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## Common Materials Turned Deadly: How Much Does America Have to Monitor to Prevent Further Acts of Terrorism?

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## COMMON MATERIALS TURNED DEADLY: HOW MUCH DOES AMERICA HAVE TO MONITOR TO PREVENT FURTHER ACTS OF TERRORISM?

DORI PERSKY<sup>1</sup>

### INTRODUCTION

In this age of terrorism, the focus tends to be on the next big terrorist plot, usually involving mass chemical weapons, biological warfare, or nuclear devices. However, people often fail to consider the many ways in which explosives can be created using materials that anyone can purchase. Most recently this was brought to light with the Boston Marathon Bombings. On April 15, 2013, two pressure cooker bombs exploded near the finish line of the Boston Marathon, killing three people and injuring 264 others.<sup>2</sup> In the investigation that followed, police discovered that the bombs were created using pressure cookers, gunpowder extracted from fireworks, glue, nails as shrapnel, and what may have been Christmas tree lights as initiators.<sup>3</sup> With the exception of fireworks,<sup>4</sup> all of these items can be purchased without regulation.

But the Boston Marathon Bombings (Boston Bombings) are not the first time such common materials were used for deadly purposes. Insurgents in Afghanistan and Iraq have been using improvised explosive devices (IEDs) made with pressure cookers for many years.<sup>5</sup> Additionally, terrorists used pressure cooker bombs in the 2006 Mumbai train explosions, which killed over 200 people.<sup>6</sup> In fact, the Department of Homeland Security (DHS) issued an internal memorandum regarding the use of such devices in 2004, warning that “these types of devices can be initiated using simple elec-

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1 J.D. Candidate, May 2015, American University Washington College of Law; B.A. European Studies, 2009, Vanderbilt University.

2 Deborah Kotz, *Injury Toll from Marathon Bombs Reduced to 264*, BOSTON GLOBE, Apr. 24, 2013, available at <http://www.bostonglobe.com/lifestyle/health-wellness/2013/04/23/number-injured-marathon-bombing-revised-downward/NRpaz5mmvGquP7KMA6XsIK/story.html>; see Caitlin Dewey, *Homeland Security Warned About Terrorist Use of Pressure Cooker Bombs in 2004*, WASH. POST, Apr. 16, 2013, available at <http://www.washingtonpost.com/blogs/worldviews/wp/2013/04/16/homeland-security-warned-about-terrorist-use-of-pressure-cooker-bombs-in-2004/> (explaining that the Department of Homeland Security warned about the potential use of pressure cookers to create improvised explosive devices (IEDs)).

3 Evan Perez & Pervaiz Shallwani, *FBI Says Devices Suggest Expertise*, WALL ST. J., Apr. 26, 2013, available at <http://online.wsj.com/article/SB10001424127887324743704578447212196070792.html> (referring to an unclassified report by the Federal Bureau of Investigation (FBI) and suggesting that the Tsarnaev brothers may have had training in how to build an explosive device).

4 See MASS. GEN. LAWS ANN. ch. 148, § 39 (West 2013) (detailing Massachusetts fireworks laws and regulations mandating that fireworks cannot be sold to, possessed by, or exploded by citizens in Massachusetts).

5 See Dewey, *supra* note 2 (noting that DHS knew about pressure cooker bombs based on past uses).

6 See *id.* (describing past uses of IEDs to illustrate the potential level of destruction pressure cooker IEDs can incur).

tronic components including, but not limited to, digital watches, garage door openers, cell phones or pagers,<sup>7</sup> which are more easily obtainable items. Because pressure cookers are still viewed as a common kitchen device, no U.S. security agency monitors them.

Fertilizer, another commonly purchased material, has also been used to create explosive devices. Probably the most well-known example of the use of fertilizer in an explosive device is the Oklahoma City Bombing. On April 19, 1995, Timothy McVeigh parked a rented truck in front of the Alfred P. Murrah Federal Building in Oklahoma City, Oklahoma.<sup>8</sup> Inside the van McVeigh loaded a mixture that included more than 2,000 pounds of ammonium-nitrate fertilizer that he purchased from a farm goods store in Kansas and over 1,000 pounds of diesel fuel.<sup>9</sup> The blast killed 168 people, injured over 680 others, destroyed or damaged 324 buildings within a sixteen-block radius, and caused more than \$652 million in damages.<sup>10</sup> McVeigh and his accomplice, Terry Nichols, built the bomb for about \$5,000 using mostly common household materials that they either purchased legally or stole.<sup>11</sup>

The Boston Bombings and the Oklahoma City Bombing show that common materials such as fertilizer, pressure cookers, diesel fuel, and fireworks can be purchased easily, often without any regulation, and at a small cost. This Article argues that the government may be able to further regulate some common household items that are used for deadly purposes. Regulating such materials could make it more difficult for prospective terrorists to create bombs using these everyday materials that nearly anyone can purchase. In order to prevent future acts of terrorism of this nature, the government should create a more stringent oversight program regarding the purchase of select dangerous materials, especially of those materials that are intrinsically deadly. However, the government should only regulate the most deadly items because the government must balance its obligation to regulate deadly materials with its obligation to maintain individual liberties.

Part II of this Article discusses the federal intelligence community's<sup>12</sup> regulation of common materials used for deadly purposes with a focus on fireworks, fertilizer, and pressure cookers. It additionally discusses the intelligence community's use of data mining, focusing on how the government takes information from private companies on retail records and uses that data to formulate patterns, and the privacy concerns that such oversight invokes. Part III suggests that the intelligence commu-

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7 *Id.* (citing Information Bulletin, Potential Terrorist Use of Pressure Cookers, U.S. DEP'T OF HOMELAND SEC. (2013)).

