the American Red Cross, and others, developed a matrix of various costs associated with the basic medical and rehabilitative needs of landmine survivors to arrive at the \$9,000 figure. MONITOR, *supra* note 6, at 28.

focus of the following legal analysis.

A landmine is no different than most other products—it is a good supplied to others for use. Manufacturers of landmines should be held liable, just as other manufacturers are held responsible and accountable, for the dangerous condition of or defects in their products. In order to compensate innocent civilian victims and prevent future injuries, producers of landmines must take responsibility for the damage their products have caused and continue to cause. If they are held responsible and forced to compensate individual victims for their injuries, it is likely that most producers will discontinue production of landmines for fear of lawsuits. Similarly, producers, faced with the possibility of endless litigation given the millions of currently active landmines, may take an active role in demining efforts.

Several causes of action, some stronger than others, could lead to compensation for landmine victims. Several questions, however, must be answered before these causes of action can be pursued by, or on behalf of, the victims. These questions include the following: (1) who are the potential plaintiffs; (2) will individual suits or class actions be most appropriate; (3) who should be named as defendants; (4) should the suits be brought in state or federal court; and (5) what substantive law will govern the adjudication of these claims? Resolving these and related questions will lead to a determination of what kind of suit might be brought. Possible approaches include products liability, strict liability, negligent entrustment, and intentional tort. After determining the cause of action, consideration turns to the form of relief, calculation of damages, and available defenses.

B. Plaintiffs

1. Definition

Landmines directly and indirectly affect many persons. For the purposes of this Article, however, landmine victims as potential plaintiffs are defined as non-combatants who have suffered personal injuries directly caused by landmine explosions during post-conflict periods. In other words, the potential plaintiffs are civilians injured by landmines that were manufactured without self-detonating devices, also known as “dumb mines,” and then left in place after a conflict had ended.

Excluded as potential plaintiffs are combatants and civilian victims injured during period of conflict because certain defenses

likely would bar their claims. Also excluded are persons who have lost property or property value due to landmine infestation because the nature of their claims varies too greatly from the personal injuries suffered by the first defined group.

Nevertheless, even though this definition of potential plaintiffs excludes those injured during military conflicts and those injured by property damage, the number of potential plaintiffs remains very large. As discussed above, it is estimated that landmine victims number between 250,000 and 300,000.⁷³ Further, the most accepted estimate for new landmine injuries is a worldwide rate of 26,000 per year, equal to about seventy each day or one every twenty minutes.⁷⁴ It can be expected, despite demining and landmine awareness programs, that this rate will not significantly decrease in the near future because approximately sixty to seventy million landmines presently threaten civilians.⁷⁵

Further complicating the group of current and future landmine victims as potential plaintiffs is the fact they are located in many countries.⁷⁶ Although 100,000 U.S. citizens have been landmine victims during the twentieth century,⁷⁷ this Article assumes that all potential plaintiffs are foreign nationals.

Finally, the potential plaintiffs suffer a wide range of injuries—many of which may result in death—including loss of limbs, burns, blindness, deafness, loss of blood, infection, and other physical injuries in addition to psychological damage. Of course, death may result from these injuries. This diversity in the nature and severity of injuries could hinder a class action approach that requires commonality of factual issues, although this effect might be lessened by dividing the plaintiffs into subclasses, as discussed later in this Article.

2. Class Action

Class action lawsuits are a viable option for landmine victims because individual suits may become burdensome or take too much

⁷³ See *supra* note 51 and accompanying text.

⁷⁴ See *id.*

⁷⁵ TO WALK THE EARTH IN SAFETY, *supra* note 5, at 4.

⁷⁶ See ENDURING LEGACY, *supra* note 6, at 3 (stating that landmines are found in sixty-four countries, primarily developing states); see also TO WALK THE EARTH IN SAFETY, *supra* note 5, at 4 (noting that ninety-three countries are affected by either landmines or unexploded ordnance).

⁷⁷ Harry N. Hambric & William C. Schneck, *The Antipersonnel Mine Threat: A Historical Perspective*, Symposium on Technology and the Mine Problem, Naval Postgraduate School, Monterey, Cal., November 18-22, 1996, at 1.

time and money to pursue. For example, one particular plaintiff could represent other similarly-situated landmine victims without each victim having to take an active role in the pursuit of litigation.

To bring a class action lawsuit, several requirements must be met. In federal court, there are four prerequisites under Rule 23(a) of the Federal Rules of Civil Procedure, and three requirements under Rule 23(b)(3). First, under Rule 23(a), there must be a sufficient number of class members so as to render joinder of all members “impracticable.”⁷⁸ Second, common questions of law or fact must exist.⁷⁹ Third, the class member who acts as the representative must “‘possess the same interest and suffer the same injury’ as the class members.”⁸⁰ Finally, the class representative must be able to “fairly and adequately protect the interests of the class.”⁸¹

To bring a class action, a class also must meet the requirements of 23(b)(1),⁸² (2)⁸³ or (3).⁸⁴ Because landmine victims would seek monetary damages as their predominate form of relief, Rule 23(b)(3) is the most appropriate class device. Therefore, common questions of law or fact must “predominate over any questions affecting only individual [class] members.”⁸⁵ Second, the class action must be superior to all other possible methods of litigation.⁸⁶ Finally, there can be no undue management difficulties in bringing a class action.⁸⁷

The requirements of Rule 23 will probably only be met in the case of landmine victims if class members are divided into smaller

⁷⁸ FED. R. CIV. P. 23(a).

⁷⁹ *Id.*

⁸⁰ *East Texas Motor Freight Sys., Inc. v. Rodriguez*, 431 U.S. 395, 403 (1977) (internal citation omitted).

⁸¹ FED. R. CIV. P. 23(a).

⁸² *Id.* at 23(b)(1). Rule 23(b)(1) allows certification of a class when “the prosecution of separate actions by or against individual members of the class would create a risk of (A) inconsistent or varying adjudications with respect to individual members of the class which would establish incompatible standards of conduct for the party opposing the class” *Id.* at 23(b)(1)(A). Rule 23(b)(1)(B) allows certification where “adjudications with respect to individual members of the class . . . would as a practical matter be dispositive of the interests of the other members not parties to the adjudications or substantially impair or impede their ability to protect their interests” *Id.* at 23(b)(1)(B).

⁸³ This part of the Rule allows certification where “the party opposing the class has acted or refused to act on grounds generally applicable to the class, thereby making appropriate final injunctive relief or corresponding declaratory relief with respect to the class as a whole” *Id.* at 23(b)(2). The merit of this part of the rule as applied to landmine victims will be discussed below.

⁸⁴ FED. R. CIV. P. 23(b)(3).

⁸⁵ *Id.*

⁸⁶ *Id.* at 23(b)(3).

⁸⁷ *Id.* at 23(b)(3)(D).

groups according to location or perhaps type of injury. There are more than 300,000 victims all over the world and, therefore, one large class would probably not be certified.⁸⁸ It is likely that the prerequisites under Rule 23(a) could be met, but 23(b)(3) creates problems primarily because a class of people around the world would ensure significant management difficulties that a court could consider undue.⁸⁹ Likewise, it is questionable whether a class action would be considered superior to all other methods since individual actions would be easier to manage.

A solution to this problem would be to divide the large number of victims into multiple subclasses. To do this, it would be necessary to look to a specific geographical area where a particular producer is known to have shipped landmines. This would establish a discrete area where the tort took place. Victims in that area could be organized and more easily notified of the suit. As long as there are a sufficient number of plaintiffs to satisfy the numerosity requirement under Rule 23(a), the other class certification requirements would likely be met. Since all plaintiffs would live in one geographical area and were injured by the same landmines, common questions of law or fact would exist. Also, one particular victim would presumably have the same interests and injury as the other victims in that area, thus enabling him to represent the class fairly and adequately. Finally, common questions of fact or law would predominate such a subclass, rendering the class action mechanism superior to all other methods of litigation. Dividing the hundreds of thousands of victims into subclasses would, therefore, allow for an efficient and speedy resolution.

3. Associational Representation

A final consideration regarding class actions is whether a non-governmental organization could bring a suit on behalf of landmine victims. "An association has standing to bring suit on behalf of its

⁸⁸ See, e.g., *Amchem Prods., Inc. v. Windsor*, 521 U.S. 591, 625 (1997) (rejecting a nationwide class for asbestos claimants because individual issues predominated over common issues).

⁸⁹ In *Castano v. The American Tobacco Co.*, the Fifth Circuit refused to certify a nationwide class because of "difficult choice of law determinations, . . . Erie guesses, notice to millions of class members . . ." 84 F.3d 734, 747 (5th Cir. 1996). But see *In re "Agent Orange"*, in which the court allowed television ads and media publicity to serve as notice to thousands of class members. *In re "Agent Orange" Product Liability Litigation*, 100 F.R.D. 718, 730 (E.D.N.Y. 1983). The class here may not be as big as the one in *Castano*, but the location of the potential plaintiffs, as well as their location in poor, technologically deprived countries would make notice especially problematic.

members when its members would otherwise have standing to sue in their own right, the interests at stake are germane to the organization's purpose, and neither the claim asserted nor the relief requested requires the participation of individual members in the lawsuit."⁹⁰

No current NGO is suitable for the purpose of representing landmine victims in such a legal action; however, if one were created, it would need to carefully define the relief sought through its action. If an NGO requested relief involving individual monetary compensation, some participation by the individual members would be necessary, therefore precluding the NGO from representing these individuals.

On the other hand, an NGO might succeed with an associational representation approach if it limited its request to funding for a global trust fund in support of other NGOs and agencies that, in turn, would provide care and support for landmine victims.⁹¹ In terms of standing, management, and effectively representing landmine victims' interests, an associational representation approach through a specially formed NGO—possibly tied to a global trust fund—offers an intriguing alternative beyond the scope of this Article, but worthy of future investigation.

C. Defendants and Personal Jurisdiction

The range of potential defendants in landmine litigation is very broad, at least partially, because landmine production and the chain of distribution have involved a constellation of many entities in a number of the world's states.⁹² Where the plaintiffs file their suit, however, will determine whom they can sue because a court must

⁹⁰ *Friends of the Earth, Inc. v. Laidlaw Envtl. Servs., Inc.*, 528 U.S. 167, 181 (2000). It should be noted that most cases of this type have involved special interest organizations, such as environmental groups, or labor unions.

⁹¹ The concept of a global trust fund for landmine victims is not new and various ideas are currently under study by several mine action NGOs. Nevertheless, the purpose of this Article is to explore compensation theories for landmine victims under U.S. law rather than the possible distribution and administration of funds for the benefit of the victims. Although a global trust fund might provide a useful vehicle within the context of an associational representation approach, this Article takes no position on the trust fund concept itself.

⁹² It should be noted that in all potential defendant categories discussed in this Article, whether governmental or private, the term "landmine producers" includes the entire universe of entities involved in landmine production and the chain of distribution, from component suppliers through assemblage and final delivery to the buyers.

have personal jurisdiction over each named defendant in the case.⁹³ This means that a defendant is only subject to jurisdiction in those places it could “reasonably anticipate being haled into court”⁹⁴ The three basic conditions that render personal jurisdiction are actual presence,⁹⁵ domicile, and business activity.⁹⁶ Victims of landmine explosions could bring lawsuits against defendants in states where a producer is incorporated, where it has its primary place of business, or where it conducts continuous and systematic business.⁹⁷ The litmus test is whether a defendant has such minimum contacts in a forum state that the court, by exerting its jurisdiction over that defendant, does not “offend ‘traditional notions of fair play and substantial justice.’”⁹⁸

1. Potential Categories of Defendants

Landmine victims can look to five categories of potential defendants. First, they could sue the producers of the particular landmines that injured them.⁹⁹ This case would be brought in a state where the defendant was domiciled, actually present, or conducting business.

Second, in the more likely event that a plaintiff could not identify which specific landmine producer was responsible for his injuries, he could name multiple defendants under an enterprise liability theory.¹⁰⁰ This presents a significant problem, however, because defendants’ products cause harm outside the United States. A landmine liability case is not like most products liability cases in which the product either causes harm in the state where the case is eventually brought or where it is placed into the stream of U.S. interstate commerce. Landmines are not manufactured and used in the same place.¹⁰¹ In fact, they are not used in the United States at all.¹⁰² Rather, they are either manufactured by one company and

⁹³ See *World-Wide Volkswagen Corp. v. Woodson*, 444 U.S. 286, 291 (1980) (citing *Int’l Shoe Co. v. Wash.*, 326 U.S. 310 (1945)).

⁹⁴ *World-Wide Volkswagen*, 444 U.S. at 297.

⁹⁵ *Pennoyer v. Neff*, 95 U.S. 714, 733 (1877).

⁹⁶ *Int’l Shoe Co.*, 326 U.S. at 317.

⁹⁷ See *supra* notes 93-96 and accompanying text.

⁹⁸ *Int’l Shoe*, 326 U.S. at 316.

⁹⁹ A producer who contracts with the U.S. government to produce some military item may be protected by the government contractor defense, which will be discussed thoroughly below. See *infra* PART III.G.3.

¹⁰⁰ For further discussion on the enterprise liability theory, see *infra* PART III.F.1.a. See also *Sindell v. Abbott Labs.*, 607 P.2d 924, 928 (Cal. 1980).

¹⁰¹ EXPOSING THE SOURCE, *supra* note 4, at 9.

