

Barriers to Entry

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Who Builds Fortified Boundaries and Why?

In October 2006, President George W. Bush signed a bill authorizing the construction of a 700-mile-long fence along the U.S.-Mexico border. The barrier, consisting of reinforced fencing, cameras, lighting, and sensors, was designed to stem the flow of illegal immigrants and smugglers into the United States.¹ Critics were quick to attack the feasibility of the project on three primary grounds.² Some argued that the costs of constructing the fence, at \$1 million to \$2 million per mile, would be prohibitive.³ Others doubted the feasibility of the project given the challenges posed by border length and terrain.⁴ The most vocal group of skeptics argued that illegal immigrants would be able to circumvent the barrier with ease by climbing over it, digging under it, or cutting through it.⁵

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1. Michael A. Fletcher and Jonathan Weisman, "Bush Signs Bill Authorizing 700-Mile Fence Border," *Washington Post*, October 27, 2006; and Rachel L. Swarns, "House Votes for 698 Miles of Fences on Mexico Border," *New York Times*, December 16, 2005.

2. Additional criticism of the U.S.-Mexico border fence included the claim that it would increase fatalities among immigrants forced to seek more dangerous routes into the United States; that it would harm the environment by disrupting the ecosystem along the border and by causing floods and erosion; that it would insult Mexico and weaken U.S.-Mexico ties; and that it would be aesthetically displeasing. See John King, "Border Fence Is a Dividing Line in Immigration Debate," *CNN International*, <http://www.cnn.com/2009/POLITICS/02/13/king.sou.border/index.html>; Ralph Blumenthal, "Some Texans Fear Border Fence Will Sever Routine of Daily Life," *New York Times*, June 20, 2007; Sylvia Moreno, "On the Rio Grande, Anger Swells over Plans for Fence," *Washington Post*, June 22, 2007; "Critics of Fence Point to Flood at Border Sites," Associated Press, August 26, 2008; Manuel Roig-Franzia and Sylvia Moreno, "More Than a Line in the Desert," *Washington Post*, May 21, 2006; and Charles Bowden, "Our Wall," *National Geographic*, May 2007, <http://ngm.nationalgeographic.com/2007/05/us-mexican-border/bowden-text>.

3. Spence S. Hus, "Delay Seen for Fence at U.S.-Mexico Line," *Washington Post*, September 11, 2008; and Mary Vallis, "Congressman Proposes Wall along Border with Mexico to Block Illegal Immigrants: Idea Compared to Berlin Wall, West Bank Barrier," *National Post* (Canada), November 11, 2005.

4. Greg Weston, "Great Wall of America? Plan to Separate U.S. from Both Canada and Mexico with Big, Honking 'Electronic Fence,'" *Toronto Sun*, September 24, 2006; and N.C. Aizenman, "Border Fence Would Slice through Private Land," *Washington Post*, February 16, 2008.

5. Lawrence Downes, "The Not-So-Great Wall of Mexico," *New York Times*, April 20, 2008; and

The passion with which both proponents and opponents of the U.S.-Mexico border fence cling to their views is surprising given how little is known about such barriers. In this article, we present a novel database of similar barriers around the world, analyze the conditions under which such barriers are constructed, and hypothesize about their effectiveness. We call these barriers “fortified boundaries.”

Why do states erect fortified boundaries? We conclude that most are built by wealthy states to keep out unwanted migrants, particularly those originating from Muslim-majority states. Contrary to conventional wisdom, states that construct such barriers do not tend to suffer disproportionately from terrorism, nor do they tend to be involved in a significant number of territorial disputes. The primary motivation for constructing fortified barriers is not territory or security but economics.

In the first section of this article, we elaborate the concept of “fortified boundaries,” which are asymmetrical, physical barriers placed along borders. These boundaries are more formidable in structure than conventional boundary lines but less robust than militarized boundaries. Their goal is not to eliminate the cross-border movement of clandestine transnational actors (CTAs), but to impose costs on would-be infiltrators and in so doing deter or impede infiltration. In the second section, we review the literature pertaining to borders and boundaries and offer some preliminary thoughts on why states construct fortified boundaries.

In the third section, we introduce a novel dataset encompassing all pairs of contiguous states worldwide. To distinguish builders from targets and account for the existence of reciprocal fortified boundaries, we list each dyad twice in our dataset, yielding 635 dyads, of which 51 are separated by fortified boundaries.⁶ These data illustrate several points. First, states are building fortified boundaries at an accelerating rate. Second, although barrier builders tend to be considerably richer than barrier targets, they are not freer or more democratic than target states. Finally, Muslim-0majority states are more likely to be the targets of fortified boundary construction than other types of states.

The fourth section presents a multivariate analysis of these data. We find no

Peter Andreas, “Politics on the Edge: Managing the U.S.-Mexico Border,” *Current History*, February 2006, pp. 64–68.

6. We exclude islands that do not share land borders with other countries. Our qualitative discussion assumes 51 boundary dyads (listed in table 1), but our electronic database, discussed below, excludes a further 6. Three of these involve now-extinct countries (Soviet Union-Norway, Soviet Union-Finland, and Romania-Yugoslavia). Three others involve boundary builders that erected more than one wall against a particular neighbor (Israel-Lebanon 1975 and 2012, Israel-Syria 1984 and 2013, and Egypt-Gaza 1982 and 2009). In the latter case, we include the more recent boundary in our dataset. Our statistical analysis excludes barriers constructed before 1990.

evidence for the thesis that fortified boundaries are routinely constructed as an attempted land grab, but we also find no evidence that states that build barriers have experienced a disproportionate number of terrorist attacks. Instead, the data show that differences in state wealth and migration rates are the best predictors of barrier construction.

In the fifth section, we illustrate these quantitative findings by means of three qualitative case studies: Spanish barriers around the enclaves of Ceuta and Melilla, Israel's West Bank barrier, and Morocco's Berm. These cases are designed not to test our argument, but to exemplify the wide range of barrier types and targets as well as the patterns we have identified in our statistical analysis.

In the sixth section, we explore the effectiveness of fortified boundaries. The paucity of data on the stopping power of barriers, the challenge in posing counterfactuals, and the problem of selection bias all encumber the analysis of fortified boundary success. Moreover, even obviously successful barriers can create long-term reputational costs, provide disincentives for compromise, and unleash perverse blowback effects.

In the seventh section, we propose two hypotheses regarding the effectiveness of fortified boundaries. First, we expect the effectiveness of a barrier to increase as a function of a state's ability to control the territory on both sides of it. Second, we expect effectiveness to decrease if CTAs can find alternative routes for crossing into the state that circumvent the fortified boundary. We predict that the most effective fortified boundaries will be found where the initiating state controls the territory beyond a boundary that blocks the only route of access into the state. The fourth and final case study in this article, the Morice Line, designed by the French in 1957 to prevent insurgent infiltration into Algeria, exemplifies this kind of robust barrier.

Our analysis throughout this article is both state centric and rationalist. We assume that states are unitary actors that engage in cost-benefit analyses prior to constructing fortified boundaries. In so doing, we distinguish our analysis from studies that emphasize the role of domestic political interests and constraints on border policy.⁷ Our approach is also materialist. Unlike political geographers, who have explored the social construction of barriers and their symbolic functions, we are interested in barriers' tangible properties and physical functions. In the conclusion, we propose several ways in which social constructivists, scholars of domestic politics, and students of international political economics might build on our findings.

7. See George Gavrilis, *The Dynamics of Interstate Boundaries* (Cambridge: Cambridge University Press, 2008); and Peter Andreas, *Border Games: Policing the U.S.-Mexico Divide* (Ithaca, N.Y.: Cornell University Press, 2009).

Defining Fortified Boundaries

Fortified boundaries share three qualities that distinguish them from other types of borders or fortifications. First, their primary function is border control, not military defense or territorial demarcation. Second, they are physical barriers as opposed to virtual, symbolic, or declaratory boundaries. Third, they are asymmetrical in origin and intent. These interrelated characteristics deserve closer scrutiny.

Unlike military fortifications or defenses, such as the French Maginot Line or its German counterpart, the Siegfried Line, fortified boundaries serve a law enforcement function. Their goal is not to deter or impede a conventional military assault but to prevent the cross-border flow of what Peter Andreas has termed “clandestine transnational actors.”⁸ Targets of a fortified boundary include relatively innocuous actors, such as unauthorized immigrants or refugees; traffickers in drugs, weapons, or humans; and more imminent security threats such as spies, insurgents, and terrorists.