8 *See Terror Hits Home: The Oklahoma City Bombing*, FED. BUREAU OF INVESTIGATION, <http://www.fbi.gov/about-us/history/famous-cases/oklahoma-city-bombing> (last visited July 15, 2013) (detailing the destruction caused by the fertilizer bomb used in the Oklahoma City Bombing).

9 *See* Charles C. Sinnard, *Growing Crime: The Rising Use of Fertilizer For Illegal Purposes and the Need for Stricter Regulations Concerning its Sale and Storage*, 4 DRAKE J. AGRIC. L. 505, 510 (1999) (explaining how the fertilizer used in the bomb was purchased legally).

10 *See* Alan Calnan & Andrew E. Taslitz, *Defusing Bomb-Blast Terrorism: A Legal Survey of Technological and Regulatory Alternatives*, 67 TENN. L. REV. 177, 181 (1999) (discussing other terrorist bombings claiming the lives of U.S. citizens over the past fifty years).

11 *See generally* United States v. McVeigh, 153 F.3d 1166, 1177 (10th Cir. 1998) cert. denied, 526 U.S. 1007 (1999) (describing the charges against Oklahoma City bomber Timothy McVeigh). *See generally* United States v. McVeigh, 153 F.3d 1166, 1177 (10th Cir. 1998) cert. denied, 526 U.S. 1007 (1999) (describing the charges against Oklahoma City bomber Timothy McVeigh).

12 This Article focuses on the law enforcement members of the federal government who have a hand in monitoring terrorism, such as the DHS, FBI, and the Bureau of Alcohol, Tobacco, and Firearms (ATF).

nity should only regulate the most dangerous items, such as certain kinds of fertilizer and explosives. Finally, Part IV concludes that the intelligence community cannot regulate everything, so the government should only regulate the materials that pose the greatest risk in a manner that does not violate the privacy rights of U.S. citizens, such as recommended in Part III.

## II. U.S. INTELLIGENCE COMMUNITY'S REGULATION AND MONITORING OF COMMON MATERIALS USED FOR DEADLY PURPOSES

Currently, government security agencies monitor some types of fireworks and fertilizers.<sup>13</sup> Pressure cookers, on the other hand, are merely monitored by consumer organizations for safety standards.<sup>14</sup> Here, the regulation of fireworks, fertilizer, and pressure cookers is discussed.

### A. Fireworks

Congress passed the Federal Explosives Law (FEL)<sup>15</sup> in 1970 as part of the Organized Crime Control Act.<sup>16</sup> FEL applies at nearly every stage in the life of an explosive, including importation, manufacture, purchase, use, or storage of explosive materials.<sup>17</sup> FEL also “establishes licensing and permit restrictions for buyers, sellers and users of explosives,” and “prohibits the sale or distribution of explosives to unauthorized persons and unauthorized locations.”<sup>18</sup> More recently, the Safe Explosives Act<sup>19</sup> updated these regulations. The Safe Explosives Act requires licensees and permittees to keep records of explosives sold.<sup>20</sup> These records must include documentation of importation, production, shipment, receipt, or sale of explosive materials.<sup>21</sup>

According to the Safe Explosives Act, licensed dealers must take physical inventories of all their explosive materials, and keep track of them in accurate record form.<sup>22</sup> Additionally, in a separate re-

13 See generally Federal Explosives Law, 18 U.S.C. §§ 841–848 (2012); see also Exec. Order No. 13284, 68 Fed. Reg. 4075 (Jan. 23, 2003) (creating DHS to monitor terrorism domestically and internationally); Homeland Security Act (HSA) of 2002, Pub. L. No. 107–296 § 101(b)(1)(A)–(C), 116 Stat. 2135, 2145–47 (2002) (codified at 6 U.S.C. § 111 (2012)) (stating the mission of DHS: “to prevent terrorist attacks within the United States, reduce the vulnerability of the United States to terrorism; and minimize the damage, and assist in the recovery, from terrorist attacks that do occur within the United States”).

14 See Dewey, *supra* note 2.

15 Federal Explosives Law, 18 U.S.C. §§ 841–848 (describing the legality of the importation, manufacturing, distribution, and storage of explosive materials).

16 18 U.S.C. § 1962 (2012).

17 See Calnan & Taslitz, *supra* note 10, at 192 (explaining that the regulation at all levels of the life span of an explosive is an improvement from the Federal Explosives Law’s predecessor).

18 See *id.*

19 27 C.F.R. § 555.121 (2013).

20 See *id.* § 555.121(a)(2) (requiring records to be kept for five years or until the business closes).

21 See *id.* § 555.121(c) (granting the Bureau of Alcohol, Tobacco, and Firearms authorization to implement provisions of the law); see generally 27 C.F.R. ch. II (2013); see also *Explosives Industry*, BUREAU OF ALCOHOL, TOBACCO, AND FIREARMS, <http://www.atf.gov/content/Explosives/explosives-industry> (last visited July 15, 2013) (designating what the ATF regulates and enforces, including dynamite, igniters, and fireworks).

22 See Safe Explosives Act, § 555.124(a) (“Each licensed dealer shall take true and accurate physical inventories . . .”).

cord, the dealers are required to record the following information regarding purchases: date, name or brand of explosive, manufacturer's marks of identification, quantity, description, and name, address, and license or permit number of the person buying the materials.<sup>23</sup> These rules do not apply to gasoline, fertilizer, or industrial and laboratory chemicals,<sup>24</sup> though they do apply to fireworks. While these records must be available at all times for an ATF inspector,<sup>25</sup> there is no central database or record keeper who keeps track of these purchases systematically or with any regularity. Rather, the records are kept in whatever manner the dealer sees fit,<sup>26</sup> for the purpose of being available should an ATF inspector ask for them, which usually only occurs post-disaster. The laws also restrict who can deal and purchase explosive materials. People under indictment or convicted of a crime punishable for a term in prison over one year, fugitives, unlawful users of controlled substances, people adjudicated a mentally defective or committed to a mental institution, aliens, people dishonorably discharged from the armed forces, or people whose citizenships have been renounced are not allowed to buy or sell explosives.<sup>27</sup>