¹⁰² *Id.*

then shipped overseas for use, or their components are manufactured separately by many companies, assembled in another place, and finally shipped overseas for use.¹⁰³ It is unlikely that a single court would have personal jurisdiction over all potential defendants in a case like this. Therefore, unless a defendant waives personal jurisdiction, which would be highly unusual, it would be nearly impossible to name many defendants from many different states in one federal court proceeding. A possible solution to this problem could be to file many different suits in the appropriate fora and subsequently request that all cases be transferred to the judicial panel on multidistrict litigation for pretrial purposes.¹⁰⁴ Though these cases would be remanded to the court in which they were originally filed, all discovery and pretrial tasks would be performed in a central location leading to a more efficient and economical resolution.

Third, a plaintiff could attempt to sue all companies in the chain of distribution of a particular landmine in order to encompass all component part makers. Again, the personal jurisdiction requirement makes this very difficult to accomplish in a single action. A separate lawsuit likely would have to be filed against each defendant in the appropriate forum.

Fourth, a plaintiff could sue the government that contracted with the producer to make the landmine.¹⁰⁵ This option presents a host of problems regarding governmental immunity for the United States and foreign sovereign immunity for other governments. These are not personal jurisdiction problems, but rather are defenses that will be discussed in detail later in this Article.¹⁰⁶

¹⁰³ *Id.*

¹⁰⁴ 28 U.S.C.A. § 1407(c)(i) (West 2002). For this to occur, the action must be civil, there must be one or more common questions of fact, and the actions must be pending in different districts. *Id.* at § 1407(a).

¹⁰⁵ Suing the U.S. government under this theory raises the defense of sovereign immunity, which will be discussed in the defenses section below. *See infra* PART III.G.3.

¹⁰⁶ *See infra* PART III.G. This category of potential defendants, including state factories and state-owned corporations, is the most problematic under U.S. law. This by no means suggests that the U.S. government or other foreign sovereigns have not been involved, but their inclusion as defendants would immediately raise defense issues which in turn would dramatically alter the character of the potential litigation. Although other authors—most notably Professor Kenneth R. Rutherford—have presented some forceful legal and moral arguments that the United States and other sovereigns should bear the costs for compensating landmine victims, these arguments are grounded primarily on international law and are not the focus of this Article. Under U.S. law, in addition to the likely defense issues, a more in depth discussion than is possible in this Article should include a thorough review of the

Finally, a plaintiff could sue both the producers and the governments with whom they contracted.¹⁰⁷

2. Foreign Corporations

A special problem arises when considering foreign corporations. Because U.S. courts may have a difficult time exerting jurisdiction over such corporations, a foreign corporation conducting business solely in another country will not meet the minimum contacts requirement for jurisdiction in the United States. The Alien Tort Claims Act, however, grants U.S. courts jurisdiction over foreign defendants in tort actions where plaintiffs assert a tort claim that violates a U.S. treaty or the “law of nations.”¹⁰⁸ This injects the need to argue that the use of landmines violates international law, an argument that has been well made previously, but it is not the focus of this Article.¹⁰⁹

Alien Tort Statute of 1789, the Foreign Sovereign Immunities Act of 1976, the act of state doctrine, the doctrine of universal jurisdiction, and possibly the Torture Victim Protection Act of 1991 for their potential impact on jurisdiction.

¹⁰⁷ It is interesting to note that even if a class sues a particular producer or group of component part-makers and is able to overcome the personal jurisdiction problems, the named defendants may move to join the United States or another government with whom the producer contracted. In this case, a new set of problems arises with regard to joinder and intervention.

¹⁰⁸ U.S. federal courts have jurisdiction over actions arising from a tort committed against an alien in violation of the “law of nations.” 28 U.S.C. § 1350 (1993). The “law of nations” has been interpreted to mean generally law dealing with the relationship among nations rather than individuals. *Dreyfus v. Von Finck*, 534 F.2d 24, 30-31 (2d Cir. 1976). Some courts have held that the statute can be invoked to confer federal subject matter jurisdiction in a private claim because all that is required is a violation of the “law of nations.” *Abebe-Jira v. Negewo*, 72 F.3d 844, 847 (11th Cir. 1996). Other courts, however, have held explicitly that the Act is only applicable between nations. *See Sanchez-Espinoza v. Reagan*, 770 F.2d 202, 206-07 (D.C. Cir. 1985). One obstacle facing the use of the Act in litigation against landmine producers may be that some courts interpret the Act to apply to individuals only, not corporations. *Beanal v. Freeport-McMoRan, Inc.*, 969 F. Supp. 362 (E.D. La. 1997). There may be, however, other precedent to contradict this notion—*Beanal* is a district court decision and therefore not binding on other district courts. Moreover, this decision may be attacked on several grounds, including the notion that federal subject matter jurisdiction and federal diversity jurisdiction generally apply to corporations as well as individuals. *See Rivera Sanchez v. MARS, Inc.*, 30 F. Supp. 2d 187 (D.P.R. 1998). The alien’s tort action may also provide subject matter jurisdiction over certain kinds of groups or organizations. *Hilao v. Estate of Marcos*, 103 F.3d 789, 795 (9th Cir. 1996).

¹⁰⁹ *See, e.g., R.J. Araujo, Anti-Personnel Mines and Peremptory Norms of International Law: Argument and Catalyst*, 30 VAND. J. TRANSNAT’L L. 1 (1997) (analyzing the problems of anti-personnel mines under international law). *See also Mary A. Ferrer, Affirming Our Common Humanity: Regulating Landmines to Protect Civilians and Children in the Developing World*, 20 HASTINGS INT’L & COMP. L. REV. 135 (1996) (discussing the shortcomings of international law’s regulation of landmine use); Janet E. Lord, *Legal*

D. Federal v. State Court Subject-Matter Jurisdiction

To bring a claim in federal court, the court must not only have personal jurisdiction, as discussed above, but also jurisdiction over the subject matter at issue. A court has subject-matter jurisdiction where a question arises under the Constitution, laws, or treaties of the United States, or where there is diversity of citizenship among the parties.¹¹⁰ For federal question jurisdiction to be present, the “plaintiff’s statement of his own cause of action”¹¹¹ must show that it was created by federal law, or “if the plaintiff’s cause of action is based on state law, a federal law that creates a cause of action is an essential component of the plaintiff’s claim.”¹¹² This “well-pleaded complaint rule” does not allow the plaintiff to anticipate a federal defense to his claim nor does it allow a defendant to remove a case to federal court based on a federal defense.¹¹³

In the potential landmine cases involved here, there is no “arising under” jurisdiction because there is no federal law at issue in the plaintiffs’ claims. It is likely, though, that there will be diversity of citizenship. Diversity, however, must be complete—no one plaintiff can be from the same state as any one defendant.¹¹⁴ Therefore, in these cases, it must be made certain that if numerous defendants are named, they cannot be from the same states as the plaintiffs.¹¹⁵ In the case of class actions, the rules change because only the named plaintiffs need be diverse to all the defendants.¹¹⁶ This should not present a problem in the types of cases under consideration here.

If a landmine victim decides to sue a foreign government, the federal courts will have jurisdiction under The Foreign Sovereign Immunities Act (FSIA).¹¹⁷ Under the FSIA, federal district courts have jurisdiction over “a foreign state . . . as to any claim . . . with

Restraints on the Use of Landmines: Humanitarian and Environmental Crisis, 25 CAL. W. INT’L L.J. 311 (1995) (discussing the problems landmines present under international law).

¹¹⁰ U.S. CONST. art. III, § 2.

¹¹¹ *Louisville & Nashville R.R. Co. v. Mottley*, 211 U.S. 149, 152 (1908).

¹¹² ERWIN CHEREMINSKY, *FEDERAL JURISDICTION* 274 (1999).

¹¹³ *Skelly Oil Co. v. Phillips Petroleum Co.*, 339 U.S. 667, 672 (1950); *see also* 28 U.S.C. § 1441(b) (2000).

¹¹⁴ *Strawbridge v. Curtiss*, 7 U.S. 267 (1806).

¹¹⁵ A plaintiff’s “state” is determined by his place of domicile, which is defined as the place where he has his “true, fixed, and permanent home and principal establishment, and to which he has the intention of returning whenever he is absent therefrom.” CHEREMINSKY, *supra* note 112, at 294 (citation omitted).

¹¹⁶ *See Snyder v. Harris*, 394 U.S. 332, 340 (1969); *see also Mehlenbacher v. Akzo Nobel Salt, Inc.*, 216 F.3d 291, 296 (2d Cir. 2000).

¹¹⁷ 28 U.S.C. §§ 1330, 1332(a)(2)-(4), 1391(f), 1441(d), 1602-11 (1976).

respect to which the foreign state is not entitled to immunity”¹¹⁸ Regardless of the application of the FSIA, there still would be diversity jurisdiction between a landmine victim (a foreign national) and an alien defendant, including a foreign government.

E. Choice of Law

When a case is litigated in federal court based on diversity jurisdiction, or where state claims are brought along with federal claims, the court must determine what state’s law applies to the controversy. Each state has choice of law rules that it applies to a particular cause of action to determine what law applies. As a general rule, a federal court sitting in diversity must apply the choice of law rules of the state in which it sits.¹¹⁹ When a case is complex and involves many claimants from many different states, however, the choice of law rules become difficult to apply. For instance, in tort cases, a state’s choice of law rules usually look to apply the law of the place where the tort occurred.¹²⁰ When the tort occurs in a foreign nation, however, a question arises as to whether the federal court must apply the law of that foreign nation.

In *Day & Zimmerman, Inc. v. Challoner*,¹²¹ the plaintiff sued for a death and injury “resulting from the premature explosion of a 105-mm howitzer round in Cambodia.”¹²² The district court and court of appeals held that Texas strict liability law applied to the occurrence.¹²³ This decision, however, ignored Texas’ choice of law rule, which mandated that the law of the place where the tort occurred should govern.¹²⁴ Recognizing this conflict, the Supreme Court overruled the court of appeals and held that Texas should have applied its choice of law rule,¹²⁵ resulting in the application of Cambodian tort law.¹²⁶

If landmine litigation is sustained in a federal court, it can be argued that instead of applying the substantive law of a particular

¹¹⁸ 28 U.S.C. § 1330(a) (1976).

¹¹⁹ *Erie R.R. Co. v. Tompkins*, 304 U.S. 64, 64 (1938).

¹²⁰ *Simon v. Philip Morris Inc.*, 124 F. Supp. 2d 46, 57 (E.D.N.Y. 2000).

¹²¹ 423 U.S. 3 (1975).

¹²² *Id.* at 3.

¹²³ *Id.*

¹²⁴ *See id.* at 4-5 (holding that, in diversity suits, a federal court is to apply the forum state’s choice of law rule regardless of whether it points to the forum’s substantive law).

¹²⁵ *Id.*

¹²⁶ *Id.*

state, federal common law should be applied.¹²⁷ In the “*Agent Orange*” products liability litigation, the Eastern District of New York applied “federal or national consensus common law to all substantive issues” at bar.¹²⁸ In reaching this decision, Judge Weinstein surveyed five approaches to conflicts law. These approaches, as will be discussed more fully below, included those based on: (1) the Restatement (First) approach; (2) the Restatement (Second) approach; (3) the governmental interest approach; (4) Professor Leflar’s analysis;¹²⁹ and (5) the forum approach.¹³⁰

The First Restatement on Conflicts of Laws suggests applying the law of the place where the wrong occurred.¹³¹ This approach, taken by Texas’ choice of law rule, was ultimately applied in *Challoner*.¹³² Cambodian law applied in that case because that is where the wrong occurred. In “*Agent Orange*”, however, the court did not apply this approach because no party argued for the application of Vietnamese, Cambodian, or Laotian law.¹³³ More importantly, the court stated that it would be “ludicrous” for the United States to apply the law of a place with which it had been, until recently, at war.¹³⁴

Similar logic could be applied in landmine cases. The injuries have occurred all over the world including places entangled in civil war. It is improbable and perhaps “ludicrous” to apply the law of a land with an unstable or transitional government and weak or changing rules of law. Under the First Restatement, then, federal courts should not apply the law of a foreign nation. Likewise, no particular U.S. state has more concern than another in the outcome of the litigation. Therefore, a national consensus law should apply rather than state substantive law.

The Second Restatement approach mandates that a court follow the statutory directive of the state in which it sits.¹³⁵ When no directive is applicable, the court shall consider a number of factors to

¹²⁷ The substance of federal common law can be determined by looking at “state law sources, the Restatement of Law of the American Law Institute, and other ‘non-federal’ sources.” See *In re “Agent Orange,”* 580 F. Supp. 690, 696 (E.D.N.Y. 1984).

¹²⁸ See *id.* at 711.

¹²⁹ *Id.* at 706 (describing the Leflar approach as taking into consideration “five choice-influencing considerations” in light of specific facts) (citation omitted). See generally Robert A. Leflar, *Choice-Influencing Considerations in Conflicts Law*, 41 N.Y.U. L. REV. 267, 269 (1966).

¹³⁰ See *In re “Agent Orange,”* 580 F. Supp. at 708.

¹³¹ RESTATEMENT (FIRST) OF CONFLICTS OF LAWS § 377 (1971).

¹³² 423 U.S. at 4-5.

¹³³ *In re “Agent Orange,”* 580 F. Supp. at 708.

¹³⁴ See *id.* at 707.