Fortified boundaries impede CTA movement by imposing costs on those seeking to cross a border, thus deterring or dissuading would-be infiltrators. At the same time, fortified boundaries should not be expected to stop all CTAs cold. Barrier critics who emphasize successful instances of infiltration thus misstate the purpose of barrier construction and, in so doing, critique a straw-man argument. Fortified boundaries are designed to dissuade CTAs from attempting to cross a particular border at a particular location or to slow the movement of CTAs so as to increase the chances of their being apprehended by security forces. This reasoning applies even where fortified boundaries resemble fences more than walls and contain gaps through which individuals might pass. Even a simple barrier can impede CTA movement or encourage potential infiltrators to follow more circuitous or costly routes. Partial barriers that redirect movement to as-yet unprotected parts of the border relieve the barrier builders of the burden of having to survey the entire border, and they increase the odds of apprehending infiltrators. CTAs may attempt to breach barriers, but such efforts require significant coordination, impose costs on the CTAs, draw attention to their presence, and result in temporary success, at best.

8. Peter Andreas, “Redrawing the Line: Borders and Security in the Twenty-first Century,” *International Security*, Vol. 28, No. 2 (Fall 2003), pp. 78–111. See also Peter Andreas, “Criminalizing Consequences of Sanctions: Embargo Busting and Its Legacy,” *International Studies Quarterly*, Vol. 49, No. 2 (June 2005), pp. 335–360; and Peter Andreas, “Illicit International Political Economy: The Clandestine Side of Globalization,” *Review of International Political Economy*, Vol. 11, No. 3 (August 2004), pp. 641–652.

Second, because fortified boundaries are designed for policing the movement of individuals across a border, they are less robust than military fortifications, built to prevent a border crossing by military personnel and vehicles, yet more formidable than conventional boundary lines. In occupying the middle ground between the functions provided by military fortifications and the functions provided by conventional boundary lines, fortified boundaries integrate physical elements from both types of borders. They tend to be composed of some combination of ditches, barbed wire, fences, walls, and guard towers to form a moderate obstacle. Impervious to unarmed assault, they can withstand modest attacks by small or lightly armed groups long enough to provide advanced warning and allow for mobilization by security forces. Consequently, they tend to be patrolled by border police or semi-militarized units or, at the least, are surveyed by electronic means. They are not, however, fully militarized: we exclude from our definition boundaries, such as those along the demilitarized zone in Korea, that are designed to stop military incursions.

We can imagine a continuum of border institutionalization in which military fortifications occupy one extreme. At the other extreme lie customary boundaries that have not been enshrined in law. Once delimited, boundaries become legal fictions that draw their authority from maps and treaties. The next step in the institutionalization of a boundary is demarcation, the representation of a boundary on the ground in some form, be it a sign, a marker, or a fence.⁹ As the physical representation of a boundary is bolstered, the boundary ceases to provide the merely symbolic function of declaring the location of a border and begins to form a physical impediment. This bolstering can be uneven across a single boundary line: some states can afford to demarcate or reinforce only small segments of the border or only significant border crossings, leaving the rest of their boundary open to population movements. Other states prefer nonphysical means for securing their boundaries against the flow of goods and people, from economic borders established by means of tariffs, quotas, and customs houses to virtual borders composed of surveillance and detection devices.¹⁰ In this article, however, we use the term “fortified boundary” to refer exclusively to a border that has been reinforced, in whole or in large part, to form a physical obstacle.

The third characteristic of a fortified boundary, directly related to its func-

9. George Gavrilis, “Boundary Making and Boundary Disputes,” in Bertrand Badie, Dirk Berg-Schlosser, and Leonardo Morlino, eds., *International Encyclopedia of Political Science*, Vol. 1 (New York: CQ Press, 2011), pp. 81–85.

10. Andreas, “Illicit International Political Economy,” pp. 85, 97; and Peter Andreas, “The Mexicanization of the U.S.-Canada Border,” *International Journal*, Vol. 60, No. 2 (Spring 2009), pp. 458–459.

tion and appearance, is its asymmetry. Fortified boundaries do not usually come in pairs. Even in the rare circumstance where entities on both sides of a border agree on the need for a barrier, its construction is initiated and executed by one side with no reciprocity by its neighbor. Whereas the physical appearance of a fortified boundary serves to distinguish it from a conventional border, this asymmetry helps to differentiate it from a militarized border. When states compete over territory, become embroiled in a boundary dispute, or commence hostilities, the outcome tends to be mutual border militarization. Although weaker states have a greater incentive to construct military fortifications along borders with superior neighbors, these neighbors are motivated to even the score by emulating the construction of defenses, leading to reciprocal (if sometimes uneven) militarization of the border.

For a fortified boundary to be built, on the other hand, it suffices for one state to perceive a unilateral threat from CTAs in a neighboring state. The threatened state will construct a fortified boundary if its neighbor is unwilling or unable to stem the flow of CTAs across the border. The construction of fortified boundaries is thus a one-sided act in response to a unilateral threat, executed without the support (and usually without the consent) of the target state, and often accompanied by protests from the target state. After all, in constructing a fortified boundary, a state is sending a clear message to its neighbor that the threat of CTAs is overwhelmingly one-sided and that it perceives the neighboring state as uncooperative in stemming that threat.

In sum, fortified boundaries differ from conventional interstate boundaries in their physical appearance, which is designed to enhance border control. Fortified boundaries are distinct from militarized boundaries because of their asymmetrical origin and intent. Salient historical cases of fortified boundaries include the Great Wall of China (started in the fifth century B.C.E.), the Roman *limes* (including, most famously, Hadrian's Wall in northern England, constructed in the first century C.E.), Offas Dyke between Wales and England (eighth century), and the Danevirke in Schleswig-Holstein (ninth century).

Theorizing Fortified Boundaries

Scholarly research has had relatively little to say about why a state might build a fortified boundary, preferring instead to focus on the significance of borders more generally. Many scholars elide the physicality of borders, choosing instead to emphasize the symbolic functions of boundaries rather than their impact on state power, resources, and security.¹¹ In their analyses, these scholars treat boundaries as institutions that take part in a global system of ordering,

11. David Newman, "The Resilience of Territorial Conflict in an Era of Globalization," in Miles

construct differences, and mobilize identities, rather than as obstacles to the movement of peoples and goods.¹² Others acknowledge the physical function of borders implicitly but view them as ineffective. The globalization literature, for example, emphasizes the permeability and increasing irrelevance of boundaries, at times going as far as to prophesize their ultimate demise.¹³ Similarly, the literature on nonstate actors has sought to highlight the ease with which immigrants, refugees, smugglers, insurgents, and terrorists can cross boundary lines.¹⁴ Although the study of boundary fortifications was a major topic of research prior to World War II,¹⁵ the consensus among scholars of postwar military technology is that technological progress has favored offensive weapons and offensive doctrine, relegating old-fashioned fortifications, such as the infamous Maginot Line, to the dustbin of history.¹⁶

The emphasis on transnational threats unhindered by state borders has led

Kahler and Barbara F. Walter, eds., *Territoriality and Conflict in an Era of Globalization* (Cambridge: Cambridge University Press, 2006), pp. 102–104.

12. See, for example, David Sibley, *Geographies of Exclusion* (London: Routledge, 1995), p. 32; Anssi Paasi, "Boundaries as Social Processes: Territoriality in the World of Flows," in David Newman, ed., *Boundaries, Territory, and Postmodernity* (London: Frank Cass, 1999); pp. 69–88; T.K. Oommen, "Contested Boundaries and Emerging Pluralism," *International Sociology*, Vol. 10, No. 3 (September 1995), pp. 251–268; Mathias Albert, David Jacobson, and Yosef Lapid, eds., *Identities, Borders, Orders: New Directions in International Relations Theory* (Minneapolis: University of Minnesota Press, 2001); Henk van Houtum and Ton van Naerssen, "Bordering, Ordering, and Othering," *Tijdschrift voor Economische en Sociale Geografie*, Vol. 93, No. 2 (May 2002), pp. 125–136; Malcolm Anderson, *Frontiers: Territory and State Formation in the Modern World* (Cambridge: Polity, 1996); David Newman, "The Lines That Continue to Separate Us: Borders in Our 'Borderless' World," *Progress in Human Geography*, Vol. 30, No. 2 (April 2006), pp. 143–161; and Wendy Brown, *Walled States, Waning Sovereignty* (New York: Zone Books, 2010).