Fireworks are defined as “any composition or device designed to produce a visible or an audible effect by combustion, deflagration, or detonation,” and are divided into two categories: consumer fireworks and display fireworks.<sup>28</sup> While display fireworks are subject to all of the regulations listed above, consumer fireworks are not. The ATF's rules of importation, distribution, and storage do not regulate consumer fireworks. Rather, state and local agencies regulate consumer fireworks, in part because consumer fireworks are designed to burn, not explode.<sup>29</sup> Each state has different rules on the sale of consumer fireworks, some banning the purchase of such materials altogether.<sup>30</sup>

The U.S. Consumer Product Safety Commission (CPSC) and the U.S. Department of Transportation (DOT) also play a role in the oversight of consumer fireworks.<sup>31</sup> The CPSC has enforcement power under the Federal Hazardous Substances Act.<sup>32</sup> The main purpose of the CPSC's regulations is to maintain consumer safety. Thus, these regulations limit the levels of pyrotechnic material in

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23 See *id.* § 555.124(b)(1)–(6) (dealers must enter the necessary information before the close of the next business day).

24 See *id.* § 555.141(a)(8).

25 See *id.* § 555.121(b) (“ATF officers may enter the premises of any licensee or holder of a user permit for the purpose of examining or inspecting any record or document required.”).

26 See 18 U.S.C. § 842(f) (2006) (detailing what records are required for licensees and permittees of explosives, and allowing, but not requiring, computerized records of purchases).

27 Safe Explosives Act § 555.26.

28 *Id.* § 555.11.

29 Press Release, Am. Pyrotechnics Ass'n, American Pyrotechnics Association Offers Information Regarding Fireworks Devices Implicated in Boston Bombing Investigation (Apr. 25, 2013), *available at* <http://www.prnewswire.com/news-releases/american-pyrotechnics-association-offers-information-regarding-fireworks-devices-implicated-in-boston-bombing-investigation-204782871.html>.

30 See e.g., MASS. GEN. LAWS ANN. ch. 148, § 39 (West 2013) (banning all consumer fireworks in Massachusetts); U.S. FIREWORKS, <http://www.usfireworks.biz/legal/ok.htm> (last visited July 15, 2013) (allowing certain types of consumer fireworks with district approval in Oklahoma); *Are Fireworks Legal in Your State?*, USA.GOV, <http://blog.usa.gov/post/54109217133/are-fireworks-legal-in-your-state> (last visited July 15, 2013) (permitting only the use of sparklers in Vermont).

31 See Press Release, Am. Pyrotechnics Ass'n, *supra* note 29 (stating that the CPSC and the DOT are the primary federal agencies with oversight of consumer fireworks).

32 Federal Hazardous Substances Act (FHSA), 15 U.S.C. § 1261 (2012).

consumer fireworks<sup>33</sup> in addition to ensuring that devices pass safety tests before they can be sold, and that they are labeled correctly.

The Boston Bombings suspects may have used fireworks to create the bombs that exploded at the Boston Marathon.<sup>34</sup> Authorities say that Tamerlan Tsarnaev purchased fireworks from a store in New Hampshire, paying over \$400 in cash for two “lock and load” reloadable mortar kits, which each contains four tubes and twenty-four shells.<sup>35</sup> Per regulation, the store recorded the name and driver’s license number of each customer who purchased items, enabling the authorities to track down Tsarnaev’s purchase.<sup>36</sup> However, the types of fireworks purchased by Tsarnaev contain trace amounts of explosive material that is meant to burn rather than to detonate.<sup>37</sup> Both the ATF and the American Pyrotechnics Association (APA) say that consumer fireworks have rarely been used for such destructive purposes.<sup>38</sup> Fireworks were almost certainly not the primary source of the explosions at the Boston Marathon. The type and scale of destruction at the Boston Marathon almost certainly could not have been caused by such small amounts of explosives as in the fireworks Tsarnaev purchased.<sup>39</sup> The APA believes that the investigation will find that other materials were the cause of the deadly explosions.<sup>40</sup> Based on this information, the threat posed by consumer fireworks for terrorist purposes seems miniscule and the ATF regulations and state laws do an effective job when it comes to regulating their purchase and use.

### B. Fertilizer

Fertilizer, ordinarily used for farming or gardening, can also be converted into a deadly explosive. Urea-nitrate and ammonium-nitrate fertilizer can be turned into a bomb by merely adding fuel oil and a detonator.<sup>41</sup> Anyone can go to a farm supply or garden store and purchase multiple bags of fertilizer. It is not unusual for someone involved in agriculture or even an ordinary person to buy large amounts of fertilizer. Ammonium-nitrate fertilizer is not included within the meaning of an

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33 See 16 C.F.R. § 1500.17 (2013) (limiting firecrackers to fifty milligrams of pyrotechnic powder for ground devices, and 130 milligrams for aerial devices).

34 See Holly Ramer & Lynne Tuohy, *NH Store: Boston Bombing Suspect Bought Fireworks*, HUFFINGTON POST, Apr. 23, 2013, available at [http://www.huffingtonpost.com/2013/04/23/boston-bombing-suspect-fireworks\\_n\\_3143254.html](http://www.huffingtonpost.com/2013/04/23/boston-bombing-suspect-fireworks_n_3143254.html) (reporting that the older Tsarnaev brother bought explosives in a New Hampshire fireworks store that may have been used in the creation of the Boston Marathon bombs).

35 *Id.*

36 *Id.*

37 See Press Release, Am. Pyrotechnics Ass’n, *supra* note 29 (detailing the specific fireworks purchased contained only sixty grams, or two ounces of explosives per shell, with a total of forty eight shells purchased).