¹³⁵ RESTATEMENT (SECOND) OF CONFLICTS § 6(1) (1971).

determine what law applies. These include:

(a) the needs of the interstate and international systems; (b) the relevant policies of the forum; (c) the relevant policies of other interested states and the relative interests of those states in the determination of the particular issue; (d) the protection of justified expectations; (e) the basic policies underlying the particular field of law; (f) certainty, predictability and uniformity of result; and (g) ease in the determination and application of the law to be applied.¹³⁶

In a tort case specifically, the court must consider which state had the “most significant relationship to the occurrence and the parties.”¹³⁷ This will include an examination of where the tort occurred, where the conduct that caused the injuries occurred, the “domicile, residence, nationality, place of incorporation and place of business of the parties,” and where the relationship of the parties is centered.¹³⁸ The court concluded, in *Agent Orange*, that where injuries occurred in all fifty states and other countries, where the products in question could not be identified as coming from any one defendant, and where “neither the plaintiff nor the defendant . . . [had] any significant contact with the [forum] state other than the fact that suit was filed in that state,” a particular state’s interests would not be considered in determining choice of law.¹³⁹ In landmine cases, the only contact with the states in which suits would be filed, if any, would be the defendants’ places of incorporation, business, or residence. Therefore, no state’s interest should be considered relevant.

The governmental interest conflicts approach requires that the court “consider whether the public policy of a particular legislature would be furthered, frustrated or is irrelevant if applied in the case at bar.”¹⁴⁰ The court held in *Agent Orange* that no one state would be affected; rather, the national legislature would be affected. It would, therefore, be more appropriate to apply federal law. The same rationale could be applied to landmine litigation. Because the injuries did not take place in any U.S. state, the concern is a national rather than a local one.

Under the Leflar approach, a court will consider the “predictability of legal result, maintenance of interstate order,

¹³⁶ *Id.* at § 6(2).

¹³⁷ *Id.* at § 145.

¹³⁸ *Id.*

¹³⁹ *In re “Agent Orange,”* 580 F. Supp. at 701.

¹⁴⁰ *Id.* at 706.

simplification of the judicial task, the forum's governmental interests, and a preference for application of the better law."¹⁴¹ Judge Weinstein found this last factor important, stating that federal law was more progressive and provided a better law. It is possible that in the landmine litigation setting, a federal products liability law like that applied in "*Agent Orange*" would provide a more just result.

The final approach considered by Judge Weinstein was the forum approach. This approach applies when foreign law would normally govern, but neither party pleads such an application.¹⁴² When this occurs, the court will apply the law of the forum in which it sits or dismiss the case.¹⁴³ This rule simply reinforces the idea that national law is preferred to foreign law in cases tried in U.S. federal courts. When the law of the forum state has not contemplated litigation similar to that before it, federal law will apply because the state lacks the resources to handle such litigation.¹⁴⁴ It is likely that no state is prepared to deal with the magnitude of landmine litigation. Therefore, as with the other approaches, it would seem more appropriate to apply federal common law.

Finally, there is a significant distinction to consider between "*Agent Orange*" and potential landmine litigation. The plaintiffs in "*Agent Orange*" were members of the U.S. armed services and their families.¹⁴⁵ Judge Weinstein's opinion is rife with references to the distinct federal character of soldiers.¹⁴⁶ Likewise, Judge Weinstein repeatedly mentions Congressional legislation passed to protect "*Agent Orange*" victims.¹⁴⁷ This federal involvement cannot be found in the case of landmines. The victims are civilians and no federal legislation has been passed to provide them with compensation for their injuries. Federal involvement, however, still abounds. Landmine victims' injuries would not have occurred had the United States not been involved in the making of landmines for warring nations. It could be appropriate, therefore, for a court to apply a federal or national consensus law when considering choice of law in landmine litigation.

¹⁴¹ *Id.* at 707; *see also* Leflar, *supra* note 129, at 282-304.

¹⁴² *In re "Agent Orange,"* 580 F. Supp. at 708.

¹⁴³ *Id.*

¹⁴⁴ *See id.* at 709 ("[I]t has been clearly shown in this litigation why the law of the forum should be displaced in the face of the overwhelmingly national and federal aspects of the case. A state court in such a position, having no preexisting applicable conflicts rule, would turn to federal or national consensus law.").

¹⁴⁵ *Id.* at 693.

¹⁴⁶ *Id.* at 704.

¹⁴⁷ *See id.* at 698, 704.

F. Bases for Liability

Landmine producers and their component suppliers made business decisions to enter the competitive landmine market where they designed, manufactured, and marketed their products in the hopes of generating financial profits. By viewing landmines as a product manufactured for profit, the relevant U.S. substantive laws regarding potential liability for landmine related injuries are relatively straightforward.¹⁴⁸

1. Products Liability

The idea of liability is “founded on the opinion . . . that the defendant ought to have acted otherwise, or, in other words, that he was to blame.”¹⁴⁹ Products liability can be based on either negligence or strict liability. Negligence places blame on a defendant for failing to act with ordinary care, whereas strict liability focuses on the plaintiff’s injuries rather than the defendant’s behavior.¹⁵⁰

Products liability evolved both as a means to compensate injured plaintiffs and to provide a powerful incentive to producers, distributors, and sellers to provide fundamentally safe products. Knowing that financial damages could result from making, distributing, or selling a faulty product, gives producers an economic, if not, a moral incentive to protect consumers.

a. Negligence

Negligence is an age-old concept that can be defined as “conduct which falls below the standard established by law for the protection of others against unreasonable risk of harm.”¹⁵¹ One acts within the appropriate standard when he acts with ordinary care, or as a “reasonable person of ordinary prudence under the circumstance”¹⁵² If a person fails to act with ordinary prudence and causes injury to another, then that person will be held liable for

¹⁴⁸ This is not to minimize the complications discussed separately in this Article arising from the involvement of governments (in terms of immunity and related defenses), the enormity and complexity of the factual aspects, and the political and emotional issues.

¹⁴⁹ OLIVER WENDELL HOLMES, *THE COMMON LAW* 82 (Mark DeWolfe Howe ed., 1971) (1881).

¹⁵⁰ See *Lewis v. Timco, Inc.*, 716 F.2d 1425, 1434 (5th Cir. 1983) (Politz, C.J., dissenting) (“A negligence action focuses on conduct, specifically the quality of the act causing the injury; a strict products liability action focuses on the product itself.”).

¹⁵¹ RESTATEMENT (SECOND) OF TORTS § 282 (1965).

¹⁵² W. PAGE KEETON ET AL., *PROSSER & KEETON ON THE LAW OF TORTS* § 34, at 209 (5th ed. 1984).

the resulting damages.

Producers of products, like any other defendant, sometimes act outside the realm of ordinary care. This breach of duty of care may manifest itself in a product defect or in a failure to produce safer designs, which may then result in injury to the products' users. Further, that duty of care extends to innocent bystanders, thereby, extending the scope of the producers' liability.¹⁵³

Regardless of their intended use, landmines are products just like automobiles, power tools, or blasting caps. Landmine producers breached their duty of care by failing to design and produce landmines with available safety features, such as a self-destruct or self-deactivating mechanism, which, if included, would have reduced the risk of injury to innocent bystanders. Therefore, under a traditional negligence products liability theory, landmine producers should be held liable for injuries resulting from the use of their products.

A key question that often arises in negligence products liability cases is whether a "defendant may exonerate itself by showing that it adopted and lived up to the standard existing in the industry."¹⁵⁴ In other words, if the entire automobile industry uses a faulty door latch system when safer designs would have prevented injuries, can individual producers be relieved of liability? Judge Learned Hand answered this question in *T.J. Hooper v. Northern Barge Corp.*:

[I]n most cases reasonable prudence is in fact common prudence; but strictly it is never its measure; a whole calling may have unduly lagged in the adoption of new and available devices. It never may set its own tests, however persuasive be its usages. Courts must in the end say what is required; there are precautions so imperative that even their universal disregard will not excuse their omission.¹⁵⁵

Even before the United States entered the Vietnam War, it was possible to create a landmine with a self-destructing mechanism.¹⁵⁶ Most mines, however, were not made with these mechanisms because doing so would have added cost and reduced the attractiveness of the landmines in the marketplace. The entire industry's failure to employ self-destruct mechanisms will not excuse the decision of individual companies and government agencies not to forge ahead for the protection of innocent civilians. Under this theory, the importance of a self-destruct mechanism toward reducing the risks

¹⁵³ See, e.g., *Codling v. Paglia*, 298 N.E.2d 622 (N.Y. 1973).

¹⁵⁴ MARSHALL S. SHAPO, *TORT AND INJURY LAW* 175 (1990).

¹⁵⁵ *T.J. Hooper v. Northern Barge Corp.*, 60 F.2d 737, 740 (2d Cir. 1932).

¹⁵⁶ See *supra* note 41 and accompanying text.

for innocent civilian bystanders is so “imperative that even its universal disregard [does not] excuse its omission.”¹⁵⁷

In the alternative, if a court will not accept the failure to employ a self-destruct mechanism as a *per se* breach of duty, another theory could be advanced. This approach would define landmines as defective. Because landmines are doing what they were designed to do when they maim or dismember victims,¹⁵⁸ it becomes more difficult to find a defect as defined by traditional products liability theory. The failure to use a reasonable alternative that would have made a product safer has been held to constitute defective design and, thus, a breach of duty.¹⁵⁹ Landmines, therefore, might be considered defectively designed products because there was a safer and more reasonable alternative available to landmine producers.

After the plaintiffs establish a breach of a legally recognized duty by the landmine producers, they must then show that the breach caused their injuries. There are two types of causation: causation in fact and proximate causation.¹⁶⁰ Causation in fact can be established by looking at the facts in question and applying either the “but for” or the substantial factor test. If the plaintiffs’ injuries would not have occurred “but for” the defendants’ wrongful conduct, there is causation. The substantial factor test requires the plaintiff to show that the defendant’s behavior was a substantial factor in bringing about his injury, and must also be a material element of the injury.¹⁶¹ Proximate causation is more difficult because it “involves a policy determination made by the court that requires the plaintiff to demonstrate that a defendant’s actions occurred through a linear

¹⁵⁷ 60 F.2d at 740.

¹⁵⁸ “The mine has been designed with a view to disable personnel. Operating research has shown that it is better to disable a man than to kill him.” EXPOSING THE SOURCE, *supra* note 4, at 5 (quoting *Technical Specifications for Mine Anti-Personnel (P4MK2)*, PAKISTAN ORDINANCE FACTORIES BROCHURE); see also Protocol on Prohibitions or Restrictions on the Use of Mines, Booby-Traps and Other Devices (Amended Protocol II), amended May 3, 1996, 2 U.S.T. 105-1, at 37 (defining anti-personnel landmines as “mine[s] primarily designed to be exploded by the presence, proximity or contact of a person and that will incapacitate, injure or kill one or more persons”).

¹⁵⁹ *Townsend v. Gen. Motors Corp.*, 642 So. 2d 411, 418 (Ala. 1994); Timothy D. Lytton, *Tort Claims Against Gun Manufacturers for Crime-Related Injuries: Defining A Suitable Role for the Tort Systems in Regulating the Firearms Industry*, 65 MO. L. REV. 1, 13 (2000) (discussing guns as a defective product).

¹⁶⁰ See Nancy Lee Firak, *The Developing Policy Characteristics of Cause-In-Fact: Alternative Forms of Liability, Epidemiological Proof and Trans-Scientific Issues*, 63 TEMP. L. REV. 311, 311-14 (1990).

¹⁶¹ KEETON ET AL., *supra* note 152, § 41, at 267-68.

chain of events and were not broken by an intervening third party.”¹⁶²

A plaintiff must also prove both general and specific causation.¹⁶³ General causation means that the plaintiff must show that the defendant’s product was capable of causing his injury; whereas specific causation requires a showing that the defendant’s product did cause his injury.¹⁶⁴ While general causation could be proven, specific causation may create potential problems for landmine victims if not dealt with properly. In many cases, plaintiffs may not know the producer of the mine that injured them. Presumably, if the particular producer cannot be identified because mines explode into numerous pieces, it may be difficult to prove that one producer caused a victim’s injury.

There are two solutions to this problem. First, plaintiffs could argue that, just as in the “*Agent Orange*” case, general causation suffices. In “*Agent Orange*”, Judge Weinstein allowed the plaintiffs to recover even though they could not prove which defendants’ chemicals caused their injuries, only that each defendant’s product could have.¹⁶⁵ This inability to prove specific causation was then taken into account when compensation was determined. Therefore, everyone who was injured recovered damages, but less than they would have had they been able to prove specific causation.¹⁶⁶ Plaintiffs who could not even prove general causation, though, could not recover under “*Agent Orange*”. Unless a plaintiff could prove his injury was “of the kind caused by defendant’s conduct” and that he was “placed at risk by the defendant’s acts,” he could not recover.¹⁶⁷

Landmine cases are very similar to the “*Agent Orange*” cases. After a mine explodes, there is no way to determine the producer. Therefore, if proving specific causation is a requirement, few plaintiffs could ever recover. It is necessary to adopt the logic of Judge Weinstein in “*Agent Orange*” regarding specific causation if justice is to be done.

¹⁶² James Pizzirusso, Note, *Increased Risk, Fear of Disease and Medical Monitoring: Are Novel Damage Claims Enough to Overcome Causation Difficulties in Toxic Torts?*, 7 ENVTL. LAW. 183, 184 (2000).

¹⁶³ *Rutigliano v. Valley Bus. Forms*, 929 F. Supp. 779, 783 (D.N.J. 1996).