13. Newman, "The Resilience of Territorial Conflict in an Era of Globalization," p. 101; Paasi, "Boundaries as Social Processes," p. 70; Kenichi Ohmae, *The Borderless World: Power and Strategy in the Interlinked Economy* (New York: Harper Business, 1990); Richard Rosecrance, "The Rise of the Virtual State: Territory Becomes Passé," *Foreign Affairs*, Vol. 75, No. 4 (July/August 1996), <http://www.foreignaffairs.com/articles/52241/richard-rosecrance/the-rise-of-the-virtual-state-territory-becomes-pass%C3%83%C2%A9>; and David Jacobson, *Rights across Borders: Immigration and the Decline of Citizenship* (Baltimore, Md.: Johns Hopkins University Press, 1996).

14. See, for example, Kelly M. Greenhill, "Engineered Migration and the Use of Refugees as Political Weapons: A Case Study of the 1994 Cuban Balseros Crisis," *International Migration*, Vol. 40, No. 4 (September 2002), pp. 39–74; Michael A. Innes, "Deconstructing Political Orthodoxies on Insurgent and Terrorist Sanctuaries," *Studies in Conflict and Terrorism*, Vol. 31, No. 3 (March 2008), pp. 251–267; Idean Salehyan, "The Externalities of Civil Strife: Refugees as a Source of International Conflict," *American Journal of Political Science*, Vol. 52, No. 4 (October 2008), pp. 787–801; Idean Salehyan, "No Shelter Here: Rebel Sanctuaries and International Conflict," *Journal of Politics*, Vol. 70, No. 1 (January 2008), pp. 54–66; and Wayne A. Cornelius and Idean Salehyan, "Does Border Enforcement Deter Unauthorized Immigration? The Case of Mexican Migration to the United States of America," *Regulation & Governance*, Vol. 1, No. 2 (June 2007), pp. 139–153.

15. The most famous example of such research is George Nathaniel Curzon, *Frontiers* (Oxford: Clarendon, 1908). For a review of the classical literature on boundaries, see Ladis D. Kristof, "The Nature of Frontiers and Boundaries," *Annals of the Association of American Geographers*, Vol. 49, No. 3 (September 1959), pp. 269–282.

16. The geostrategist Nicholas John Spykman was among the first to make this observation in 1942. See Spykman, "Frontiers, Security, and International Organization," *Geographical Review*, Vol. 32, No. 3 (July 1942), p. 438. On the offense-defense balance, see Jack S. Levy, "The Offensive/"

international security scholars to focus on boundaries in the context of militarized interstate conflicts, offering little insight into the effectiveness of borders in repelling nonstate actors.¹⁷ Paradoxically, then, the combined effect of the neglect of borders by both students of globalization and international security scholars is to open a space for an analysis of why fortified boundaries get built and, ultimately, their effectiveness against insurgents, immigrants, and smugglers.

Why, then, do states erect fortified boundaries? We identify two broad schools of thought that differ in the motives each imputes to the building state. One school sees states as interested primarily in the power of barriers to stop CTAs from crossing borders. If that is the state's motive, then fortified boundaries would get built under three conditions. First, states would initiate the construction of fortified boundaries when leaders perceive that unfortified borders no longer offer sufficient protection against CTAs. Second, leaders must believe that these barriers can significantly reduce those unwanted flows. Third, leaders must feel that the benefits of barrier construction outweigh the costs. These conditions are consonant with most states' justifications of their barriers, which are said to serve as a defense against some combination of insurgents, smugglers, undocumented migrants, and terrorists.

Under what conditions might a state perceive its neighbor as a source of unwanted cross-border flows, and therefore the potential target of a fortified boundary? Dramatic differences in wealth and economic opportunity between neighboring countries might propel states to contemplate barrier construction, as it did along the U.S.-Mexico border. We would expect wealthier countries to build fortified boundaries against their poorer neighbors. A related condition might be a significant difference in freedom and political opportunity between two neighbors. We might expect freer countries to erect barriers against political migrants. Finally, we would expect fortified boundaries against states suspected of harboring terrorists.

Defensive Balance of Military Technology: A Theoretical and Historical Analysis," *International Studies Quarterly*, Vol. 28, No. 2 (June 1984), pp. 219–238; Stephen Van Evera, "The Cult of the Offensive and the Origins of the First World War," *International Security*, Vol. 9, No. 1 (Summer 1984), pp. 58–107; Charles L. Glaser and Chaim Kaufmann, "What Is the Offense-Defense Balance and Can We Measure It?" *International Security*, Vol. 22, No. 4 (Spring 1998), pp. 44–82; Michael E. Brown et al., eds., *Offense, Defense, and War* (Cambridge, Mass.: MIT Press, 2004); Sean M. Lynn-Jones, "Offense-Defense Theory and Its Critics," *Security Studies*, Vol. 4, No. 4 (Summer 1995), pp. 660–691; George H. Quester, *Offense and Defense in the International System* (New York: John Wiley and Sons, 1977); and Jonathan Shimshoni, "Technology, Military Advantage, and World War I: A Case for Military Entrepreneurship," *International Security*, Vol. 15, No. 3 (Winter 1990/91), pp. 187–215.

17. For exceptions, see Robert A. Pape, "The Strategic Logic of Suicide Terrorism," *American Political Science Review*, Vol. 97, No. 3 (August 2003), pp. 14–15; and Paul Staniland, "Defeating Transnational Insurgencies: The Best Offense Is a Good Fence," *Washington Quarterly*, Vol. 29, No. 1 (Winter 2005/06), pp. 31–34.

A second school of thought imputes a different motive to states and highlights alternative political agendas for their construction. Fortified boundaries create highly visible “facts on the ground” that can become a source of tension, particularly when the presence of CTAs coincides with boundary disputes. Whereas a state may intend the construction of a fortified boundary as a defensive act, aimed at reassuring its domestic audience, others may interpret its appearance as a declaratory act, designed to assert the location of a disputed boundary to a foreign audience. Moreover, because the course of a fortified boundary is determined in large part by law enforcement needs and not by legal, humanitarian, or environmental considerations, its construction may meet increasing opposition from a wide variety of affected audiences, including individuals who might respond with acts of terrorism. For this group of explanations, then, fortified boundaries magnify the problem they are allegedly intended to resolve.

Who Erects Fortified Boundaries? Data and Descriptive Statistics

Table 1 lists all fortified boundaries built from 1945 to 2014, sorted in order of the date in which boundary construction began, though these data are not always known with precision. The table also includes information on the approximate length of the fortified boundary, its stated target (based on statements by representatives of the building state), and an estimate of our confidence in the start date. Our dataset includes additional information not displayed in this table, such as the size, gross domestic product (GDP), and regime type for both builder and target states, as well as the estimated cost of barrier construction.

One striking feature of table 1 is the apparent acceleration in the rate of barrier construction over time, from only 2 during the 1950s to 25 since the year 2000. We illustrate this pattern in figure 1. Although the escalation in barrier construction is not monotonic, the trend is clearly increasing over time. Moreover, at least since the 1990s the barriers have become significantly more ambitious in terms of their length.

Table 2 compares states building barriers with their targets. This table strongly suggests that builders face a greater human influx than targets.¹⁸ First, building states are significantly richer than target states. The average GDP

18. We exclude Europe from this analysis because within that region many states, such as the signatories of the Schengen agreement, are not free to erect fortified boundaries even if they so desire. We drop barriers that were erected before 1990 so that the values of our explanatory variables better correspond with the actual situation at the time barriers were erected. Only barriers actually erected appear in our dataset; barriers that were planned but not executed and barriers on which construction has not yet begun are omitted from our data.