38 See *id.*

39 See *id.* (suggesting that consumer fireworks are rarely used for destructive purposes because there are many alternate materials that are easily available with the capability of causing much more damage).

40 See *id.*

41 See Calnan & Taslitz, *supra* note 10, at 181–82 (explaining that urea-nitrate fertilizer was used for the World Trade Center bombing in 1993, ammonium-nitrate fertilizer was used for the Oklahoma City bombing in 1995, and suggesting that those with little technical knowledge can easily and cheaply obtain the necessary materials to create a powerful bomb).

explosive under the Federal Explosives Law.<sup>42</sup> Thus, ATF rules and regulations do not govern fertilizer. Instead, the Environmental Protection Agency and the Department of Agriculture regulate fertilizer as a common product with an eye towards its potential effects on the environment,<sup>43</sup> not its use in explosives.

After 9/11, Congress enacted a law requiring plants using or storing high-risk chemicals such as ammonium nitrate to file reports with DHS in order to increase security.<sup>44</sup> Additionally, some states require vendors of commercial grade fertilizer to register with the state.<sup>45</sup> But there are no federal regulations regarding the sales of such materials.<sup>46</sup> Most regulations occur at the manufacturing and distribution level.<sup>47</sup> At the federal level, the Environmental Protection Agency (EPA) regulates fertilizer to ensure safe water and conservation practices,<sup>48</sup> the DOT regulates the transportation of fertilizer as a hazardous material,<sup>49</sup> but “[w]hat is missing is any regulation from the Department of Agriculture concerning the purchase and safety from theft of either anhydrous ammonia or ammonium nitrate.”<sup>50</sup> Any further regulation or monitoring is done on a local level.

Almost anyone can purchase commercial grade fertilizer.<sup>51</sup> Some states require a seller of such materials to record buyers’ driver’s license information, similar to the fireworks regulations, and require the vendor to keep the information on file.<sup>52</sup> “Fortunately, many local law enforcement agencies maintain amicable relationships with shopkeepers who will inform the police of a person they are unfamiliar with buying large amounts of commercial grade fertilizer.”<sup>53</sup> But this system is obviously not comprehensive. Rather, the monitoring is wholly dependent on the alertness of the shopkeepers and also on whether or not the shopkeepers actually make the call to the police.

Because fertilizer creates an effective explosive when combined with few other common products, it has been used for deadly purposes multiple times in the past. For example, in February 1993, a truck bomb filled with 1,500 pounds of urea-nitrate fertilizer exploded underneath the North

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42 See 27 C.F.R. § 555.141 (2013) (discussing the materials that are exempted from the Federal Explosives Law).

43 See generally 40 C.F.R. §§ 257, 264, 266, 268 (2013) (detailing proper methods for disposal of fertilizer and other guidelines to ensure minimum environmental contamination).

44 See Manny Fernandez & Steven Greenhouse, *Texas Fertilizer Plant Fell Through Regulatory Cracks*, N.Y. TIMES, Apr. 24, 2013, available at <http://www.nytimes.com/2013/04/25/us/texas-fertilizer-plant-fell-through-cracks-of-regulatory-oversight.html?pagewanted=all&r=0> (explaining how the West Fertilizer plant in Texas, where a non-criminal, deadly explosion occurred in May 2013, managed to evade the necessary reporting standards despite storing large amounts of dangerous fertilizer).

45 See Adam Shiner, *Materials for Fertilizer Bombs Not Regulated*, HOMELAND SEC. NEWS WIRE, Jan. 14, 2011, available at <http://www.homelandsecuritynewswire.com/materials-fertilizer-bombs-not-regulated> (discussing the ease with which people are able to purchase materials that can be used to create dangerous explosive devices).

46 See *id.* (“While some states do choose to exercise their regulatory powers, laws can differ greatly from state to state, and some states do not have any regulation.”).

47 See Sinnard, *supra* note 9, at 515.

48 See *id.*; 40 C.F.R. § 418.70 (1998) (laying out the Environmental Protection Agency’s role in regulating fertilizer).

49 See 49 C.F.R. § 176.415 (1998) (proscribing the requirements for transporting ammonium- nitrates and certain ammonium-nitrate fertilizers).

50 Sinnard, *supra* note 9, at 515.

51 See Shiner, *supra* note 45.

52 See *id.*

53 *Id.*

Tower of the World Trade Center in New York City, killing six people.<sup>54</sup> Two years later, a similar device destroyed the Murrah Federal Building in Oklahoma City.<sup>55</sup> The power of these explosions shows that certain types of fertilizers are extremely prone to use for dangerous purposes, so further regulation and monitoring of certain kinds of fertilizer may be necessary to prevent future acts of terrorism.

### *C. Pressure Cookers*

The intelligence community does not currently regulate pressure cookers. The only rules concerning pressure cookers are from agencies that govern consumer safety.<sup>56</sup> Though DHS is aware that terrorists used pressure cookers to create IEDs before the Boston Bombings, it has not taken any steps towards regulation of this common kitchen appliance.<sup>57</sup> It is unclear if DHS will take such action in the wake of the Boston Bombing.

### *D. Data Mining of Retail Records for Common Materials*

The government uses data mining to collect data on consumers' purchases of fireworks, fertilizer, pressure cookers, and other ordinary items that can be turned into deadly weapons. Data mining is "the application of database technology and techniques—such as statistical analysis and modeling—to uncover hidden patterns and subtle relationships in data and to infer rules that allow for the prediction of future results."<sup>58</sup> Due to the development of high-speed computers and new technology, gathering and sorting vast amounts of data has become easier over time. Data mining is not a new phenomenon. It has been used in the private sector for marketing, supply chain analysis, and financial analysis for years.<sup>59</sup> However, the government's use of data mining for counterterrorism purposes is a more recent trend.