¹⁶⁴ *See Wheat v. Sofamor*, 46 F. Supp. 2d 1351, 1357 (N.D. Ga. 1999).

¹⁶⁵ 597 F. Supp. at 782, 827 (drawing a parallel to alternative liability in the asbestos realm, stating “the plaintiff does not determinatively prove which producer’s asbestos caused his injury. A prima facie case is shown if the plaintiff can prove that he was exposed to the defendant’s products on at least one occasion.”).

¹⁶⁶ Richard Delgado, *Beyond Sindell: Relaxation of Cause-In-Fact Rules for Indeterminate Plaintiffs*, 70 CAL. L. REV. 881, 893 (1982).

¹⁶⁷ *Id.*

The second solution to the specific causation problem is for the plaintiffs to assert an enterprise liability theory. This theory was first asserted and accepted in *Hall v. E.I. DuPont De Nemours & Co.* in 1972.¹⁶⁸ In that case, thirteen children sued the producers of blasting caps.¹⁶⁹ These incidents occurred in twelve distinct situations in ten different states.¹⁷⁰ The plaintiffs did not know which company made which blasting caps, so they sued every blasting cap producer.¹⁷¹ The court allowed the plaintiffs to name all producers as defendants because they comprised the entire blasting cap industry.¹⁷² Likewise, the court there found the defendants to have “adhered to an industry-wide standard with regard to safety features of blasting caps”¹⁷³

Enterprise liability was again asserted in *Sindell v. Abbott Laboratories*.¹⁷⁴ In that case, “[t]he plaintiff, a cancer victim whose mother ha[d] ingested DES when pregnant with her,”¹⁷⁵ named numerous pharmaceutical companies as defendants, claiming they collaborated in the “production, marketing, promotion and testing of DES,” and were thus responsible for her injuries.¹⁷⁶ The plaintiff argued that instead of the burden being on her to prove that a particular producer’s product caused her injuries, the burden should be placed on the defendants to prove they were not the producer whose product injured her. When most of the producers were unable to show they were not the ones who injured the plaintiff, the court apportioned liability in proportion to that company’s share of the DES market.¹⁷⁷ Likewise, the plaintiffs in landmine litigation could name all known landmine producers and then assert that if

¹⁶⁸ 345 F. Supp. 353 (E.D.N.Y. 1972).

¹⁶⁹ *Id.* at 359.

¹⁷⁰ *Id.*

¹⁷¹ *Id.* at 358.

¹⁷² The individual trials in this case resulted in judgments for the defendants on other grounds. See *Lehtonen v. E.I. Du Pont de Nemours & Co., Inc.*, 389 F. Supp. 633 (D. Mont. 1975); see also *Davis v. E.I. Du Pont de Nemours & Co., Inc.*, 400 F. Supp. 1347 (W.D.N.C. 1974); *Ball v. E.I. Du Pont de Nemours & Co., Inc.*, 519 F.2d 715 (6th Cir. 1975).

¹⁷³ *Sindell*, 607 P.2d at 934.

¹⁷⁴ *Id.* The enterprise liability theory is asserted very often in large products liability cases. See, e.g., *City of Phila. v. Lead Indus. Ass’n Inc.*, 994 F.2d 112 (3d Cir. 1993) (applying theory used in case against multiple lead pigment manufacturers); *Hamilton v. Accu-Tek*, 62 F. Supp. 2d 802, 840 (E.D.N.Y. 1999) (discussing enterprise liability theory). See also Naomi Sheiner, Comment, *DES and a Proposed Theory of Enterprise Liability*, 46 *FORDHAM L. REV.* 963 (1978).

¹⁷⁵ Delgado, *supra* note 166, at 882.

¹⁷⁶ *Sindell*, 607 P.2d at 934.

¹⁷⁷ See Delgado, *supra* note 166, at 882.

none can prove that they were not the maker of the particular landmines in question, they must be held liable for plaintiff's injuries in proportion to their share of the landmine market.

A final causation problem is that of superseding or intervening causes. A plaintiff's case may be thwarted if a defendant can show that a superseding or intervening event actually caused the plaintiff's injuries.¹⁷⁸ In the case of landmines, defendants could argue that any number of events might have occurred between the time of the manufacturing and shipping of the landmines and the time of the explosion. For instance, it is possible that third parties buried the mines incorrectly, altered the mines, or acted criminally¹⁷⁹ in order to cause the types of injuries at issue. Of course, they might also argue that landmines should have been retrieved or destroyed by the original users after their intended use, and that such failure constituted a misuse of the product.

Although landmine producers might make these arguments, they are not likely to prevail because, when the mines were made, the companies knew the potential risks for tampering and misuse—the occurrence of foreseeable intervening acts cannot exonerate the producers from liability. The producers were aware of the possible shipment to terrorists or to third parties not trained in mine technology. Because of this, the producers should not be relieved of liability simply because the expected occurred.

b. Strict Liability

Strict liability, unlike negligence, does not look to place blame on the defendant. Rather, it focuses on the plaintiff's injuries and places the cost of that injury on the person more able to absorb the loss. Strict liability is divided into two separate concepts: product defects and abnormally dangerous products.¹⁸⁰

Defective product strict liability is based on the idea that a producer of a defective product is “in the best position to either

¹⁷⁸ See RESTATEMENT (SECOND) OF TORTS §§ 440-441 (defining superceding and intervening causes); see also KEETON ET AL., *supra* note 152 § 44, at 312 (asserting that defendant is not liable for injuries caused by superceding or intervening causes that are not foreseeable).

¹⁷⁹ Third party criminal acts, which qualify as intervening or superseding in the explosives field, include “the acts of distributors who fail to prevent criminal theft of explosives, retailers who sell explosives to criminals, or terrorists who intentionally misuse explosives to inflict harm upon others” Alan Calnan & Andrew W. Taslitz, *Defusing Bomb-Blast Terrorism: A Legal Survey of Technological & Regulatory Alternatives*, 67 TENN. L. REV. 177, 253 (1999).

¹⁸⁰ RESTATEMENT (SECOND) OF TORTS § 402(A) (1965).

insure against the loss or spread the loss among all the consumers of the product.”¹⁸¹ The Restatement (Second) of Torts states:

[o]ne who sells any product in a defective condition unreasonably dangerous to the user or consumer . . . is subject to liability for physical harm thereby caused to the ultimate user or consumer, . . . if (a) the seller is engaged in the business of selling such a product, and (b) it is expected to and does reach the user or consumer without substantial change in the condition in which it is sold.¹⁸²

This rule applies even if the seller has acted with reasonable care and has no contractual relationship with the user or consumer.¹⁸³

The rules governing strict liability are based on years of case law that have established public policy interests as the rationale for attachment of such liability. All of these interests are directly applicable to the case of landmines, including: the substantial cost of injury to a victim as compared with the ability to insure the risk of injury by the seller;¹⁸⁴ the public interest in discouraging producers from marketing defective products;¹⁸⁵ the inability to prove negligence because of the secretive nature of manufacturing processes;¹⁸⁶ and the inability of a plaintiff to investigate thoroughly the safety of a particular product.¹⁸⁷

The production and use of landmines could also be defined as abnormally dangerous activities. “Abnormally dangerous activity” is defined as including six factors: (1) the “existence of a high degree of risk of some harm to the person, land or chattels of others;” (2) the “likelihood that the harm that results from it will be great;” (3) the “inability to eliminate the risk by the exercise of reasonable care;” (4) the “extent to which the activity is not a matter of common usage;” (5) the “inappropriateness of the activity to the place where it is carried on;” and (6) the “extent to which its value to the community is outweighed by its dangerous attributes.”¹⁸⁸ The production of

¹⁸¹ *Ogle v. Caterpillar Tractor*, 716 P.2d 334, 342 (Wyo. 1986) (citing William L. Prosser, *The Assault upon the Citadel (Strict Liability on the Consumer)*, 69 YALE L.J. 1099, 1120 (1960)).

¹⁸² RESTATEMENT (SECOND) OF TORTS § 402(A)(1) (1965).

¹⁸³ *Id.* at § 402(A)(2).

¹⁸⁴ See *Greenman v. Yuba Power Prods., Inc.*, 59 Cal. 2d 57, 63 (Cal. 1962).

¹⁸⁵ See *Escola v. Coca Cola Bottling Co. of Fresno*, 150 P.2d 436, 441 (Cal. 1944) (Traynor, J., concurring); see also *Gonzalez v. Rutherford Corp.*, 881 F. Supp. 829, 843 (E.D.N.Y. 1995); *Harber v. Altec Indus., Inc.*, 812 F. Supp. 954, 963 (W.D. Mo. 1993).

¹⁸⁶ *Escola*, 150 P.2d at 443 (Traynor, J., concurring).

¹⁸⁷ *Id.*

¹⁸⁸ RESTATEMENT (SECOND) OF TORTS § 520 (1979).

landmines meets every condition under this definition.¹⁸⁹ It is almost certain that a person, land or chattel will be injured. The harm that occurs when a landmine explodes often includes dismemberment or death. Landmine producers could not completely eliminate the risk by using reasonable care because even the installation of self-destruct mechanisms would not eliminate all risk. Landmines, despite the tens of millions sold, are not a matter of common usage. The presence of sixty to seventy million landmines in post-conflict areas is anything but appropriate to the place. Finally, landmines arguably provide absolutely no value to any community that could be weighed against their dangerous attributes.

If landmine production is held to be an abnormally dangerous activity, then the producers will be liable “for all injury resulting from the activity . . . regardless of who was at fault. The injury must, of course, be one of the kinds of harm which one expects given the dangerous nature of the activity.”¹⁹⁰ The kinds of harm which landmines have caused for decades have been precisely what every landmine producer could have expected. The producers of landmines have created an enormous risk of civilian injury or death, and they have profited from creating such risk. Therefore, under strict liability, the burden of the loss should be placed on the producers.

A potential problem with strict liability is that many manufacturers produce only components of landmines. Therefore, a question of fairness arises. Should a component part maker be held strictly liable even though its particular part may not have been defective or its particular contribution may not be abnormally dangerous? The Consumer Protection Act provides guidance in answering this question.¹⁹¹ It mandates that component part makers will be liable unless “they can show the defect was a result of instructions given by the manufacturer of the final product or was

¹⁸⁹ Another interesting attempt to utilize this analysis is being applied in gun manufacturer litigation. These cases seek to determine whether gun manufacturers should be held strictly liable for injuries or deaths caused by their products—namely handguns. *See, e.g.*; *Moore v. R.G. Indus., Inc.*, 789 F.2d 1326 (9th Cir. 1986); *Copier By & Through Lindsey v. Smith & Wesson Corp.*, 138 F.3d 833 (10th Cir. 1998). *See generally* Joi Gardner Pearson, Comment, *Make It, Market It, and You May Have to Pay For It: An Evaluation of Gun Manufacturer Liability for the Criminal Use of Uniquely Dangerous Firearms in Light of In Re 101 California Street*, 1997 B.Y.U. L. REV. 131 (1997).

¹⁹⁰ *Indiana Harbor Belt R.R. Co. v. Am. Cyanamid Co.*, 662 F. Supp. 635, 639 (N.D. Ill. 1987).

¹⁹¹ Consumer Protection Act, 1987, Ch. 45 § 1 (Eng).

due to negligence on the part of the final product manufacturer.”¹⁹² Taking a different approach, section five of the Restatement Third of Torts states that a component part seller is liable for the harm caused by its component part if (1) the product (the component part) is defective, or (2) the seller substantially participates in the integration of the component part into the end product.¹⁹³ If the first prong of the Restatement is met, “the plaintiff must [also] show that the product defect caused the harm,” whereas if the second prong is met, “the plaintiff must also show that the integration of the component part caused the [end] product to be defective.”¹⁹⁴

These two sources provide a guide for what a court might do regarding landmine component part makers.¹⁹⁵ If landmine victims could show that the producers knew the product they were manufacturing would become part of a landmine, liability could apply and, following the Consumer Protection Act, the component part makers could be liable.

The analysis is a bit more involved under the Restatement. Under the Restatement, a landmine victim would have to show either that the product was defective and that defect caused him harm, or the particular component part maker substantially participated in the integration of its part with the whole and that the part caused the whole to be defective. In the end, a court would have to consider the special use of landmines and the knowledge of the makers in determining whether strict liability should apply.

2. Negligent Entrustment

Another possible cause of action against landmine producers is negligent entrustment. One may be held liable for this tort if he “permit[s] a third person to use a thing or to engage in an activity” that is under his control and where he “knows or should know that such person intends or is likely to use the thing or to conduct himself in the activity in such a manner as to create an unreasonable risk of harm to others.”¹⁹⁶ A claim of negligent entrustment will be upheld if

¹⁹² Susan H. Easton, *The Path for Japan?: An Examination of Product Liability Laws in the United States, the United Kingdom and Japan*, 23 B.C. INT’L & COMP. L. REV. 311, 319-20 (2000).

¹⁹³ RESTATEMENT (THIRD) OF TORTS § 5 (1998).

¹⁹⁴ Carly E. Beauvais, *Products Liability: Buonanno v. Colmar Belting Co.*, 733 A.2d 712 (R.I. 1999), 5 ROGER WILLIAMS U. L. REV. 791, 793 (2000).

¹⁹⁵ Several courts have followed these approaches in the past. *See, e.g.*, *Moor v. Iowa Mfg. Co.*, 320 N.W.2d 927 (S.D. 1982); *Buonanno v. Colmar Belting Co., Inc.*, 733 A.2d 712 (R.I. 1999).