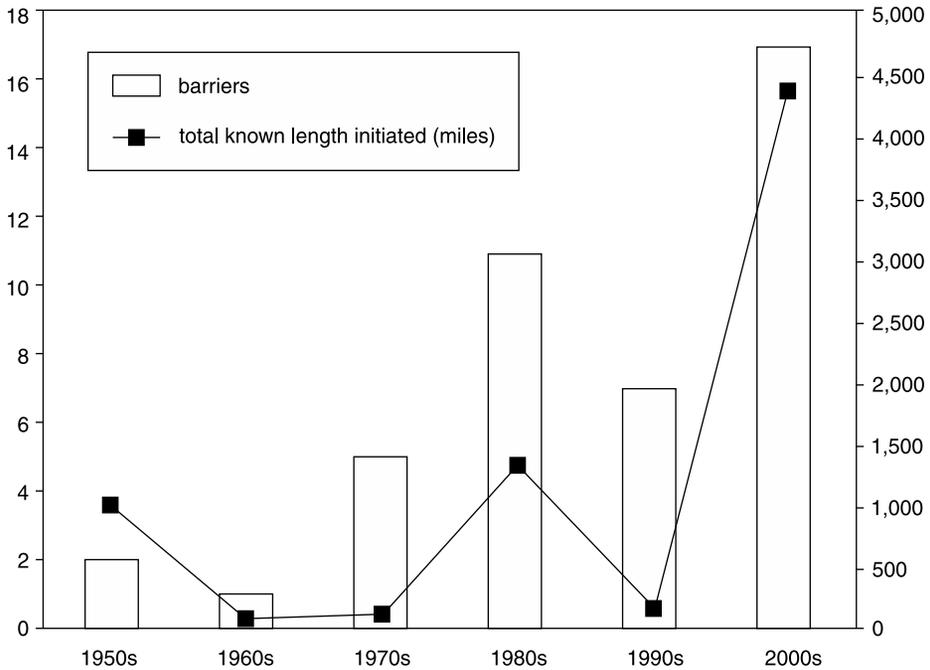
Table 1. Fortified Boundaries Built from 1945 to 2014

Builder-Target	Start Date	Approximate Length (miles)	Stated Target	Confidence in Start Date
Soviet Union (East Germany)-West Germany (inner German border)	1952	845	fascism	high
France (Algeria)-Tunisia	1957	171	insurgents	high
Soviet Union (East Germany)-West Germany (Berlin Wall)	1961	93	fascism	high
Israel-Lebanon	1975?			low
South Africa-Mozambique	1976			moderate
Soviet Union-Norway	1976?			very low
Soviet Union-Finland	1978?			very low
South Africa-Zimbabwe	1979-83?	114		low
Morocco-Western Sahara	1980	1,020?	militants	high
Israel-Jordan	1981?			low
Egypt-Gaza	1982	7	smuggling	high
Israel-Syria	1984?			low
South Africa-Swaziland	1985?			low
India-Pakistan	mid-1980s	301	rebels, smuggling	moderate/low
Thailand-Cambodia	1987?			low
Soviet Union (Hungary)-Austria	pre-1989?			very low
Romania-Hungary	1989			moderate/high
Romania-Yugoslavia	1989			moderate/high
India-Bangladesh	1989-94		immigration, illegal activities	moderate
Iran-Pakistan	1990-92		smuggling	moderate/low
Malaysia-Thailand	1993?		smuggling, immigration, taxation	very low
Israel-Gaza	1994	31	terrorism	moderate/high
Kuwait-Iraq	1994	122		moderate
Spain (Ceuta)-Morocco	1995	5		high

Table 1. (continued)

Builder-Target	Start Date	Approximate Length (miles)	Stated Target	Confidence in Start Date
Spain (Melilla)-Morocco	1998	6		high
Uzbekistan-Kyrgyzstan	1999			high
Iran-Afghanistan	2000-07		drug smuggling	moderate
United Arab Emirates-Oman	2000-07	246?		moderate
United Arab Emirates-Saudi Arabia	2000-07	285?		moderate
Turkmenistan-Uzbekistan	2001	973?	avoid disputes, prevent entry	high
Uzbekistan-Afghanistan	2001?	82		low
Israel-West Bank	2002	245	terrorism	high
Botswana-Zimbabwe	2003	300	disease, immigrants	high
Saudi Arabia-Yemen	2003	875?	infiltration, smuggling	high
Thailand-Malaysia	2004?			very low
Uzbekistan-Kazakhstan	2004			moderate
China-North Korea	2006			high
Kazakhstan-Uzbekistan	2006	27?	smugglers	high
United States-Mexico	2007	613	terrorism, immigration, smuggling	high
Pakistan-Afghanistan	2007	171?	security/militants	high
Saudi Arabia-Iraq	2008	540?	terrorism	high
Myanmar-Bangladesh	2009			high
Egypt-Gaza	2009	7		high
India-Myanmar	2010		rebels	high
Israel-Egypt	2010		immigration, terrorism	moderate
Kazakhstan-Kyrgyzstan	2010		smugglers	moderate/high
Israel-Lebanon	2012	1		moderate
Greece-Turkey	2012	8		moderate
Turkey-Syria	2012			moderate
Israel-Syria	2013			moderate
Bulgaria-Turkey	2014			moderate

Figure 1. Number of Separation Barriers Initiated and Total Length of Barriers Constructed, by Decade



per capita for builders is \$9,143 versus only \$2,361 for target states.¹⁹ This is consistent with the idea that building states seek to limit the influx of economic migrants. At the same time, however, there is not much of a difference between builders and targets in the percentage of the population below the poverty line. This result could, of course, be a function of differing definitions of “poverty” across countries. Second, although builders are more democratic than targets in relative terms (4.3 vs. 5.6), the average builder is still authoritarian in absolute terms. Barriers tend to be built by one authoritarian country against another. Third, more than half of the barrier builders and more than 80 percent of their targets are Muslim-majority states or groups.²⁰ Of 34 barriers built worldwide since 1990, 29 were constructed against Muslim-majority targets. Of those 29, 17, or 59 percent, were also initiated by Muslim-majority states. Thus, exactly 50 percent of post-1990 walls

19. Both measured in dollars for the year 2000 using purchasing power parity.

20. Gaza and the West Bank are counted as separate territories.

Table 2. How Do Builders Differ from Targets?

	Builder	Target
average GDP per capita (PPP in 2000 \$)	9,143 (N=33)	2,361 (N=29)
average 2000 Freedom House score (1 is least, 7 is most authoritarian)	4.3 (N=34)	5.6 (N=31)
average percentage of population below poverty line in 2000	24 (N=25)	35 (N=29)
nominal religion, year 2000	53% of builder countries Muslim (N=18/34)	85% of target countries Muslim (N=29/34)
average cumulative number of terror attacks endured from 1970 to 2000	796 (N=34)	488 (N=32)

NOTE: The table compares key characteristics of builders and targets only for dyads with fortified boundaries initiated since 1990. The average builder is richer, freer, and a greater target for terrorists than the average target. Sample sizes differ slightly across characteristics as a result of data availability. GDP stands for gross domestic product and PPP for purchasing power parity.

separate Muslims from Muslims. Samuel Huntington famously stated that “Islam has bloody borders,” a reference to the borders between Muslim states and non-Muslim states.²¹ Our data suggest that the Muslim world is unique in its “barrier building” tendencies, internally as well as externally. Out of 146 bilateral intra-Muslim boundaries, 17, or roughly 12 percent, feature barriers.

Why do Muslim-majority states tend to erect barriers against Muslim-majority neighbors? These states fall on the authoritarian side of the spectrum, so our information about the characteristics of their barriers, let alone their intentions in building them, is sparse; thus our answer must rely on conjecture. Given that most of the relevant boundaries are in the Middle East and Central Asia, we suspect that several of the dominant motivations for barrier construction converge in these cases and coincide with Muslim-majority populations: boundary disputes, terrorism, smuggling, and illegal migration in various permutations. As a survey of the multiple incentives for Uzbekistan’s barrier construction put it: “Each of the versions presented could suffice as an explanation for the decision of the Uzbek authorities to build barriers on their border.”²²

21. Samuel P. Huntington, “The Clash of Civilizations?” *Foreign Affairs*, Vol. 72, No. 3 (Summer 1993), p. 35.

22. Erkin Akhmadov, “Uzbekistan-Kyrgyzstan: Building a Wall,” *Central Asia-Caucasus Analyst*, July 1, 2009, <http://old.cacianalyst.org/?q=node/5143>. We thank Michael Barak for directing us to this resource.

The spatial proximity of barrier builders to one another in these regions, and the temporal proximity of their construction projects, suggests both shared threats and a process of learning. Most salient among the emulated examples were those of the earliest barrier builders in the Middle East and North Africa, Morocco and Israel, whose barriers succeeded in stamping out violent incursions in a prompt and highly visible manner that could not have been lost on their attentive neighbors.