There are several types of data mining: pattern-based, subject-based, and risk-assessment. Pattern-based data mining seeks to find patterns in data, not specific to any individual, but rather to trends found in data.<sup>60</sup> Subject-based data mining is the search for information about a particular

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54 *World Trade Center 1993 Bombing: NYC Marks 20th Anniversary of Terrorist Attack*, HUFFINGTON POST (Feb. 26, 2013), [http://www.huffingtonpost.com/2013/02/26/world-trade-center-1993-bombing-20th-anniversary-photos-new-york-city-terrorism\\_n\\_2763382.html](http://www.huffingtonpost.com/2013/02/26/world-trade-center-1993-bombing-20th-anniversary-photos-new-york-city-terrorism_n_2763382.html) (reflecting on the 2013 anniversary of the World Trade Center bombing).

55 *Id.* (noting that the World Trade Center bombing was in 1993); *see also* Fernandez & Greenhouse, *supra* note 44 (looking at the explosion at the West Fertilizer Plant in West, Texas in April 2013, as a further example of failure to regulate ammonium-nitrate fertilizer, and discussing how, under the regulations implementing the Emergency Planning and Community Right-to-Know Act (EPCRA), 40 C.F.R. § 350–372 (1988), the plant sent an annual report to local agencies with details of the hazardous chemicals stored there but the local officials failed to file it with DHS).

56 *See* Dewey, *supra* note 2 (claiming that pressure cookers are often not searched when being brought into the United States).

57 *See id.* (explaining that DHS has been on alert about pressure cooker bombs for years).

58 U.S. GOV'T ACCOUNTABILITY OFFICE, GAO-04-548, DATA MINING: FEDERAL EFFORTS COVER A WIDE RANGE OF USES, 4 (2004) (hereinafter *Data Mining*).

59 *See id.* (describing how the use and sophistication of data mining has increased over time).

60 *Id.*



person, such as phone records, fingerprints, or criminal records.<sup>61</sup> Risk-assessment data mining is the use of data to determine whether a particular person or transaction could pose a threat based on predictors from past activities.<sup>62</sup> Here, pattern-based data mining and risk-assessment data mining will be discussed in the context of their use for counterterrorism purposes.

Among the executive agencies, the Department of Defense (DOD) has the largest number of data mining efforts.<sup>63</sup> The DOD uses data mining to analyze intelligence and detect terrorist activities.<sup>64</sup> The government collects data from both the public and private sectors,<sup>65</sup> while private databases collect commercial retail records.<sup>66</sup> In 2002, the Attorney General Guidelines gave the FBI authority to engage in data mining.<sup>67</sup> DHS also has the same permission to use data mining technology under a grant from Congress.<sup>68</sup> When it comes to using data mining for counterterrorism, “the relevant question is why an individual took a particular action, such as renting a car or purchasing chemicals.”<sup>69</sup> But, “while pattern analysis can objectively identify what a person has done, and even say whether it is within a norm, it is far harder to attribute motivation to actions.”<sup>70</sup>

The intelligence community utilizes data mining because it can no longer solely rely on traditional methods of intelligence gathering such as human sources to collect the wide range of data now available.<sup>71</sup>

When people think of commercial data mining they often think of its use for marketing campaigns or online advertisements. Commercially, data mining usually predicts customer patterns and allows retailers to make future recommendations to consumers based on past purchases. However, this information can be useful to the intelligence community as well.

### *E. Data Mining and Privacy*

More recently, retailers have started to collect personal data from consumers by tracking shop-

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61 *Id.*

62 James X. Dempsey & Lara M. Flint, *Commercial Data and National Security*, 72 GEO. WASH. L. REV. 1459, 1460 (2004).

63 *See* Data Mining, *supra* note 58 at 3.

64 *Id.*

65 *See id.* at 5; *see also* Dempsey, *supra* note 62, at 1476 (“Especially since September 11, the FBI has obtained commercial databases from private entities, from grocery store frequent-shopping records to scuba diving certification records, without having to exercise any compulsory authority.”).

66 *See* Dempsey & Flint, *supra* note 62, at 1460 (noting that the private sector offers the government services based on the aggregation and analysis of information that is available to the private sector).

67 *See id.* at 1468 (citing Dep’t of Justice, Attorney General’s Guidelines on General Crimes, Racketeering Enterprise and Terrorism Enterprise Investigations 21–22 (May 30, 2002), *available at* <http://www.justice.gov/ag/readingroom/generalcrimea.htm>).

68 *See id.* at 1469 (referencing Homeland Security Act of 2002, Pub. L. No. 107–296, § 201(d)(14), 116 Stat. 2135, 2145–47 (2002)).

69 *Id.* at 1470.

70 *Id.*

71 MARY DEROSA, CSIS, DATA MINING AND DATA ANALYSIS FOR COUNTERTERRORISM 5 (2004), *available at* [http://www.csis.org/files/media/csis/pubs/040301\\_data\\_mining\\_report.pdf](http://www.csis.org/files/media/csis/pubs/040301_data_mining_report.pdf) (“For counterterrorism, we must be able to find a few small dots of data in a sea of information and make a picture out of them.”).

pers' cell phones when they enter a specific store.<sup>72</sup> Using the Wi-Fi signals from shoppers' cell phones, retailers are able to track shoppers' motions to gather information about shoppers' behaviors and send such shoppers personal deals based on their recorded habits.<sup>73</sup> Unsurprisingly, this invasion of privacy disturbs many shoppers.<sup>74</sup> Stores argue that this behavior is no different than tracking consumers' online behavior or using cameras in stores to track shoppers' activities.<sup>75</sup>

There are no privacy laws stopping the government from obtaining personal information such as travel records, online and offline retail purchases, real estate and mortgage records, magazine subscriptions, or utility bills.<sup>76</sup> With commercial data such as retail records of how many pounds of fertilizer are being purchased, the government has every right to voluntarily request data, so long as no statute prohibits the government's access to the information.<sup>77</sup> There are often exceptions to privacy laws carved out for law enforcement and intelligence agencies. Thus, the request and use of such retail records are perfectly legal. Whether this permissibly shared data includes personal information about specific individual buyers is questionable.