¹⁹⁶ RESTATEMENT (SECOND) OF TORTS § 308 (1965).

the plaintiff can prove that the product is highly dangerous, the seller had “specific knowledge of the buyer’s dangerous intent or is witness to conduct that clearly evinces his unsuitability to use the product, and, given the available information, the seller displays a reckless disregard for the safety of the buyer or others whom she may injure.”¹⁹⁷ This tort has been used in cases where plaintiffs claim gun producers have negligently entrusted guns to buyers who have then criminally or tortuously injured the plaintiffs. Only one of these suits, however, has been successful,¹⁹⁸ while all others have been summarily dismissed.¹⁹⁹

In the case of landmines, producers create a dangerous instrumentality and then sell it overseas to warring countries or factions within countries. Though landmine producers most often negotiate with governments, these same producers know or should know that landmines will end up in the hands of people not qualified to handle them properly. These producers also know that some of the landmines they entrust to buyers subsequently will be sold to terrorists and criminals. This conduct is in reckless disregard for the safety of many civilians who, as a result, will undoubtedly be maimed or killed by landmines.

3. Intentional Torts

The key to committing an intentional tort is, of course, intent. Without it, there can be no finding of liability. Advancing an intentional tort theory in the case of landmines is more difficult than the other options discussed above. This is primarily because the intent element is difficult to satisfy. Battery and intentional infliction of emotional distress arguably could have applications for landmine victims. Public nuisance and trespass would, at best, be difficult claims for victims defined in this Article, although these claims might be effective for property owners in areas affected by landmines.

Battery is the intentional harmful or offensive touching of

¹⁹⁷ See Calnan & Taslitz, *supra* note 156, at 268.

¹⁹⁸ See *Kelley v. R.G. Indus. Inc.*, 497 A.2d 1143 (Md. 1985) (holding that “it is entirely consistent with public policy to hold the manufacturers and marketers of Saturday Night Special handguns strictly liable to innocent persons who suffer gunshot injuries from the criminal use of their products,” and that such liability is “warranted”).

¹⁹⁹ See *Court Dismisses Negligent Entrustment Claim in Chicago Suit Against Gun Makers*, 28 PROD. SAFETY & LIAB. REP. (BNA) 142 (Feb. 21, 2000); see also *Copier By & Through Lindsey v. Smith & Wesson Corp.*, 138 F.3d 833 (10th Cir. 1998); *City of Phila. v. Beretta U.S.A. Corp.*, 126 F. Supp. 2d 882, 902-04 (E.D. Pa. 2000); *Penelas v. Arms Techn., Inc.*, 778 So. 2d 1042 (Fla. Dist. Ct. App. 2001).

another.²⁰⁰ In the case of landmines, a plaintiff could assert that the producers intended harmful or offensive touching to occur when their landmines exploded, but because the intent of the producers is to harm combatants, a plaintiff must assert transferred intent. Transferred intent means that “if A aims at B, and hits C, C can sue A for battery, even though he was not the intended victim and even though battery is an intentional tort.”²⁰¹ Battery is a plausible cause of action where victim (C) is a civilian, as would be the case for all plaintiffs here, even though producer (A) was aiming for combatants (B). The difficulty here is not the transfer of intent, but rather the intent itself. Plaintiffs would need to show that landmine producers (A) intended to harm combatants (B).

A person may be liable for intentional infliction of emotional distress if he “by extreme and outrageous conduct intentionally or recklessly causes severe emotional distress to another”²⁰² A landmine victim may be able to sustain such a cause of action if he can show that the production of landmines is extreme or outrageous conduct. This may be difficult because landmines are considered a viable weapon in combat situations. Considering the extremely hazardous and indiscriminate character of landmines, however, it is possible that their production may be determined extreme. The fact that the purpose of landmines is to maim and mutilate substantially helps the victim’s case.²⁰³

It is also possible that those who witnessed the explosion, which dismembered or killed a family member, could file a claim. In order to bring such a claim, the plaintiff would have to show that he is “closely related to the injury victim,” was “present at the scene of the injury-producing event at the time it [occurred] and [was] aware that it [caused] injury to the victim and . . . as a result [suffered] emotional distress beyond that which would be anticipated by a disinterested witness.”²⁰⁴ It is probable that family members witnessing the injury of a landmine victim could prove such a case, although the issue of intent remains problematic.

Public nuisance is the “unreasonable interference with a right common to the general public.”²⁰⁵ To determine if an “unreasonable

²⁰⁰ RESTATEMENT (SECOND) OF TORTS § 13 (1965).

²⁰¹ Niehus v. Liberio, 973 F.2d 526, 533 (7th Cir. 1992).

²⁰² Russell v. Salve Regina College, 649 F. Supp. 391, 400 (D.R.I. 1986) (citing RESTATEMENT (SECOND) OF TORTS § 46 (1965)).

²⁰³ See EXPOSING THE SOURCE, *supra* note 4, at 5.

²⁰⁴ Thing v. La Chusa, 771 P.2d 814, 815 (Cal. 1989).

²⁰⁵ Lytton, *supra* note 159, at 45-46.

interference” has occurred, there must be a factual determination about how the conduct in question “(1) is proscribed by statute; (2) involves a significant interference with public health, safety, peace, comfort, or convenience; or (3) is of a continuing nature and has produced long-lasting and significant effects on a public right, of which the defendant knows or has reason to know.”²⁰⁶ The state or a private citizen can bring a public nuisance claim. Lighting fireworks, storing explosives, and emitting loud and disturbing noises have all been held to be public nuisances.²⁰⁷ Landmines certainly are more disturbing than these examples, yet it would be difficult to reach the landmine producers under this claim since they likely are too far removed from the actual nuisance activity.

Trespass to land is an invasion “(a) which interferes with the right of exclusive possession of the land, and (b) which is a direct result of some act committed by the defendant.”²⁰⁸ The insertion of explosives into private land by buyers of landmines would be an invasion of an owner’s possessory interest in the land. Whether the producers of landmines could be held liable for this invasion, however, is questionable. Though the producers know their landmines will be planted, this typically occurs during armed conflicts and the producers’ relationship to those who physically plant the mines is very attenuated. Further, as with public nuisance, only those who own property under which mines have been planted would have standing to sue.

In sum, none of the possible intentional torts offer viable causes of action for plaintiff landmine victims as defined in this Article.

G. Defenses

Assuming any action in a landmine case would follow products liability or strict liability theories, the possible defenses are relatively straightforward. The more unusual and stronger defenses arise primarily from the character of landmines as weapons and the involvement of either the U.S. government or foreign governments in the contracting or licensing of exports.

²⁰⁶ *Id.*

²⁰⁷ See generally *Landau v. City of New York*, 72 N.E. 631 (N.Y. 1904); *State v. Excelsior Powder Mfg. Co.*, 169 S.W. 267 (Mo. 1914); *Town of Preble v. Song Mountain, Inc.*, 308 N.Y.S.2d 1001 (N.Y. Sup. Ct. 1970).

²⁰⁸ See Joshua M. Penrod, Note, *Refusing to Torture the Ancient Doctrine of Trespass: Kernan v. Homestead Development Co.*, 4 T.M. COOLEY J. PRAC. & CLINICAL L. 67, 68-69 (2000).

1. Statutes of Limitations and Equitable Tolling

A threshold issue for a landmine suit, as with any civil litigation, is whether or not the suit is barred by the applicable statute of limitations. This issue is complicated in the case of landmines because of the multiple jurisdictions in which the injuries occurred and because there is no set jurisdiction for bringing suits against landmine producers. To determine the proper statute of limitations, courts follow three steps:²⁰⁹ first, they “look to the federal law for guidance;” second, in the absence of a federal proscription, they “look to state common law;” and third, if state common law is inconsistent with the intent of the federal law, they do not apply state law.²¹⁰

As the first step in the analysis, one of the few federal statutes helpful to foreign victims of landmines is the Alien Tort Claims Act (the ATCA).²¹¹ The ATCA applies “where . . . an alien sues . . . for a tort . . . which was committed in violation of the law of nations.”²¹² Any foreign national meeting all three requirements may bring suit in the U.S. federal courts. This is key for landmine victims who may not have access to a judicial forum in their home country, or for those who live in a country with no laws allowing such a claim. The matter, however, becomes complicated by the ATCA’s silence on the issue of timing. The ATCA has no statute of limitations.²¹³ In fact, while some federal statutes regarding human rights or genocide, such as the Torture Victims Act, provide definite time limits,²¹⁴ most leave that issue open.²¹⁵

Since there is no federal time limit on suits brought under the ATCA or other federal statutes that might provide guidance, federal courts next look to apply the limitations period of the “most closely analogous statute of limitations under state law.”²¹⁶ Looking at case law, the courts have held that “a federal district court sitting in diversity must apply the choice of law precepts of the forum state.”²¹⁷

²⁰⁹ 42 U.S.C. § 1988(a) (2000).

²¹⁰ Justin H. Roy, *Strengthening Human Rights Protection: Why the Holocaust Slave Labor Claims Should Be Litigated*, 1 SCHOLAR 153, n.381 (1999).

²¹¹ 28 U.S.C. § 1350 (2000).

²¹² *Bodner v. Banque Paribas*, 2000 WL 1411100, at *8 (E.D.N.Y. Aug. 31, 2000).

²¹³ *Iwanowa v. Ford Motor Co.*, 67 F. Supp. 2d 424, 462 (1999).

²¹⁴ 28 U.S.C. section 1350 bars claims that are over 10 years old. Roy, *supra* note 210, at n.375.

²¹⁵ For example, in 28 U.S.C. section 1331, “there is no prided statute of limitations.” Roy, *supra* note 210, at 199.

²¹⁶ See *supra* note 186 and accompanying text.

²¹⁷ *Iwanowa*, 67 F. Supp. 2d at 472.

To determine what state law is most applicable, courts must look to the state law most closely analogous. If the injury sustained by the plaintiff has a counterpart in a state statute, that law's statute of limitations will be used.

Plaintiffs in a landmine injury case would assert tort claims, which, in most states, involve a relatively short statute of limitations, typically two to three years from the time of injury.²¹⁸ Nevertheless, equitable estoppel principles can bar defendants from raising the statute of limitations defense under certain circumstances in which there was fraud, concealment, deception, or other misconduct by the defendant.²¹⁹ Therefore, the applicable statute of limitations for landmine victims could depend both on the choice of forum and of the particular causes of action.

State law still might not provide the appropriate statute of limitations. In cases where the state law is in conflict with the spirit of a federal act or statute, "a narrow exception to this rule [exists] when another federal statute or rule 'clearly provides a closer analogy than available state statutes, and when the federal policies at stake and the practicalities of litigation make the [federal statute] a significantly more appropriate vehicle for interstitial lawmaking.'"²²⁰

Finally, and most importantly, equitable tolling principles offer another avenue for tolling the statute of limitations in a landmine case. The facts of landmine cases are unique and suitable for the application of equitable tolling principles. Most of the world's landmines are located in developing countries with numerous legal systems or, in some cases, little or no rule of law. Landmine victims often live in poverty with very limited healthcare services, legal assistance, or even current news available to them. Further, some of the mines were placed in their current locations decades ago. The

²¹⁸ In Illinois, for example, there is a ten-year statute of limitations for an action for breach of a written contract; a five-year statute of limitations "for breach of an oral contract, or for other civil actions without an express time period;" a five-year catch-all statute; and a two-year statute for personal injury claims. *Sampson v. Fed. Rep. of Germany*, 975 F. Supp. 1108, 1122 (N.D. Ill. 1997).

²¹⁹ For example, under the New York equitable estoppel principle, "[a] party may be estopped from raising a statute of limitations defense where his fraud, concealment, or deception prevented the plaintiff from timely filing his claim." *Roy*, *supra* note 210, at 201. Pennsylvania common law also recognizes equitable tolling in certain causes of action: "common law negligent misrepresentation in the business context . . . does recognize equitable tolling in such circumstances." *In re Chambers Dev. Sec. Litig.*, 848 F. Supp. 602, 627 (W.D. Pa. 1994).

²²⁰ *Iwanowa*, 67 F. Supp. 2d at 462 (quoting *Reed v. United Transp. Union*, 488 U.S. 319, 324 (1989) (quoting *DelCostello v. Int'l Bd. of Teamsters*, 462 U.S. 151, 172 (1983))).

victims themselves may not be aware of the avenues available to them to obtain relief because many reside in desolate areas of the world. They cannot afford representation and often are unaware of the possibility of bringing a suit at all. Still other nations of origin may not have the proper laws in place to bring a suit against landmine producers and may not be aware of U.S. laws until most statute of limitation periods have already run out. On the whole, preparation of any suit or even determining which producers are the proper defendants for a particular suit likely would require a great deal of time. To alleviate the injustice to those victims, there are ways for tolling the statute of limitations.