The colonial legacy of the Middle East and the abrupt formation of several Central Asian republics after the collapse of the Soviet Union created a host of territorial disputes in both Muslim-majority regions. Several Gulf states (Oman, Saudi Arabia, and the United Arab Emirates) and republics in Central Asia (Kazakhstan, Turkmenistan, and Uzbekistan) have sought to create facts on the ground by erecting physical barriers to secure farmland and water, to mitigate unwanted population flows, and to stem rival resettlement efforts. At the same time, their boundaries proved useful in curtailing smuggling efforts out of their territories, the entry of illegal immigrants from poorer countries into their territories, and the cross-border infiltration of terrorists from one Muslim-majority state to another. The threat of Islamist terrorism, in particular, helps explain the rapid escalation of boundary construction in recent years: Half of post-World War II barriers were built in or after the year 2000, coinciding with the rise of al-Qaida and parallel jihadist movements. As table 2 shows, barrier builders endured significantly more terror attacks than their targets. This is also true for Muslim-only country pairs, illustrating that in these cases the convergence of multiple threats offers a more compelling explanation than the simple economic logic that drives barrier construction elsewhere.

Table 2 focuses on the differences between barrier builders and their targets, but we are also interested in how country pairs (dyads) with barriers differ from dyads that do not have barriers. The results, which appear in table 3, offer further evidence that barrier builders face greater potential and actual human inflows than countries that opt not to build such barriers. The asymmetry in GDP per capita between the two countries is much larger in the case of dyads with barriers (\$8,198) than in dyads without barriers (\$-570). In other words, countries that opt to build barriers face, on average, significantly poorer targets than countries opting not to build. Likewise, on average building countries face targets that are less free, have more poverty, and experience greater out-migration (relative to the builder) than nonbuilders. Finally, builders in dyads with barriers have suffered more terrorist attacks from their targets (2.9, on average) than have potential builders in dyads without barriers (0.6, on average).

Table 3. How Do Country Dyads with Barriers Differ from Dyads without Barriers?

	Dyads with Barriers	Dyads without Barriers
average difference in GDP per capita (PPP in 2000 \$)	8,198 (N=28)	-570 (N=430)
average difference in 2000 Freedom House scores (1 is least, 7 is most authoritarian)	-1.1 (N=31)	0.1 (N=451)
average difference in percentage of population below poverty line in 2005	-13.7 (N=24)	1.1 (N=331)
average net migration rate of target (or potential target) per 1,000 population	-0.66 (N=31)	-0.4 (N=456)
average cumulative number of terror attacks endured by countries in dyad from 1970 to 2000	1,255 (N=34)	930 (N=465)
average cumulative number of terror attacks launched from target (or potential target) to builder, 1970 to 2000	2.9 (N=34)	0.6 (N=465)

NOTE: The table compares dyads (country 1, country 2), where country 1 has a barrier against country 2, with dyads where country 1 has opted not to erect a barrier against country 2. For dyads with barriers, we compute the difference between a builder and a target on some characteristic (such as gross domestic product [GDP] per capita) by subtracting the value of the target country from the value of the builder country. In dyads without barriers (where country 1 is only a potential builder), the differences are computed by subtracting country 2's value from country 1's value. A negative number for average net migration rate of target represents out-migration from the country. PPP stands for purchasing power parity.

Who Erects Fortified Boundaries? A Multivariate Analysis

The results presented in table 3 strongly suggest that states erect barriers to keep out unwanted CTAs, but it does not identify which of the many factors best predicts the erection of a fortified boundary. For that we specify multivariate models in which the separate effects of a particular factor can be assessed while controlling for the potentially confounding effects of the other factors. Because the outcome variable is binary, we employ logit models measuring whether or not a country initiated the construction of a fortified boundary along its border with a neighboring country at any point since 1989.²³ As noted above, explanations for fortified boundaries can be divided into those that highlight alternative political agendas such as grabbing land and those that emphasize the need to stem unwanted cross-border flows of CTAs.

23. Here we again exclude purely European dyads from this analysis and omit barriers that were erected before 1989.

We employ multiple measures to distinguish between these two schools of thought. To test whether barriers are a means of territorial consolidation, we include a binary variable coded as 1 if a territorial dispute exists between a builder and a target and 0 otherwise (authors' data). To test for barrier construction as a means for stemming CTA flows, we distinguish among political, economic, and terrorist cross-border flows. Our political explanatory variable is the difference in freedom between builder and target, as measured by Freedom House.²⁴ If fortified boundaries are built to stop political refugees, we expect the occurrence of fortified boundaries to be correlated with differences in freedom. Our economic explanatory variables include the difference in GDP per capita between builder and target (from the United Nations), the rate of out-migration from the target (from the Central Intelligence Agency), and the percentage of the target population below the poverty line as defined in the target country (from the CIA). If the goal of building fortified boundaries is to stem the flow of those seeking better economic prospects, then we would expect a positive correlation between the existence of a barrier and wealth differences between builder and target. We would also expect these wealth differences to lead to population migration from the target to the builder.

Our terrorism explanatory variables include the cumulative number of terrorist attacks that a builder has endured (adapted from the Global Terrorism Database), the cumulative number of terrorist attacks launched from the a target to a builder (adapted from the International Terrorism: Attributes of Terrorist Events [ITERATE] project), and a binary variable computed from the ITERATE data that indicates whether or not terrorism from target to builder increased from 1990 to 2010.²⁵ Each of these indicators implies a slightly different way in which countries that build fortified boundaries interpret terrorist attacks against them. Do builders create such boundaries in response to the overall amount of terrorism they have experienced, irrespective of where those attacks originate? If so, then there should be a positive correlation between the Global Terrorism Database cumulative attack numbers and the existence of a fortified boundary. Do builders keep tabs on which neighbors are the source of terrorism and build fortified boundaries only against terrorist sources? If so, then we should expect dyad-level terror attack counts from the ITERATE project to be positively correlated with the erection of such boundaries. Finally, do countries decide to build a fortified boundary by comparing the number of ter-

24. Freedom House, *Freedom in the World* (Washington, D.C.: Freedom House, 1995, 2000, and 2005).

25. To compute this for each dyad, we regress the yearly count of terror attacks between target and builder on year. Where the resultant slope coefficient is positive, we code the trend as increasing (1); where the resultant slope is non-positive, we code the trend as 0.

ror attacks they endure with the number other countries endure? Or do they take into account only their own experience with increasing numbers of attacks? If the former, then we should expect the cumulative number of attacks to be significant; if the latter, only the trend across time should matter.

To test the idea that nominally Muslim countries are inordinately the target of fortified boundaries, we include a binary variable indicating whether the target country's population is nominally Muslim or not (from the CIA). Finally, we control for the capacity of states to erect fortified boundaries. Many states might see a need for a fortified boundary but have neither the capacity nor the funds to erect one. Our measure of this capacity is the logged builder's GDP (from the United Nations) per kilometer of border with the target (from the U.S. Census Bureau). Unless otherwise specified, explanatory variables contain data from the year 2000.

Figure 2 illustrates the results of three logit models.²⁶ Each panel in the figure presents the results of a different model, with coefficient magnitudes on the horizontal axis. The label "common factors" indicates variables that are common to all three models. "Unique factors," by contrast, identifies variables unique to each model. Each panel contains point estimates and 95 percent confidence intervals, with a vertical reference line drawn at zero to identify no effect. Coefficients with confidence intervals containing the vertical line at zero are statistically insignificant.

We can draw four conclusions from the results presented in figure 2.²⁷ First, there is no evidence that states tend to erect fortified boundaries along disputed borders. There is no cross-national correlation between territorial disputes and the existence of fortified boundaries worldwide.

Second, states build fortified boundaries to stem unwanted cross-border flows resulting from differences in wealth between builder and target (builder-target per capita GDP). Once this finding is taken into account, further features of economic distress in a potential target (levels of out-migration or poverty levels) do not increase the propensity of a builder to erect a barrier.²⁸ "Difference in freedom" has no explanatory power. Freer states do not build fortified boundaries against less free ones once we account for wealth differences.