Merely because data is used commercially or is available to the public does not mean that the information can be used with no constraints on privacy.<sup>78</sup> To the contrary, the Fair Credit Reporting Act<sup>79</sup> and its amendment, the Fair and Accurate Credit Transactions Act of 2003,<sup>80</sup> protect consumers from disclosure of inaccurate personal information that consumer reporting agencies collect.<sup>81</sup> These rules apply to commercial usage of the data gathered, but may not apply to the government's use of such information. Additionally, the Privacy Act of 1974<sup>82</sup> requires that agencies give the public notice of any personal records on an individual that an agency may have and outlines the conditions for disclosure of such records.<sup>83</sup> But even the Privacy Act carves out an exception for records belonging to the FBI and other law enforcement agencies.

Because there are exceptions for law enforcement and intelligence gathering, it is questionable whether the government's use of data mining infringes upon U.S. citizens' Fourth Amendment rights against unreasonable searches.<sup>84</sup> According to the U.S. Supreme Court, searches conducted

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72 See Stephanie Clifford & Quentin Hardy, *Attention, Shoppers: Store is Tracking Your Cell*, N.Y. TIMES (July 14, 2013), available at [http://www.nytimes.com/2013/07/15/business/attention-shopper-stores-are-tracking-your-cell.html?hp&\\_r=1&](http://www.nytimes.com/2013/07/15/business/attention-shopper-stores-are-tracking-your-cell.html?hp&_r=1&) (discussing the use of cell phone tracking for data-collection in the retail realm).

73 See *id.* (detailing how some stores track information such as shoppers' sex, how long they spend perusing merchandise, and what people are buying).

74 See *id.* (expressing that some consumers feel as though they are being "stalked" in the stores).

75 See *id.* (explaining that some cameras in stores are so sophisticated that they are able to track what exactly shoppers are looking at).

76 Dempsey & Flint, *supra* note 62, at 1476.

77 *Id.*

78 *Id.* at 1462 ("Data privacy laws thus limit the use of widely available, and even public, information because it is recognized that individuals should retain some control over the use of information about themselves and should be able to manage the consequences of others' use of that information.").

79 Fair Credit Reporting Act (FCRA), 15 U.S.C. § 1681e(b)–(d) (2006).

80 Fair & Accurate Credit Transactions Act of 2003 (FACTA), 15 U.S.C. § 1601 (2012).

81 15 U.S.C. §§ 1681e(b)–(d) (2006) (regulating accuracy of reporting and disclosure of consumer reports by users).

82 Privacy Act of 1974, 5 U.S.C. § 552(a) (2012).

83 *Id.*

84 See generally U.S. CONST. amend. IV (guarding against unreasonable search and seizure).

without warrants are unlawful, “notwithstanding facts unquestionably showing probable cause.”<sup>85</sup> But, the government may argue that this is a matter of political question, and thus the courts cannot debate its merits.<sup>86</sup>

Additionally, the Fourth Amendment does not protect anything a person knowingly exposes to the public.<sup>87</sup> The Supreme Court has upheld the legality of governmental use of pen registers to monitor the outgoing calls of suspects.<sup>88</sup> And the Uniting and Strengthening America by Providing Appropriate Tools Required to Interrupt and Obstruct Terrorism (USA PATRIOT) Act<sup>89</sup> grants explicit permission to the government to intercept wire, oral, and electronic communications if they relate to terrorism.<sup>90</sup> It too would seem logical that one has no legitimate belief that retail records are kept private. Logically, the Fourth Amendment reasoning in *Smith v. Maryland* should apply to retail records as well. In *Smith*, the court found that people should not expect numbers that are dialed from their telephones to be private.<sup>91</sup> If there is no expectation that one’s purchases are being kept private, then the government can scrutinize these records without a warrant.<sup>92</sup> Likewise, under the USA PATRIOT Act, the government is granted permission to search such records. Thus, because there is no expectation that retail records are private, and because of the USA PATRIOT Act’s authority, the government’s use of data mining with retail records does not seem to currently violate any federal laws on privacy.

#### IV. THE DEPARTMENT OF HOMELAND SECURITY SHOULD SELECT ONLY THE MOST DANGEROUS MATERIALS TO MONITOR AND REGULATE IN A NON-INTRUSIVE MANNER

Nearly any material can be turned into a weapon.<sup>93</sup> But the government cannot adequately

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85 See *Katz v. United States*, 389 U.S. 347, 357 (1967) (discussing the government’s use of electronic surveillance, which can be done without a warrant in special exceptions, such as when the law enforcement agency is in hot pursuit of a suspect).

86 See, e.g., *Al-Aulaqi v. Panetta*, No. 1:12-cv-01192 (D.D.C. filed July 18, 2012) (arguing for the government that the use of drone attacks overseas is a political question, and thus not for the courts to decide on its constitutionality); *but see* STAFF OF DEP’T OF HOMELAND SEC., QUADRENNIAL HOMELAND SECURITY REVIEW REPORT: A STRATEGIC FRAMEWORK FOR A SECURE HOMELAND 2 (2010) (hereinafter *Quadrennial Homeland Sec. Rev.*) (“Indeed, homeland security is as much about protecting the American way of life as it is about protecting this country from future attack. Thus, a safe and secure homeland must mean more than preventing terrorist attacks from being carried out. It must also ensure that the liberties of all Americans are assured, privacy is protected, and the means by which we interchange with the world—through travel, lawful immigration, trade, commerce, and exchange—are secured.”).