Two circumstances in which equitable tolling can stop the statute of limitations are: 1) “where the defendant has actively misled the plaintiff”;²²¹ or 2) where a defendant has concealed “facts that would alert the plaintiff to the plaintiff’s claim.”²²² This is problematic for landmine victims because they would need to prove that a failure by defendant producers to notify buyers of a safer alternative was misleading or constituted concealment. Further, such failure to notify the landmine buyers should be extended to the plaintiffs who ultimately suffered injuries as a result. Even so,

[e]quitable tolling applies in the “usual case” where an injured party remains ignorant of fraudulent conduct without any want of diligence or due care on his or her part. In such case, the bar of the statute of limitations does not begin to run until the fraud is discovered, even where [a] defendant has not taken special efforts to conceal the fraud.²²³

In such cases of concealment, the key is to look to the date when items were made public.²²⁴

It could be argued that landmine victims, often situated in locations where access to current information is very limited, have yet to learn that their injuries might have been prevented. Failing to show concealment, plaintiff landmine victims might argue that the doctrine of unclean hands allows for equitable tolling if they could show that the defendants conspired or otherwise actively withheld information from the plaintiffs regarding safer alternatives.²²⁵ The weakness of these arguments, in addition to the obvious burden of

²²¹ *Id.* at 467.

²²² *Bodner*, 2000 WL 1411100, at *15.

²²³ Quote contained in a Westlaw headnote preceding *In re Chambers Dev. Sec. Litig.*, 848 F. Supp. 602 (W.D. Pa. 1994).

²²⁴ Roy, *supra* note 210, at 201.

²²⁵ *Id.*

proof problems, is that any alleged concealment of facts by the defendants was from the landmine buyers, not the plaintiffs.

A related but somewhat broader approach for tolling statutes of limitations seeks to avoid injustice by considering special circumstances beyond the control of plaintiffs. These “[e]quitable tolling principles apply in cases where a defendant’s wrongful conduct, or extraordinary circumstances outside the plaintiff’s control prevent a plaintiff from asserting a claim timely.”²²⁶ The statute of limitations should toll, for example, where plaintiffs have been denied access to other countries’ courts;²²⁷ where defendants were immune from suit during a particular time period;²²⁸ or where there is a genuine fear of reprisals.²²⁹

A stronger approach to applying equitable principles for landmine victims is to consider their knowledge or, more accurately, their lack of knowledge. “The essence of the doctrine of ‘equitable tolling’ of a statute of limitations is that the statute does not run against a plaintiff who is unaware of his cause of action.”²³⁰ Given the very nature of many civilians injured by landmines, especially those in areas where access to the courts or other avenues for relief is either non-existent or minimal, it seems unjust to deny them a legal remedy simply because they had no way of knowing they could bring a suit.

Finally, “[u]nder the continuing violation doctrine, ‘the limitations period for a continuing offense does not begin until the offense is complete.’”²³¹ Due to the permanent nature of landmines, in courts that adhere to this equitable tolling principle, the statute of limitations will not run until all landmines are removed or detonated. Because this task would take an enormous amount of time, possibly measured in decades, the victims of landmines would be free to pursue their claims of relief without being barred by time limitations.

²²⁶ Stephanie A. Bilenker, *In Re Holocaust Victims’ Assets Litigation: Do the U.S. Courts Have Jurisdiction Over the Lawsuits Filed by Holocaust Survivors Against the Swiss Banks?*, 21 MD. J. INT’L L. & TRADE 251, 275 (1997).

²²⁷ *Id.*

²²⁸ Hilao v. Estate of Marcos, 103 F.3d 767, 773 (9th Cir. 1996).

²²⁹ See Fleischhaker v. Adams, 481 F. Supp. 285, 292 (D.D.C. 1979) (disallowing tolling where fear of reprisals was subjective); see also Jones v. Sauls Lithograph Co., Inc., 1978 WL 27 (D.D.C. Feb. 10, 1978) (tolling did not apply where plaintiff’s fear of reprisal was unsubstantiated).

²³⁰ *Bodner*, 2000 WL 1411100, at *15 (quoting Long v. Abbott Mortgage Corp., 459 F. Supp. 108, 113 (D. Conn. 1978)).

²³¹ *Id.* (quoting United States v. Rivera-Venture, 72 F.3d 277, 281 (2d Cir. 1995)).

2. Conventional Tort Defenses

The fact situations for landmine victims as potential plaintiffs would preclude most conventional tort defenses such as consent, assumption of risk, and contributory negligence.²³² Even in instances where landmine victims knew or should have known an area might be infested with landmines, it seems unlikely that defendant landmine producers would raise these defenses against the claims of severely injured landmine victims as a strategic matter in court.

Even the tort defense of superceding causes²³³ would be difficult to raise because, in most instances, landmines were used as intended, and producers knew or should have known that combatants rarely remove landmines after their military use ends. This defense might have application where landmines were used to depopulate civilian areas, such as placement in schools and water supplies, but in that instance the defense might strengthen plaintiffs' claims for negligent entrustment.

3. Governmental Immunity

If landmine victims were to assert tort claims against the U.S. government, the governmental immunity defense would be a viable defense for the government. The fact that the U.S. government is generally free from liability or suit stems from the idea that "the King can do no wrong."²³⁴ Though this statement does not necessarily ring true, governmental liability and judicial review of legislative or executive action does present separation of powers problems.²³⁵ Therefore, governmental immunity offers a way to avoid such problems. The only way the government could be held liable would

²³² "One who effectively consents to conduct of another intended to invade his interests cannot recover in an action of tort for the conduct or for harm resulting from it." RESTATEMENT (SECOND) OF TORTS § 892A (1979) (consent defense). The defense of assumption of the risk applies where a plaintiff is "actually aware of a reasonable risk and voluntarily undertakes it." RESTATEMENT (THIRD) OF APPOINTMENT § 3 cmt. c. Contributory negligence (also called comparative fault) is where the plaintiff's "negligence that is a legal cause of an indivisible injury to the plaintiff reduces the plaintiff's recovery in proportion to the share of responsibility the fact finder assigns to the plaintiff." RESTATEMENT (THIRD) OF APPOINTMENT § 7.

²³³ "A superceding cause is an act of a third person or other force which by its intervention prevents the actor from being liable for harm to another which his antecedent negligence is a substantial factor in bringing about." RESTATEMENT (SECOND) OF TORTS § 440 (1965).

²³⁴ KEETON ET AL., *supra* note 152, at 1033 (quoting Borchard, *Governmental Responsibility in Tort*, 36 YALE L.J. 1 (1926); Parker, *The King Does No Wrong – Liability for Misadministration*, 5 VAND. L. REV. 167 (1952)).

²³⁵ See *Tucson Airport Auth. v. Gen. Dynamics Corp.*, 136 F.3d 641, 644 (9th Cir. 1998).

be if the plaintiffs could assert a civil rights violation. In that case, the government could be held liable under the Alien Tort Claims Act, which mandates that the government, in such cases, be treated just as any private individual would be treated.²³⁶ Nevertheless, it is improbable that landmine victims could prove civil rights claims against the United States for the use of or exportation of landmines.

If landmine victims were to assert tort claims against foreign governments, governmental immunity again would present a viable defense. Foreign governments are generally immune to suit in U.S. courts under the Federal Sovereign Immunities Act.²³⁷ This is true unless one of the seven enumerated exceptions apply.²³⁸ The only provision that may apply to the mine cases is the third clause of the second exception. That clause says that foreign sovereign immunity will not attach if the actions at issue occurred outside the territory of the United States, were in connection with a commercial activity of the foreign state elsewhere, and caused a direct effect in the United States.²³⁹ Family members of landmine victims could bring causes of action if they argue that the commercial activity carried out by a foreign government in contracting with landmine producers (foreign or domestic) caused a direct effect in the United States because that is where their damages—loss of consortium, emotional distress, etc.—occurred.

²³⁶ 28 U.S.C.A. §§ 1346, 1402, 2401-02, 2411-12, 2671-72, 2674-80 (West 2000).

²³⁷ 28 U.S.C.A. § 1330 *et seq* (West 2000).

²³⁸ The exceptions are found in 28 U.S.C.A. section 1605 and include: (1) waiver of immunity by the foreign government; (2) actions based “upon a commercial activity carried on in the United States by the foreign state; or upon an act performed in the United States in connection with a commercial activity of the foreign state elsewhere; or upon an act outside the territory of the United States in connection with a commercial activity of the foreign state elsewhere and causes a direct effect in the United States”; (3) actions involving the illegal taking of property in the United States or exchanged for United States property by a foreign state; (4) rights to United States property are at issue; (5) actions “in which money damages are sought against a foreign state for personal injury or death, or damage to or loss of property, occurring in the United States and caused by the tortious act or omission of that foreign state or of any official or employee of that foreign state while acting within the scope of his office or employment;” (6) actions that are “brought either to enforce an agreement made by the foreign state with or for the benefit of a private party to submit to arbitration”; (7) actions “in which money damages are sought against a foreign state for personal injury or death that was caused by an act of torture, extra judicial killing, aircraft sabotage, hostage taking, or the provision of material support or resources . . . for such an act if such act or provision of material support is engaged in by an official, employee, or agent of such foreign state while acting within the scope of his or her office, employment, or agency.” 28 U.S.C.A. § 1605 (West 1994).

²³⁹ 28 U.S.C.A. § 1605 (a)(2).

4. “Feres-Stencel” Doctrine

Members of the United States Armed Forces injured during service have no cause of action against the government or the producers of the products that injured them. This rule of law developed out of two cases, *Feres v. United States*²⁴⁰ and *Stencel Aero Engineering Corp. v. United States*.²⁴¹ In *Feres*, the Court held that U.S. servicemen and women could not recover for injuries negligently caused by the government.²⁴² In *Stencel*, the Court extended such armed services immunity to producers of military equipment when it held that no recovery could be had even if the producers’ negligence, not the government, caused the injury.²⁴³

The *Feres-Stencel* defense is not viable in the landmine cases. Courts have extended the defense so that derivative claims, such as birth defects of a child caused by a father’s contamination with Agent Orange, have been rejected under *Feres-Stencel*.²⁴⁴ Innocent bystanders or family members independently injured, however, have been immune to the *Feres-Stencel* defense.²⁴⁵ It is likely, therefore, that the *Feres-Stencel* doctrine does not apply here since the injured parties are civilians, not servicemen or women.

5. Government Contractor Defense

The most obvious defense for landmine producers that have contracted with the U.S. government is the government contractor defense, which effectively is an extension of sovereign immunity. This defense would be possible only for potential defendants in the United States, but not to foreign landmine producers.

The government contractor defense can be used by producers that contract with the U.S. government to make products intended for use in armed conflict to shield those producers from liability under the principles of sovereign immunity.²⁴⁶ The policy behind this defense is to encourage private producers to contract for what are in essence government activities, which, if conducted by the government, otherwise would be protected under sovereign immunity.

²⁴⁰ 340 U.S. 135 (1950).

²⁴¹ 431 U.S. 666 (1977).

²⁴² *Feres*, 340 U.S. at 146.

²⁴³ *Stencel*, 431 U.S. at 673.

²⁴⁴ *See In re “Agent Orange” Prod. Liab. Litig.* MDL No. 381, 818 F.2d 145 (2d Cir. 1987).

²⁴⁵ *See id.* at 161.

²⁴⁶ *See Boyle v. United Techs. Corp.*, 487 U.S. 500, 514 (1988).

a. Elements of the Defense

In the case of landmine manufacturing, the private producers would need to establish the three elements of the defense and avoid the four exceptions to the defense. Elements of the government contractor defense are: (1) “the United States approved reasonably-precise specifications;” (2) “the equipment conformed to those specifications;” and (3) “the producer warned the United States about dangers in the use of the equipment known to the producer but not to the United States.”²⁴⁷ Landmine producers, in raising the defense, would assert that the United States provided them with the specifications with which to develop landmines; that they conformed their products to those specifications; and, finally, that they warned the United States about all dangers involved.

Under *Boyle v. United Technologies, Corp.*, the government contractor defense could prove a viable one unless the plaintiffs can show that at least one of the elements is missing.²⁴⁸ The plaintiffs’ best argument here is that the third element, requiring warning to the United States, is lacking. To succeed, the plaintiffs must proffer evidence that the self-destruct technology available since 1964 or earlier was not brought to the attention of the U.S. government. They must make clear that had the United States known the dangers of landmines without self-destruct devices, it would have changed its specifications to include the self-destruct design.

The U.S. experience in Vietnam supports the proposition that it was not properly warned of such dangers. In Vietnam, landmines caused thirty-three percent of all U.S. casualties and twenty-eight percent of all U.S. deaths.²⁴⁹ There, ninety percent of all mine and booby-trap components used against U.S. troops were of U.S. origin.²⁵⁰ If landmine producers had notified the United States of safer landmine designs before or during the Vietnam War, it is not logical that the United States chose to ignore or reject these safer alternatives that could have reduced the high casualty rates for its own troops. In this instance, under a strict government contractor defense analysis, the defense fails because even if precise specifications were provided and followed, the producers did not make the United States aware of known dangers.

²⁴⁷ *Boyle*, 487 U.S. at 501.

²⁴⁸ *Id.*

²⁴⁹ EXPOSING THE SOURCE, *supra* note 4, at 6.

²⁵⁰ *Id.* at 6. Another report found that, in Vietnam during 1965, between sixty-five and seventy percent of United States Marine Corps casualties resulted from landmines and booby-traps. DEADLY LEGACY, *supra* note 2, at 18.

b. Exception to the Defense

In addition to the requirement that producers provide warnings of the product's dangers, several other exceptions to the government contractor defense have developed over time and may help the landmine victims recover against producers.

The most helpful exception to the government contractor defense concerns the cost of change versus the cost of accident analysis. "[I]f the financial burden of changing a product is less than the accident costs produced by that product, the defendant-producer will be found negligent for failing to make such reasonable safety alterations."²⁵¹ This exception could prove to be the most helpful in the landmine cases because there was a safer alternative design since 1964 or earlier. The cost of adding self-detonating devices would have been far less than the cost of the accidents. This exception could, therefore, prevent the landmine producers from avoiding liability via the government contractor defense.