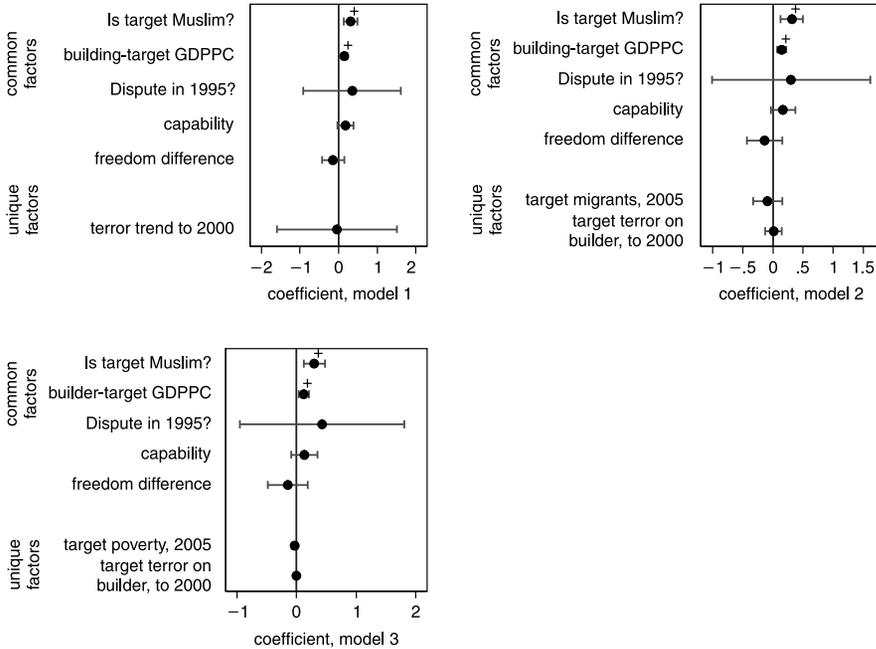
Third, although states often invoke the threat of terrorism as a reason for

26. The raw statistical output on which figure 2 is based can be found in the online appendix at doi:10.7910/DVN/U16NEI.

27. Figure 2 was created using COEFPLOT in Stata 13.1. See Ben Jann, "COEFPLOT: Stata Module to Plot Regression Coefficients and Other Results," <http://ideas.repec.org/c/boc/bocode/s457686.html>.

28. In the raw results in the online appendix, the coefficient is negative on target migration rate (per 1,000 population) in 2005 because negative migration rates indicate net outflow from the target.

Figure 2. What Factors Predict Barrier Building?



NOTE: Each panel contains point estimates and 95 percent confidence intervals. Estimates marked with a “+” are significantly different from zero. GDPPC stands for gross domestic product per capita.

building fortified boundaries, there is no statistical relationship between actual levels of terrorism and the propensity of states to construct such boundaries, even after controlling for the capacity of states to erect them (“capability”). This is true whether terrorism is measured in terms of an increasing trend within dyads since 1990 (model 1), the cumulative number of terrorist attacks across dyads (from target to builder) since 1990 (model 2), or the total number of domestic and transnational terrorist attacks endured by the builder since 1970 (“cumulative number of terror attacks on builder”).

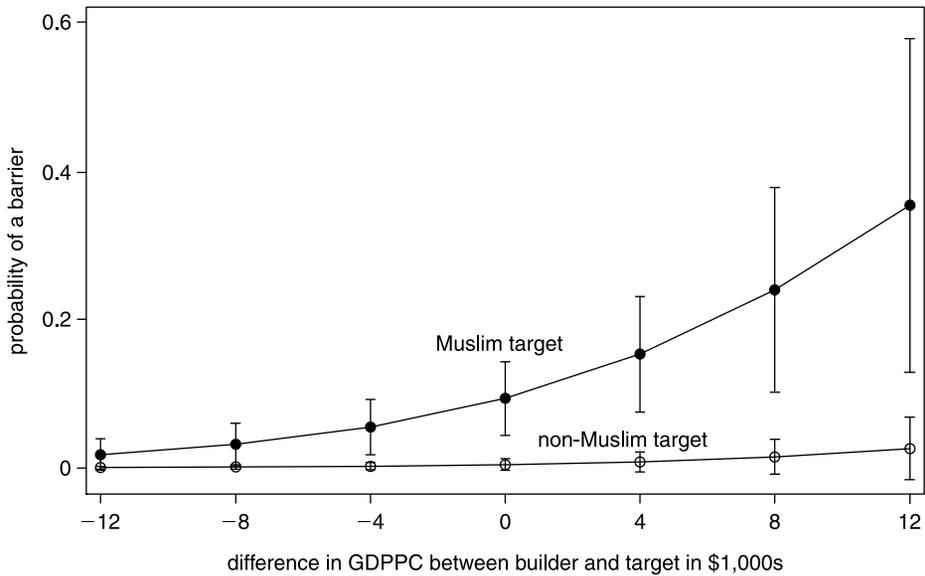
Finally, our most robust positive result concerns the nominal religion of the target state. Predominantly Muslim states have an increased probability of becoming the targets of a fortified boundary, even after taking into account disparities of wealth, freedom, and experience with terrorism. This finding is consistent with the claim that builders justify their fortified boundaries based on the fear of terrorism, and that such justifications are most warranted when

the target state is Muslim. As noted earlier, however, this finding conflicts with Huntington's thesis. Seventeen out of the 29 boundaries erected against Muslim states since 1990 were constructed by other Muslim states. If Israel is excluded from the computation (thus removing 5 boundaries), then 71 percent of fortified boundaries constructed against Muslim states were built by other Muslim states.

How substantively important for the propensity to erect fortified boundaries are differences in economic power and whether or not the target state is nominally Muslim? To answer these questions, we computed counterfactual predicted probabilities of a barrier against both Muslim and non-Muslim states for a range of differences between builder and target GDP per capita. Our three models provide strikingly similar results, but we base our counterfactual estimates on model 1 because there are fewer missing values than in model 3 (and hence a larger sample) and fewer explanatory variables than in model 2 (and hence model 1 is simpler, in a good way). To compute predicted probability of a state erecting a barrier against a target that is, say, equal in GDP per capita to that of the builder and a Muslim country, we first set the values of the difference in GDP per capita and target religion for all dyads used in model 1 to zero and "Muslim," respectively. For each dyad, we then compute the predicted probability of a barrier using the results of model 1 and each dyad's sample values for the other covariates. Finally, we compute the average probability across all observations in the sample. We repeat this procedure for differences in GDP per capita ranging from two standard deviations below zero to two standard deviations above and whether or not the target is Muslim.

The results appear in figure 3, which shows that differences in economic wealth are much less determinative of barriers than whether or not the target is Muslim. When the hypothetical builder is much poorer than the target (a strong negative difference in GDP per capita, on the left), then the probability of erecting a barrier is low regardless of whether the target is Muslim. This result reflects the commonplace view that poorer countries do not expect flows of CTAs emanating from richer countries. But as the difference in wealth shifts in favor of the hypothetical builder, target religion takes on increased importance. The greater the positive difference between a hypothetical builder's wealth and that of its potential target, the greater the probability of a barrier (as evidenced by the upward sloping curves), but the increase in probability is miniscule when the target is non-Muslim. When the target is Muslim, by contrast, there is nearly a 40 percent probability of a barrier when the builder's GDP per capita exceeds that of the target by \$12,000.

Figure 3. Predicted Probabilities of a Barrier for Varying Differences in Gross Domestic Product per Capita (GDPPC) and Nominal Religion of Target Country, including 95 percent Confidence Intervals



Three Case Studies: Spain, Israel, and Morocco

To contextualize our findings so far, we explore three cases of fortified boundary construction. We chose these cases because of their salience, diversity, and transparency. Whereas much of the barrier construction worldwide is conducted covertly, the public barriers constructed by Spain, Israel, and Morocco are ambitious and controversial, and have received a great deal of international and scholarly attention. Although they differ vastly in physical characteristics, scope, and target, all three offer qualitative illustrations of how and why states come to fortify their boundaries.