87 See *Katz*, 389 U.S. at 351 (“But what he seeks to preserve as private, even in an area accessible to the public, may be constitutionally protected.”).

88 See *Smith v. Maryland*, 442 U.S. 735, 746 (1979) (finding that people should have no expectation of privacy with numbers dialed on one’s telephone, and thus the installation of a pen register on one’s phone without a warrant is justified, as such an action is not a search).

89 Pub. L. No. 107-56, 115 Stat. 272 (2001).

90 See *id.* § 201–02 (codified at 18 U.S.C. § 2516 (2012)).

91 See *Smith*, 442 U.S. at 746.

92 See *id.* (implying that since the Fourth Amendment protections do not apply to numbers dialed from a private phone because the phone company may record those numbers for billing purposes, the protections also should not apply to retail records because retail companies may use purchase information in the same manner).

93 See discussion *supra* Part I (e.g., the possible use of Christmas lights in executing the Boston Bombings).

monitor every consumer purchase without turning the United States into an overbearing surveillance police state.<sup>94</sup> Thus, the intelligence community should only monitor the items that pose the greatest threats to human safety without human tampering.

*A. What Should the Intelligence Community Monitor and Regulate?*

The intelligence community should only monitor the materials that pose the biggest threat when they are hazardous on their own, such as certain types of fertilizer that are combustible with no added products. It seems foolish to regulate consumer fireworks since they only hold trace amounts of explosive materials that burn rather than explode. As for fertilizer, the intelligence community should continue to monitor urea-nitrate and ammonium-nitrate based fertilizers, as both of these materials are extremely hazardous when placed in the wrong hands and are easily obtainable through legal means. Additionally, these types of fertilizer are deadly even when not used with criminal intent, such as if one merely stores such fertilizer in unsafe conditions. Thus, one of the security agencies within the intelligence community should continue to monitor and regulate dangerous materials such as urea-nitrate and ammonium-nitrate.

On the other hand, pressure cookers should not be regulated. If the intelligence community regulated pressure cookers, it would be impossible to draw the line with other common household items that have the potential to be used for deadly purposes. For example, nails were used as shrapnel pieces in the Boston bombs, and Christmas lights were allegedly used as well. If pressure cookers are monitored, it would seem that nails and Christmas lights should receive the same treatment. This list of common materials would become endless because almost anything can be turned into a deadly weapon. Thus, monitoring these items would create a slippery slope. Every time a new common household product is used in a dangerous way, the government would have to add it to the list of items to regulate and monitor in terms of who is purchasing them. American liberty would be violated if the government regulates every item Americans purchase. Therefore, the intelligence community cannot be expected to put time and resources into monitoring pressure cookers, nails, Christmas lights, and other similar products. Rather, the intelligence community should alert retailers that such items have potentially deadly uses so that they remain on alert for unusual consumer behavior. In addition to receiving alerts from retailers, the intelligence community also could focus its data mining efforts on unusually high volumes of pressure cooker sales in order to find possible patterns of suspicious activity.

Additionally, with any common material that is regulated there is the issue of determining who actually needs vast quantities of such materials for legitimate purposes. For example, if fertilizer were further regulated, the intelligence community would have to make exceptions for farmers and gardeners who need to buy large amounts for their work or carpenters who need to buy nails in bulk. It would also be difficult to determine how much of the specific materials one must purchase to make that person's activities suspicious. Either an exception would need to be carved out for

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<sup>94</sup> See Quadrennial Homeland Sec. Rev., *supra* note 86 (expressing that the Department of Homeland Security is aware that it is “not possible to secure the American homeland simply with physical protections or through strategies that reinforce fear or isolation.”).

certain professionals, or every purchase of such materials would have to be flagged. However, this would make the list of potential suspects endless. Moreover, the government lacks the funding and resources to create and monitor such extensive lists.

*B. If the Government Regulates These Products, How Should They Be Monitored and By Whom?*

One possible way to monitor a select number of common products that can be used for deadly purposes is to mirror the way in which some drugs are currently monitored and regulated. For example, to purchase pseudoephedrine in some states, buyers must provide a driver's license number and signature so that the state can keep track of how much each person is buying in an attempt to reduce the drugs' use in the creation of methamphetamine.<sup>95</sup> Already, a similar program is in place for the purchase of fireworks and some types of fertilizer, requiring the seller to write down the personal information of purchasers of certain items.<sup>96</sup> However, while the intelligence community requires records of this type of information for the purchase of certain items, it fails to actually collect the data in a unified fashion. Rather, the requirement is merely that storekeepers keep the purchase records in the event that an enforcement official asks to see the records, something that usually does not happen until after some sort of tragedy or questionable event occurs. Currently, electronic records are not even mandatory. Retailers can keep the necessary records however they see fit. If these types of records were to be collected in some sort of uniform fashion, the government's use of data mining could become useful. Pattern-based data mining could help the government find unusual patterns in the amounts of such materials being purchased, and would allow the government to match that information with the personal information provided by the customers. This would not be an invasion of people's Fourth Amendment protections because consumers do not have the subjective expectation that retail records are kept private.<sup>97</sup> Thus, a governmental search of these records through the use of data mining would not be within the definition of a Fourth Amendment search.

Realistically, this type of monitoring should only be conducted when large amounts of these deadly materials are purchased. The government does not need to take down the personal information of a person who merely buys a five pound bag of fertilizer, for example, as this is an extremely common purchase. With records on such a large number of people, the entire purpose of monitoring would be defeated and the system would be overwhelmed. Thus, a limit must be created at which point it becomes mandatory to record the personal information of a purchaser. For example, someone who attempts to buy over 100 pounds of fertilizer may be noted. Such a threshold would

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95 See, e.g., 19 VA. ADMIN. CODE § 30-220-10 (2013) (requiring "all pharmacies and retailers in the Commonwealth of Virginia that sell cold and allergy medications containing ephedrine and/or pseudoephedrine products (PSE) to participate in a statewide electronic monitoring program, at no charge to the store, to record information about purchasers of these products). See generally Combat Methamphetamine Epidemic Act of 2005, 12 U.S.C. §§ 701-56 (2012) (authorizing states to enhance public safety when it comes to addressing the manufacture, sale, and use of methamphetamine, and providing federal funding for such programs).