A second exception is that, although the defense is available in cases of defective design, it does not apply to defective manufacture cases.²⁵² This exception may be problematic in this case because to support their negligence claim, the plaintiffs will assert that the offending landmines were defectively designed. It would, therefore, be fatally inconsistent to argue on the one hand a design defect and on the other a manufacturing defect.

The third exception to the government contractor defense allows a producer to be held liable when its immunity has been contracted away. This could occur with an indemnification clause, a designation of the producer as an independent contractor, or an insistence that the producer will carry liability. Unless the contracts involved any of these provisions, this exception is unlikely to apply.

The fourth exception allows producer liability when the producer used its discretion in producing the product.²⁵³ This exception is similar to the third element of the government contractor defense requiring warning to the government of the dangers. This exception may prove helpful if plaintiffs could show that the landmine producers used their discretion in not informing the government of the safer alternative, or in not using the safer alternative. When decisions are made by the contractor and the

²⁵¹ Calnan & Taslitz, *supra* note 179, at 239.

²⁵² See *Mitchell v. Lone Star Ammunition, Inc.*, 913 F.2d 242, 245 (5th Cir. 1990).
But see *Bentzlin v. Hughes Aircraft Co.*, 833 F. Supp. 1486, 1488-89 (C.D. Cal 1993).

²⁵³ Calnan & Taslitz, *supra* note 179, at 223.

government “merely accepts [such decisions], without any substantive review or evaluation,” the contractor can be said to be using its discretion, and thus unable to assert the government contractor defense.²⁵⁴

c. Extending the Defense to Landmine Exports

Another issue regarding the government contractor defense is whether the defense extends to landmines produced in the United States but exported directly to foreign entities. All arms exports from the United States, including landmines, are regulated and must be licensed by the U.S. government through provisions of the Arms Export Control Act.²⁵⁵ The rules and procedures vary depending on if the foreign entity (a foreign government or private company) first approaches the U.S. government or the arms producer.²⁵⁶

When the foreign entity approaches the U.S. government, the President of the United States is ultimately responsible for the supervision of all such contracts, which, once accepted, may then be put out for bidding by U.S. producers.²⁵⁷

When the foreign entity directly approaches the U.S. producer, the President remains responsible but the procedures differ.²⁵⁸ Only producers that have registered with the U.S. government to export specific items from the “U.S. Munitions List” of defense items²⁵⁹ may enter into export contracts. They then must obtain an export license from the Department of State and, for substantial contracts, approval of Congress. There is no judicial review of the approval or denial of a license. Therefore, once the U.S. government denies a producer the right to export a particular munitions list item, there is no appeal and the sale can go no further.

When U.S. landmine producers directly contract with foreign entities, this latter issue regarding the government contractor defense is implicitly extended to cover the exporting activities because the U.S. government provided a license. This presents a novel issue for the courts. Weighing in favor of the immunity extension is the fact that the U.S. government has ultimate authority over what sales will be allowed and what items are suitable for export. The policy giving

²⁵⁴ See *Trevino*, 865 F.2d at 1480; see also *Kleeman v. McDonnell Douglas Corp.*, 890 F.2d 698, 702-03 (4th Cir. 1989).

²⁵⁵ 22 U.S.C.A. § 2551 *et seq.* (West 2000).

²⁵⁶ See *id.*

²⁵⁷ *Id.*

²⁵⁸ *Id.* at § 2778.

²⁵⁹ 22 C.F.R. § 121.1 (1993).

rise to the defense, however, does not necessarily support such an extension because arms exporting by private producers appears to be more a commercial than governmental activity. Further, the government contractor defense includes relatively strict guidelines limiting denial of liability. The extension of the defense to exports contradicts the apparent intent by broadening the coverage of immunity to a greater range of activities.

d. Summary of Government Contractor Defense
Applicability

In sum, plaintiffs would have plausible arguments that the government contractor defense should not shield landmine producers in the United States, regardless of whether those producers contracted with the U.S. government or exported directly to foreign entities under license from the U.S. government. Gauging the strength of plaintiffs' arguments is impossible, however, until two key questions can be answered. First, more factual information is needed to learn if producers properly notified the government of the danger of not using self-detonating devices as a safer alternative.²⁶⁰ Second, regarding arms exports, courts must address the novel legal issue of whether government licensing implicitly extends the defense to those transactions.

H. Possible Relief for Landmine Victims

In terms of possible relief for landmine victims, this Article argues that the need is great and that at least some liability should rest with the entities that created, profited by, and, quite possibly, were in a position to have avoided much of the landmine threat to civilians. Assessing the actual damages suffered by landmine victims and what relief they might seek is well beyond this Article's scope. The following discussion reviews possible approaches and the difficulties involved.

²⁶⁰ In the alternative, the successful application of the government contractor defense by landmine producers in the United States—by defendants proving they had properly notified the U.S. government of safer alternatives—would raise other potentially troubling questions. This possibility would shift the focus to the U.S. government regarding its continued specification, use, and export of the more dangerous mines despite the high casualty rates for U.S. troops in Vietnam and the highly foreseeable long-term danger for civilians throughout the world. The most probable defense for the United States in this instance would be sovereign immunity, as previously discussed. Sovereign immunity by itself could provide a legal defense, but it would offer little explanation for the government's decision to ignore or reject safer alternative landmine designs.

1. Equitable Remedies

Any plaintiff claiming injury from a product might seek equitable remedies including injunctions against the continued manufacture and sale of that product in its dangerous form, removal of the product from locations where it might cause injury to future plaintiffs, and destruction of existing inventories of the product. In the instance of landmines, these are precisely the actions called for under the Mine Ban Treaty (the Treaty).²⁶¹

Organizations currently monitoring for compliance with the Treaty, as well as investigating landmine production and use generally indicate that dramatic progress has been made in reducing or even eliminating landmine production, export, sale, and use in most of the world.²⁶² Demining activity has increased, although it remains dangerous, expensive, and well behind the pace most proponents believe is necessary.²⁶³ Limited stockpile destruction has commenced in some signatory states.²⁶⁴

Even if U.S. courts could assert their authority to enforce equitable remedies regarding landmines, the Treaty as well as the political and public campaigns accompanying it appears to be accomplishing many of the necessary tasks.²⁶⁵ Plaintiff landmine victims in U.S. courts seeking equitable remedies would find little to enjoin within the United States. No authority exists to enjoin activities outside the United States, and the Treaty and accompanying campaigns already are reducing the landmine threat. In any event, eliminating landmine production, sale and use, and demining and

²⁶¹ The “Mine Ban Treaty’s” long title—*Convention on the Prohibition of the Use, Stockpiling, Production, and Transfer of Anti-Personnel Mines and On Their Destruction*—addresses its primary functions.

²⁶² See, e.g., MONITOR, *supra* note 6, at 620 (noting that Germany has destroyed all of its 1.7 million antipersonnel mines); *id.* at 685 (noting that the United Kingdom has already destroyed a “large proportion” of its stockpile).

²⁶³ See *id.*

²⁶⁴ *Id.*

²⁶⁵ The *Landmine Monitor Report* states that, at the time of its publication, 135 countries had signed or acceded to the Mine Ban Treaty. MONITOR, *supra* note 6, at 1-2. These countries included virtually all of the European Union, forty of the forty-eight countries in Africa, several of the major producers in Asia, and most of the heavily mine-affected countries around the world. Notable non-signatories included the United States—joining Cuba as the only non-signatories in the Western Hemisphere—and, of the world’s other major producers, Russia, China, India, and Pakistan. Yet each of these, except Pakistan, had expressed their eventual intention to sign the Treaty or have stated their support for the ultimate goal of a comprehensive prohibition. Progress on banning production, trade, and use, as well as demining, destruction of stockpiles, and other mine action activities, are documented throughout the report. MONITOR, *supra* note 6, at 2.

destroying stockpiles, address the threat to future victims but they offer nothing for the landmine victims who are the subject of this Article.

2. Damages

The world's landmine victims have suffered severe injuries from their innocent contact with defendant producers' products. An accurate estimate of the total monetary damages is neither available nor realistically possible. Nevertheless, a brief review of how damages are conventionally valued under U.S. law is instructive. This section will briefly review the conventional approach in the United States to valuing damages, and then will attempt to establish the scale, including only compensation for landmine victims as previously defined and excluding costs associated with other mine action activities such as demining.²⁶⁶

When plaintiffs bring negligence actions, their ultimate goal typically is to obtain a remedy in the form of monetary damages. Such monetary relief can be in the form of compensatory damages or punitive damages. Plaintiffs will be able to recover compensatory damages for all losses that have proximately resulted from the tort and all losses that will so result in the future if proven by a preponderance of the evidence.²⁶⁷ Punitive damages, "[which] represent a sum in excess of any compensatory damages . . . are usually available only when the tortfeasor has committed quite serious misconduct with a bad intent or bad state of mind such as malice."²⁶⁸

²⁶⁶ Demining cost estimates are substantial. While the number of mines to be removed is approximately sixty to seventy million, the most accepted method for estimating demining costs is based on area covered rather than number of mines. MONITOR, *supra* note 6, at 17-18. This varies by location, method, and clearance standards (e.g., the U.N. standard is 99.6 percent clearance). For example, the cost of mine clearance in Kuwait was about \$0.7 billion (and 84 deminers' lives) for 728 square kilometers, or just under \$1 million per square kilometer. In Afghanistan, the cost was \$621,889 per square kilometer. MONITOR, *supra* note 6, at 18. The difficulty with this approach is finding an agreement on how much area is to be demined since not all infested areas necessarily will be demined (e.g., deserts). A less accurate method uses dollars per mine, which has been widely reported at \$300 to \$1,000 per mine. Assuming sixty to seventy million landmines, this equals \$18 to \$70 billion to demine the world. The United States, with a stated goal "to rid the world of anti-personnel landmines which pose a threat to civilians by the year 2010," leads the world in demining funding, having spent \$63 million in 1998 and \$58 million in 1999 in 26 countries. TO WALK THE EARTH IN SAFETY, *supra* note 5, at 4. Assuming U.S. funding continues at this rate, and that the rest of the world matches the amount, it would take 1,500 years to reach \$18 billion.

²⁶⁷ DAN B. DOBBS, 2 THE LAW OF TORTS 1047 (2000).

²⁶⁸ *Id.* at 1062.

a. Compensatory Damages Generally

When determining the compensatory damages due to a plaintiff, the goal is to “fairly and adequately” calculate the losses he sustained.²⁶⁹ To do this, it is necessary to look to two types of losses: tangible and intangible.

Tangible losses, also called pecuniary or liquidated losses, are those damages that can be calculated mathematically including medical bills, lost wages, and lost earning capacity.²⁷⁰ Medical bills include those “incurred in treating, curing and alleviating the plaintiff’s physical and mental injuries,”²⁷¹ including “diagnostic tests, drugs, medical devices and artificial limbs”²⁷² “[It] does not depend upon whether the plaintiff has actually paid the doctor’s bills.”²⁷³ Lost earnings can be recovered “if the plaintiff is wholly or partly unable to carry out gainful activity as a result of tortuously inflicted injury.”²⁷⁴ Lost earnings may include actual wages, fringe benefits, and wages based on expected future advancement.²⁷⁵ Lost earning capacity even applies when a plaintiff was not working at the time of the injury, but because of the injury, will have a diminished earning capacity in the future.²⁷⁶

Intangible losses, also referred to as unliquidated damages, may include pain and suffering, loss of enjoyment of life, and future damages.²⁷⁷ Recovery for intangible losses is left to the discretion of the judge or jury. Pain and suffering claims include “any form of conscious suffering, both emotional and physical.”²⁷⁸ Often, loss of a body part or loss of a bodily function involve more pain and suffering than other injuries. Likewise, suffering or embarrassment resulting from disfigurement rises to the level necessary for substantial recovery. Loss of enjoyment of life “[permits] recovery for the plaintiff’s mental reactions to pain and to [his] sense of loss.”²⁷⁹ Future damages include “(1) [r]esiduals or future effects of an injury which have reduced the capability of an individual to function as a whole [person]; (2) future pain and suffering; (3) loss or impairment

²⁶⁹ Flannery v. United States, 297 S.E.2d 433, 435 (W. Va. 1982).

²⁷⁰ *Id.*

²⁷¹ *Id.*

²⁷² DOBBS, *supra* note 267, at 1049.

²⁷³ *Id.*

²⁷⁴ *Id.* at 1048.

²⁷⁵ *Id.*

²⁷⁶ *Id.*

²⁷⁷ Flannery, 297 S.E.2d at 435-36.

²⁷⁸ DOBBS, *supra* note 267, at 1050.