CEUTA AND MELILLA

Ceuta and Melilla are two Spanish cities in Morocco, some 11 square miles and 8 square miles in size, respectively. Both cities were retained as autonomous enclaves by Spain in 1956, despite Spain's recognition of Morocco's independence.²⁹ After Spain's accession to the Schengen agreement in 1995, the border

29. Paul K. Huth, *Standing Your Ground: Territorial Disputes and International Conflict* (Ann Arbor: University of Michigan Press, 2001), p. 222.

between Spain and Morocco in Ceuta and Melilla created tempting opportunities for migrants and smugglers to access the European mainland, a mere 8 miles away. The resulting spate of illegal border crossings into Spain prompted Spanish authorities to construct fences around Melilla and Ceuta in 1998 and 2001, respectively.³⁰ Each city was surrounded by two parallel fences enclosing the city perimeters. The 10-foot-tall fences were topped with barbed wire and equipped with spotlights. Sound sensors, motion sensors, and cameras positioned along the fence were connected to central hubs via miles of underground cables. The road between the two fences was patrolled by officers from the Spanish *guardia civil* as well as regular police, amounting, in the case of Ceuta, to more than 1,000 patrolling officers. Coastal access to the enclaves was guarded by means of a dozen patrol boats.³¹ The Ceuta fence alone cost \$350 million, subsidized by the European Union.³²

The fortified boundaries around Ceuta and Melilla dramatically reduced the number of illegal immigrants who succeeded in crossing into Spanish territory. In 1999 and 2000, before the Ceuta fence was completed, about 10,000 African migrants crossed the border illegally every year and demanded Spanish asylum from within the city. That number fell to about 2,000 yearly asylum seekers from 2001 to 2003. By 2004 there were only 129 African migrants in Ceuta requesting asylum.³³

Nonetheless, critics of the fortified boundaries around Ceuta and Melilla pointed to a constant flow of persons and goods “over, underneath, through or around” the fences and judged the walling-off of the two cities to be “more apparent than real.”³⁴ Indeed, in September 2005, the fortified boundaries around Ceuta and Melilla were put to the test when thousands of immigrants attempted to charge the fences in several coordinated attacks. The smaller assault on the Ceuta fence left 18 migrants dead, including 2 who had managed to cross over to the Spanish side. The massive attacks on the Melilla fence left 6 migrants dead, but 1,000 immigrants managed to break through the fence.³⁵ Consequently, the Spanish government ordered the construction of a third fence around Melilla at a cost of \$47 million. The three fences, each

30. Jeff Howe, “The New Border Wars,” *Wired*, June 2003, www.wired.com/wired/archive/11.06/border_wars_pr.html.

31. Riccardo Valsecchi, “Ceuta, the Border-Fence of Europe,” *Worldpress.org*, June 25, 2009, <http://www.worldpress.org/Europe/3371.cfm>.

32. Kim Willsher, “Mustafa, the Swimming Fridge Smuggler, and His Macabre Pact,” *Telegraph* (London), October 19, 2003.

33. Joseph Winter, “Attacking Europe’s Border Fences,” *BBC News Online*, May 18, 2004, <http://news.bbc.co.uk/2/hi/africa/3604519.stm>.

34. Andreas, “The Mexicanization of the U.S.-Canada Border,” pp. 135–136.

35. Daniel Wolls, “Far from Home, African Immigrants Tell Families about Grueling Ordeals to Reach Europe,” *Associated Press*, October 9, 2005.

about 7 miles in length, were also raised to a height of 20 feet to hamper the use of steps and ladders by assailants. These policies have halted all attempts at massive border crossings in Ceuta or Melilla. The Moroccan government continues to protest the construction and expansion of the fences because it persists in claiming these two territories as its own.³⁶

THE WEST BANK BARRIER

The immediate predecessor to Israel's West Bank barrier was one constructed by Israel along the border with the Gaza Strip in 1994.³⁷ The Gaza barrier was a 32-mile-long fence, 12 feet high, equipped with sensing equipment and punctuated by watchtowers and pillboxes, armed with machine guns, motions detectors, and night-vision capability. Armored vehicles and unmanned aircraft patrolled its half mile buffer zone. This fence was said to have achieved "near-total containment of terrorism."³⁸ Statistics gathered by the Israeli government suggest that not a single Palestinian suicide bomber succeeded in infiltrated Israel from Gaza between 2001 and March 2004. The head of the Southern Command of the Israel Defense Forces (IDF) at the time, Maj. Gen. Doron Almog, counted 400 attempts by Palestinians to cross the fence from 2000 to 2003, all of which are said to have failed.³⁹

A dramatic escalation in suicide attacks originating in the West Bank during the 2000–05 second intifada brought the total number of Israeli fatalities from Palestinian terrorism to 500. The perceived success of the Gaza fence led the Israeli public to conclude that physical barriers could stop Palestinian terrorism.⁴⁰ In June 2002, the Israeli government approved the first stage of a contiguous barrier designed to surround the entire West Bank. Subsequent stages passed approval in December 2002 and September 2003.⁴¹ Once completed, the barrier will extend 450 miles at a cost of \$1 million to \$2.5 million per

36. Willsher, "Mustafa, the Swimming Fridge Smuggler, and His Macabre Pact"; and Winter, "Attacking Europe's Border Fences."

37. Hillel Frisch, "(The) Fence or Offense? Testing the Effectiveness of 'The Fence' in Judea and Samaria," *Democracy and Security*, Vol. 3, No. 1 (2007), p. 6.

38. David Makovsky, *A Defensible Fence: Fighting Terror and Enabling a Two-State Solution* (Washington, D.C.: Washington Institute for Near East Policy, 2004), p. 7; Doron Almog and David Makovsky, "Israel's Fence" (Washington, D.C.: Washington Institute for Near East Policy, 2003); and Frisch, "(The) Fence or Offense?" p. 8.

39. Doron Almog, "Lessons of the Gaza Security Fence for the West Bank," Jerusalem issue brief (Jerusalem: Institute for Contemporary Affairs, December 23, 2004).

40. Israeli Ministry of Defense, "Israel's Security Fence: Operational Concept" (Tel Aviv: Israeli Ministry of Defense, February 22, 2004), <http://www.securityfence.mod.gov.il/Pages/ENG/questions.htm#q26>; Dennis Ross, "When Is a Fence Not a Fence?" *Wall Street Journal*, August 4, 2003; and Frisch, "(The) Fence or Offense?" p. 8.

41. Beit Sourik Village Council v. Government of Israel, High Court of Justice Case HJC 2056/04, sections 3–6.

mile.⁴² By September 2014, about 62 percent of the barrier had been completed, leaving two large gaps in the south and southwest of the West Bank.⁴³

The barrier comprises a multilayered system that includes chain-link fences, electronic sensors, tracking paths, barbed wire, and several segments composed of concrete walls. Its primary component is an electronic fence, equipped with intrusion detection equipment, bordered in the east by a road, barbed wire, and a trench (to prevent vehicles from crashing through the fence). To the west, the primary fence is bounded by three paths: a trace road (intended to reveal footprints), a patrol road, and a road for armored vehicles. "Depth barriers" east of the primary barrier, consisting of trenches and barbed wire, are designed to direct movement to security control points.⁴⁴ The average width of the barrier is 150 feet, though some sections reach 300 feet, depending on topographic constraints.⁴⁵ About 6 percent of the total barrier length is constructed out of 25-foot-tall concrete slabs, 10 feet wide. These sections are concentrated in urban areas and are designed to block sniper fire.⁴⁶ The barrier is protected by observation posts at regular intervals. Its gates are controlled by Israeli soldiers, while the entire length of the barrier is patrolled by soldiers and border police.⁴⁷ The barrier was designed to raise the costs and risks of launching suicide attacks by forcing terrorists to follow a circuitous route in order to reach targets, thus providing security forces enough time to locate and arrest terrorists en route to their destination.⁴⁸

Proponents of the barrier have emphasized its success in dramatically reducing the number of suicide attacks in Israel. According to statistics published by the IDF, the yearly number of attacks fell from a high of 60 (with 220

42. The lower cost is mentioned in Shlomo Brom and Yiftah S. Shapir, "Erecting a Separation Fence" (Tel Aviv: Jaffe Center for Strategic Studies, June 27, 2002). The higher cost is mentioned in Yehezkel Lein, "Behind the Barrier: Human Rights Violations as a Result of Israel's Separation Barrier" (Jerusalem: B'Tselem, April 2003), p. 7, citing Felix Frisch, "Israel Plans Tax to Be Imposed on Palestinians Who Enter Israel," *Ynet.com*, March 4, 2003, <http://www.ynet.co.il/articles/0,7340,L-2469413,00.html>.

43. Tovah Lazaroff, "Israel to Re-authorize Security Barrier Route near West Bank Historical Site," *Jerusalem Post*, September 19, 2014.