96 See discussion Part III.A.–B.

97 See *Smith v. Maryland*, 442 U.S. 735, 746 (1979) (holding that people do not have a subjective expectation that telephone records are private).

create a more focused list of “suspects” than if every single purchaser of potentially deadly materials were recorded, no matter how small the amount they purchase.

If this type of monitoring continues and expands, the intelligence community must update its method of monitoring products. The system of monitoring who buys certain materials would be more useful in combating terrorism if the intelligence community were to create a centralized database into which this information must be entered, rather than by asking storekeepers to keep their own individual records of purchases.<sup>98</sup> Such a database would allow sellers of such products to easily enter the personal information of the buyers into a computer program or website that would automatically transfer the information to agents responsible for searching the data for suspicious buying activities. This database should have the capability of sorting through the data to find patterns of people who buy unusual amounts of the materials being monitored in order to assist the various components of the government to create potential watch lists. This would take the weight off of retailers, on whom local law enforcement agents still depend to act as watchdogs and report suspicious activities.

There is also a question of who should be in charge of monitoring this type of activity. Some believe that local police are more capable of overseeing this type of enforcement than federal agents when it comes to local intelligence collection.<sup>99</sup> This seems to make the most sense in terms of local monitoring, but it cannot be expected that local law enforcement agencies will have the financial capabilities to create such databases. Thus, federal agencies such as DHS and the FBI must step in to help set up these monitoring programs and either continue to watch over them, or leave them in the hands of local law enforcement.<sup>100</sup> A national database of every consumer buying fertilizer or fireworks could be overly burdensome, so such a collection of information should be localized. Because DHS is the umbrella agency in charge of protecting the United States from terrorist attacks, DHS should take the lead in creating a program focused on the monitoring of these common deadly materials.

The issue of privacy invasion is likely to arise if the government closely monitors individuals’ buying behaviors. But this method of surveillance is no more intrusive than that of stores asking for customers’ e-mail addresses at the checkout counters in order to send promotions. Additionally, there is likely no expectation of privacy when it comes to what one buys. Though customers do not need to provide e-mail addresses, in this situation it would likely be mandatory to provide a driver’s license or some other official form of identification in order to purchase the high-risk products in large quantities. No cases have been decided contesting the legality of collecting this type of infor-

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98 See generally THE COMM’N ON THE INTELLIGENCE CAPABILITIES OF THE U.S. REGARDING WEAPONS OF MASS DESTRUCTION, REPORT TO THE PRESIDENT OF THE U.S. 351, 366 (2005), available at <http://www.gpo.gov/fdsys/pkg/GPO-WMD/pdf/GPO-WMD.pdf> (setting out recommendations for improving the collection capabilities of the intelligence community by creating an integrated collection enterprise that ensures decentralized collection capabilities are developed in a way that is consistent with long-term strategic intelligence priorities and by encouraging a shift away from human data collectors and toward other methods).

99 See Samuel J. Rascoff, *The Law of Homegrown (counter) Terrorism*, 88 TEX. L. REV. 1715, 1720 (2010).

100 See generally Mickey McCarter, *White House Proposes \$39 Billion DHS Budget For FY 2014*, HSTODAY.US (Apr. 11, 2013, 8:00 AM), <http://www.hstoday.us/single-article/white-house-proposes-39-billion-dhs-budget-for-fy-2014/7e5c4268d102ea4024dedad96bcc2e45.html> (according to Secretary of Homeland Security, Janet Napolitano, despite budget cuts and the sequester, DHS’s budget remains reasonable even though it faces cuts of five to eight percent).

mation to purchase certain drugs.<sup>101</sup> The system suggested here is no different from the current system in place in pharmacies. Because there is no expectation of privacy with these types of records, the government can search through them without a warrant, similarly to *Smith v. Maryland*,<sup>102</sup> which authorized the use of pen registries to monitor call logs.

### *C. Will Enhanced Regulation Actually Thwart Criminal Activity?*

Enhanced regulation as outlined above could help alert law enforcement agents of suspicious activity, but one cannot definitively know if it will actually thwart criminal activity. Because the intelligence community cannot monitor and regulate every single product and there are countless common items that can be turned into deadly devices, heightened monitoring of just a few items will probably not actually prevent future terrorist attacks. Because of the countless possibilities for materials that can be used for deadly purposes, once one material is monitored or regulated making it more difficult to obtain, terrorists will turn to another material that has no regulation. Thus, the cycle will be endless, and terrorists will always be looking for alternative materials to use that are unregulated, since the government cannot regulate every potentially dangerous product due to its constitutional restraints and limited resources.

## V. CONCLUSION

Even if the intelligence community chooses select materials to regulate and monitor for suspicious buying patterns, terrorists will find new materials, and the cycle will be endless. Further, if the intelligence community continues to add all of these new materials to its watch-lists, it will erode the privacy rights of U.S. citizens. It is not worth spending American tax dollars on the monitoring of common materials unless the materials themselves are hazardous to U.S. citizens, such as various varieties of fertilizer, which are highly explosive standing alone with no provocation. But it seems foolish to monitor pressure cookers, and even consumer fireworks, which have so little explosive material one would have to buy thousands to make any sort of deadly device. Therefore, the intelligence community's data mining activities in regard to terrorists' purchases should focus on materials that are deadly intrinsically.

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101 As of July 23, 2013, there are no judicial decisions on this type of purchase with respect to consumer privacy.

102 442 U.S. 735, 746 (1979).