²⁷⁹ *Id.* at 1052.

of earning capacity; and (4) future medical expenses.”²⁸⁰ Each component must be valued in the context of the community standards in which the plaintiff resides and, after compensatory damages are tabulated, they must be adjusted to take into account present value and inflation.²⁸¹

b. Punitive Damages

Punitive damages can only be recovered if compensatory damages have been recovered. Punitive damages are awarded with the goal of changing the defendant’s behavior or providing incentives for others in similar businesses to change their behavior. To award punitive damages, a court must find circumstances of aggravation or outrage, such as spite or malice, or a fraudulent or evil motive on the part of the defendant, or a conscious and deliberate disregard of the interests of others so that his conduct may be called willful or wanton.²⁸² To calculate punitive damages, judges and juries have relied upon the following factors: “(1) the reprehensibility of the defendant’s misconduct; (2) the defendant’s wealth; (3) the profitability of the misconduct; (4) litigation costs; (5) the aggregate of all civil and criminal sanctions against the defendant; and (6) the ratio between the harm caused or potentially caused by the defendant’s misconduct and the losses suffered by the plaintiff.”²⁸³ Punitive damages are often awarded in cases where defendants engaging in economic activity cause harm to plaintiffs. In calculating such damages, the defendant’s financial status will be considered to determine how much money would inflict the proper liability.²⁸⁴

For landmine victims, punitive damages would be much more difficult to recover than compensatory damages. Landmine victims would need to show that the producers undertook outrageous conduct or acted with conscious or deliberate disregard for the interests of others. Such willful and wanton conduct includes a conscious disregard for the risk to safety of life or property. Here, it

²⁸⁰ *Flannery*, 297 S.E.2d at 436.

²⁸¹ See *Green v. General Motors Corp.*, 310 N.J. Super 507, 530-44, 709 A.2d 205, 217-23 (N.J. 1998); see also, DOBBS, *supra* note 267, at 1058 (citing *Jones v. Laughlin Steel Corp. v. Pfeifer*, 462 U.S. 523 (1983) (using a low interest rate to reduce future award to present value)); *Schleier v. Kaiser Found. Health Plan*, 876 F.2d 174 (D.C. Cir. 1989) (estimating future inflation and increasing the award); *Beaulieu v. Elliott*, 434 P.2d 665 (Alaska 1967) (allowing the present value and inflation adjustment to equal each other).

²⁸² *Rouse v. Riverside Methodist Hosp.*, 459 N.E.2d 593, 596 (Ohio 1983).

²⁸³ DOBBS, *supra* note 267, at 1066-67.

²⁸⁴ See *id.*

could be argued that producers knew or should have known their refusal to include self-destruct mechanisms would cause severe injuries to post-conflict civilians. It would be difficult at best to succeed with this argument. If punitive damages were awarded, however, they almost certainly would be meaningful for landmine victims because the financial wealth of the defendants would be considered a factor in setting the award amount.

c. Assessing Landmine Victims' Compensatory Damages

If liability were found, landmine victims presumably could recover compensatory damages. Punitive damages always would be a possibility, but are not considered here.

The first component of compensatory damages for landmine victims is recovery for all medical bills, lost earnings, and lost earning capacity. As noted previously, the ICBL has estimated the immediate medical care at \$9,000 per victim.²⁸⁵ Add to this figure all continuing medical costs such as prosthetic re-fittings, at about \$125 each for anywhere up to thirty times (for a child), and the figure easily exceeds \$10,000.²⁸⁶ Other ongoing medical costs such as subsequent surgeries, therapy and treatments would add at least a few thousand dollars. A very conservative combined figure might be \$15,000 to cover all emergency medical care, continuing surgeries and medical care, therapy, prostheses, and related costs.

Lost wages and lost earning capacity are nearly impossible to compute given the number of victims and the various countries from which they come. Yet even in developing countries, a victim's lifetime of diminished income at the very least ranges from a few to perhaps tens of thousands of dollars.

Damages for pain and suffering would likely be significant since the trauma of a landmine injury is substantial. In fact, since many landmine victims lose appendages, they could be entitled to the damages associated with such a traumatic loss as well as the potential stigma arising from disability and disfigurement. Many amputees suffer throughout their lives with phantom pains and are burdened with continuing medical treatments for their injuries. Landmine victims also could be entitled to recover for loss of enjoyment of many everyday activities, such as familial and social interaction, that are made substantially more difficult as a result of a disfiguring injury.

²⁸⁵ See *supra* note 71 and accompanying text.

²⁸⁶ See DEADLY LEGACY, *supra* note 2, at 130 (giving figure of \$125 per prosthesis and estimating that a ten year old child with a life expectancy of forty to fifty years would need twenty-five prostheses).

The incomprehensible terror and suffering associated with being severely injured by a landmine can hardly be measured monetarily, but this is the only way for a victim to be compensated. Putting a number on such suffering is nearly impossible. However, in lawsuits all over the world, and especially in the United States, this is what judges and juries do every day—put a monetary number on injuries for which there cannot possibly be just compensation. For example, hundreds of lawsuits are filed each year in which a plaintiff has lost an appendage due to some type of accident. In Cook County, Illinois, a typical award of damages for a loss of a leg ranges from \$800,000 to \$1 million.²⁸⁷ In non-metropolitan areas of the United States, this number decreases substantially, but is still measured in hundreds of thousands of dollars. While it is true that landmine victims have not been injured in Cook County, Illinois, or even in the United States, these numbers give an idea of just how much an appendage is considered to be worth in certain parts of the United States.

In sum, adding the possible component elements of a lifetime of medical costs and lost income, but before including intangible losses, the compensatory damages figure should be an average of at least \$20,000 per landmine victim.

Intangible damages are harder to estimate. What value could be placed on a landmine victim's pain and suffering, loss of limb, disability, disfigurement, and loss of enjoyment? In Cook County, such a figure could range in millions of dollars. If under U.S. law \$1 million or more is a just amount for an individual severely injured in Cook County, what figures would be appropriate for victims in Mozambique or Cambodia or any other landmine-infested country? These questions need not be answered here.

It seems reasonable, however, to suggest that \$20,000 would only begin to compensate a person—regardless of where they might reside—for the devastation of their life. Assuming the United Nations estimate of 250,000 amputees as the most conservative estimate of total landmine victims, total compensatory damages (not including any intangible losses) would be at least \$5 billion.

²⁸⁷ See also *Basic Injury Values for Leg Crush Injuries and Amputations*, 2 PERSONAL INJURY VALUATION HANDBOOK 14, 18-19 (reporting U.S. mean award values of: \$3,164,525 for below the knee amputations, \$4,170,346 for above the knee amputations, and \$11,104,955 for bilateral leg amputations; as well as, U.S. mean settlement values of: \$1,053,860 for below the knee amputations, \$1,885,747 for above the knee amputations, and \$2,872,027 for bilateral leg amputations).

Five billion dollars is an overwhelming amount for the developing countries where most of the sixty to seventy million uncleared landmines are located. Compared with the thirty-four countries that exported many of those mines, however, the same \$5 billion represents less than 0.1 percent of their combined annual budgets.²⁸⁸ Although U.S. law does not normally permit considering relative wealth except with punitive damages, it is impossible to ignore the inequities in this instance. Landmine victims reside primarily in the poorest countries of the world and, through no fault of their own, suffered devastating injuries from landmines. Many of these mines were manufactured and exported for a profit from the world's wealthiest countries. These exporting countries not only can afford to provide the needed relief on a humanitarian basis, these are the same exporters who quite possibly could have avoided most of the victims' injuries by originally including self-detonating mechanisms in the mines.

²⁸⁸ Most recent budget estimates available for the thirty-four identified landmine exporting countries, including the United States but excluding China, Iraq, and Yugoslavia, total more than \$5 trillion. CIA, *CIA WORLD FACTBOOK* (2000).

IV. SUMMARY AND CONCLUSION

The facts are appalling. Each day new victims are added to the 300,000 men, women and children who have been severely injured and maimed by an unseen menace. Most of these victims receive inadequate medical care and little or no long-term therapy. Already among the poorest people in the world, the devastation to their lives is unimaginable.

The menace is not an earthquake, flood, or other natural disaster—just the opposite. Business people and government officials from thirty-four countries, including the wealthiest countries and corporations ever known, made the decision to produce and export anti-personnel landmines. They sold tens of millions of their product in a competitive market. They designed and enhanced their product to make it more effective and cheaper. They knew or certainly should have known that their product would continue to indiscriminately maim and kill innocent civilians for decades after serving its intended military purpose.

Could the producers have designed their product to serve its military purpose but without threatening so many post-conflict civilians? Evidence suggests the technology was available forty years ago. If producers had employed this technology, perhaps many of the world's 300,000 victims would be whole today and most of the sixty to seventy million landmines still threatening civilians would not exist.

Yet if such technology was available that could have avoided so much injury, suffering and expense, then why was it largely ignored? Why did producers continue to make and sell millions of cheap, "dumb" landmines year after year?

The truth of how and why these decisions were made in the business of producing and selling landmines may never be known and, in fact, is not really important. The decisions were made. As a result, hundreds of thousands of civilians have been severely injured through no fault of their own. A business product directly caused their injuries, and evidence suggests that the producers knew of a safer and reasonable alternative that could have avoided many of those injuries.

Under U.S. law, this fact situation raises several liability theories through which the victims could receive compensation for their injuries from the makers of the product. This Article has reviewed those theories, the possible defenses, the jurisdictional and procedural matters, and some of the practical aspects. The result is a complex picture with many issues.

In terms of substantive law, the primary theories of liability are fairly straightforward. These are founded on well established policies under U.S. law. Negligence holds producers liable if their failure to act with ordinary care caused injury to another. This not only places the financial burden on the party that caused or could have avoided the injury, it compensates the victims and it creates an incentive to provide fundamentally safe products in the future. The theory of strict liability approaches liability differently. It does not look to assign blame, but instead focuses on compensating persons injured by defective or abnormally dangerous products while placing the costs where they are best able to be absorbed.

Applying these theories to a product that has injured so many innocent, post-conflict civilians supports the concept of holding landmine producers liable. What can become confusing, however, is the fact that landmines were produced for the military purpose of injuring, or at least threatening to injure, people. This is not inconsistent with landmines being a product—indeed, they have been privately and publicly produced, sold and exported in a competitive world market. It does, however, give rise to a special defense that extends sovereign immunity to protect military contractors, the “government contractor defense.” This Article has explored that defense and found that it does not apply to all landmine producers and that even in those instances it may not apply if the producers failed to warn the U.S. government that a safer alternative was available. Further, the *Feres-Stencel* defense does not apply since these victims are post-conflict civilians. Other, more conventional tort defenses such as contributory negligence or assumption of risk also do not fit the fact situation.

The greatest difficulties in any case of landmine victims as plaintiffs against landmine producers as defendants are primarily jurisdictional, procedural and practical.

Hundreds of thousands of prospective plaintiffs reside in dozens of countries. They have suffered a wide range of injuries over an extended period of time from a product made by at least 100 corporations and governmental agencies in thirty-four countries. While many of these producers are located in or have sufficient contacts with the United States, and no other legal system in the world would be better positioned to hear these plaintiffs’ complaints, U.S. jurisdiction is uncertain. This Article has reviewed the possible bases for U.S. jurisdiction and several approaches regarding standing. No single best approach is apparent. Rather, in terms of jurisdiction, standing and procedural matters, the possibilities are more strategic and tactical matters, which are beyond the scope of this Article.

Practical concerns are the most daunting. Information about landmine producers and their involvement in the trade is hard to find. Locating and contacting so many plaintiffs who speak a variety of languages, often live in remote regions, and are accustomed to different cultures and legal systems would be a monumental task. Finally, the list of prospective U.S. and foreign defendants would seem to raise conflicts of interest obstacles for many attorneys, even if they had the interest and financial wherewithal to represent predominantly poor foreign nationals on a long, difficult and speculative campaign.

But returning to the initial goal of compensating the world's landmine victims—the theme of justice for these people—should the largely jurisdictional, procedural and practical difficulties matter? Did not the landmine producers make decisions that weighed their business interests against the highly foreseeable and devastating injuries their products inflicted on 300,000 innocent men, women and children? Should justice be denied because it is difficult?

One response might indeed argue that, yes, we must face reality and the effort to remedy some tragedies is too great. But this tragedy was neither natural nor unavoidable. People, who received money for their product and quite possibly could have avoided much of the tragedy, created it. Further, the financial reality is that the remedy's cost might require less than 0.1 percent of one year's revenues from the producers who spread millions of landmines around the world.²⁸⁹

Compare that with the everyday reality landmine victims must confront. Through no fault of their own, these products from Italy or Singapore or Wisconsin or California have disintegrated their limbs, embedded debris into their bodies, and blinded, deafened, burned, and disfigured them. Most victims who survived this trauma, shock, and massive blood loss then face a dismal future for the remainder of their lives.

If these victims had been injured in the United States by defective or abnormally dangerous products, it seems highly unlikely the U.S. government, courts or people would hesitate to hold the producers liable regardless of whether those producers were U.S. or foreign, private or public. Few would then argue that the jurisdictional, procedural or practical difficulties were too great.

At this point, the distinction between legal and moral arguments becomes unclear and perhaps unnecessary. This Article was not

²⁸⁹ This figure was calculated based on the combined annual government budgets of the producing countries.

intended to promote litigation so much as to suggest that landmine producers, whose products have caused severe injury to so many innocent people, can and should be responsible for compensating those victims.

Of course, if purely humanitarian interests controlled, the best result would simply have the landmine producers voluntarily join together and contribute their proportionate shares to a fund for the world's landmine victims. This fund would not undo the injuries, but it could provide adequate care to return them to as productive and meaningful lives as possible given their devastating injuries. This Article estimates such a fund at \$5 billion for the purposes of discussion.

Whatever the amount, it is an overwhelming figure for the countries in which most landmine victims reside; yet it is a remarkably small cost for the producers who made and exported the landmines. Measured against the pain, suffering, and devastation inflicted on 300,000 innocent people, it seems a rare and relatively inexpensive opportunity to correct one of the world's greatest injustices.