44. Lein, "Behind the Barrier," pp. 6–7, citing State of Israel response in High Court of Justice case HCJ 7784/02, Sa'al 'Awani 'Abd al Hadi et al. v. Commander of IDF Forces in the West Bank, section 23; and Israeli Ministry of Defense, "Israel's Security Fence."

45. Israeli Ministry of Defense, "Israel's Security Fence"; and Beit Sourik Village Council v. Government of Israel, section 7.

46. Israeli Ministry of Defense, "Israel's Security Fence"; and Clive Jones, "The Writing on the Wall: Israel, the Security Barrier, and the Future of Zionism," *Mediterranean Politics*, Vol. 14, No. 1 (March 2009), p. 5.

47. Nadav Morag, "Measuring Success in Coping with Terrorism: The Israeli Case," *Studies in Conflict and Terrorism*, Vol. 28, No. 4 (2005), pp. 307–320; and Frisch, "(The) Fence or Offense?" p. 15.

48. Morag, "Measuring Success in Coping with Terrorism"; and Gershon Baskin, "Proposals for Walls and Fences, and Their Consequences," *Palestine-Israel Journal*, Vol. 9, No. 3 (2002), pp. 7–18.

casualties) in 2002 to 5 (with 5 casualties) in 2006.⁴⁹ These figures are particularly notable given the reported rise in attempted attacks in this period.⁵⁰

The geographic distribution of successful attacks lends further credence to the effectiveness of the barrier, even though it is incomplete. As the length of various barrier segments increased, they gradually channeled attacks toward Israeli cities in the vicinity of gaps in the barrier, forcing perpetrators to either take longer routes to superior targets with an increased chance of being apprehended or to select inferior targets.⁵¹ The Palestinian cities of Tulkarm and Qalqilya had served as the launching points for multiple suicide attacks against the Israeli city of Netanya, 7 miles away, yet not a single attack originated from those cities after the barrier was constructed in their vicinity in July 2003.⁵² Statements by the heads of Palestinian terror organizations further attest to the obstacle posed by the barrier.⁵³ For example, the leader of the Palestinian Islamic Jihad, Ramadan Abdallah Shalah, admitted that "it limits the ability of the resistance to arrive deep within [Israeli territory] to carry out suicide bombing attacks."⁵⁴

Opponents of the barrier have argued that reductions in attacks since the construction of the barrier can be attributed to a cease-fire declared by Palestinian groups in 2006 and to IDF incursions into the West Bank starting in 2002 that disrupted militant planning.⁵⁵ Critics have also argued that, prior to the construction of the barrier, most terrorists did not enter Israel through

49. The number of attacks and casualties reported for the intervening years is as follows: 23 attacks (142 casualties) in 2003, 15 attacks (55 casualties) in 2004, and 7 attacks (23 casualties) in 2005. See Intelligence and Terrorism Information Center, "Anti-Israeli Terrorism, 2006: Data, Analysis, and Trends" (Gelilot, Israel: Intelligence and Terrorism Information Center at the Israel Intelligence Heritage and Commemoration Center, March 2007), p. 51. For alternative figures demonstrating similar trends, see Dion Nissenbaum, "Death Toll of Israeli Civilians Killed by Palestinians Hit a Low in 2006," McClatchy Washington Bureau, June 14, 2007; Amos Harel, "Shin Bet: Palestinian Truce Main Cause for Reduced Terror," *Ha'aretz*, January 2, 2006; Sagi Or, "Intifada's 5th Year Saw Lowest Death Toll," *Ha'aretz*, September 29, 2005; and Morag, "Measuring Success in Coping with Terrorism," p. 310.

50. The IDF is said to have intercepted 96 potential suicide bombers in 2005 and 187 potential suicide bombers in 2006. See Nissenbaum, "Death Toll of Israeli Civilians Killed by Palestinians Hit a Low in 2006."

51. Morag, "Measuring Success in Coping with Terrorism," p. 311; and Nurit Kliot and Igal Charney, "The Geography of Suicide Terrorism in Israel," *Geojournal*, Vol. 66, No. 4 (2006), p. 365.

52. Avi Dichter, "There Is Life after Terror," speech presented at the Fourth Annual Herzliya Conference, December 16, 2003; and David Makowsky, "How to Build a Fence," *Foreign Affairs*, Vol. 83, No. 2 (March/April 2004), p. 55.

53. "Leader of the Palestinian Islamic Jihad Admits That the Israeli Security Fence Prevents Terrorism" (Gelilot, Israel: Intelligence and Terrorism Information Center at the Israel Intelligence Heritage and Commemoration Center), March 26, 2008.

54. *Al Sharq* (Qatar), March 23, 2008, cited in "Leader of the Palestinian Islamic Jihad Admits That the Israeli Security Fence Prevents Terrorism."

55. Nissenbaum, "Death Toll of Israeli Civilians Killed by Palestinians Hit a Low in 2006"; Harel, "Shin Bet"; and Moshe Arens, "The Fence, Revisited," *Ha'aretz*, October 28, 2008.

open areas but through checkpoints, where they underwent faulty security screenings. The vulnerability of these checkpoints, critics argue, obviate the utility of the barrier.⁵⁶

THE MOROCCAN BERM

The Berm is a 2,700-mile-long system of sand and stone walls constructed by Morocco in the Western Sahara. It was designed to thwart incursions by the Polisario Front, an insurgent movement representing the indigenous Sahrawi population of Western Sahara. The berm crisscrosses 125,000 square miles of arid desert that contains few oases, permanent rivers, or arable land, and in which temperatures can reach 135°F in the summer months.⁵⁷

The Moroccan government initiated construction of the berm in 1980 in response to a series of successful attacks by Polisario.⁵⁸ Morocco sank an estimated 40 percent of its GDP into its construction and defense.⁵⁹ It completed the construction project within six years, producing a 1,700-mile-long external wall as well as four interior walls that bisect Western Sahara. The 7-foot-tall walls are equipped with electronic sensors and radars, topped by barbed wire, and flanked by a 23-foot-wide ditch as well as minefields. The walls are punctuated, every 3 miles or so, by military bases, observation posts, and underground bunkers.⁶⁰

The costs of maintaining a standing force of 100,000 troops along the berm placed a heavy burden on the Moroccan economy, but it also enabled Morocco to resume phosphate extraction from the region at pre-conflict levels.⁶¹ Although breachable, the berm made it increasingly difficult for Polisario to con-

56. Lein, "Behind the Barrier," p. 29, citing Israeli State Comptroller, *Audit Report on the Seam Area* (in Hebrew), Report No. 2 (Jerusalem, July 2002), p. 35.

57. Ursel Clausen, *Der Konflikt um die Westsahara* [Conflict in the Western Sahara] (Hamburg, Germany: Institut für Afrika-Kunde, 1978), pp. 2-3; and Tony Hodges, "The Western Saharans," *Minority Rights Group Report No. 40* (London: Minority Rights Group Ltd., 1984), pp. 3-4.

58. Werner Ruf, "The Role of the World Powers," in Richard Lawless and Laila Monahan, eds., *War and Refugees: The Western Sahara Conflict* (London: Pinter, 1987), pp. 73-74.

59. Subcommittees on International Security and Scientific Affairs and on Africa of the Committee on Foreign Affairs, House of Representatives, *Hearing on Arms Sales and the Conflict in Western Sahara: An Assessment of U.S. Policy*, 97th Cong., 1st sess., March 25, 1981 (Washington, D.C.: U.S. Government Printing Office, 1981), p. 43; John Damis, *Conflict in Northwest Africa: The Western Sahara Dispute* (Stanford, Calif.: Hoover Institution Press, 1983), p. 79; and Hodges, "The Western Saharans," p. 12.

60. Hodges, "The Western Saharans," p. 12; Michael Bhatia, "The Western Sahara under Polisario Control: Summary Report of Field Mission to the Sahrawi Refugee Camps (near Tindouf, Algeria)," *Review of African Political Economy*, Vol. 28, No. 88 (June 2001), pp. 291-298; David Seddon, "Morocco at War," in Lawless and Monahan, *War and Refugees*, p. 105; and Damis, *Conflict in Northwest Africa*, pp. 97-98.

61. By 1983 Morocco was exporting nearly 700,000 tons of phosphates, up from 150,000 tons prior to the construction of the berm. See Hodges, "The Western Saharans," p. 13; and Seddon, "Morocco at War," pp. 105, 108, 122-124.

duct raids, resulting in Moroccan military superiority. Its construction did not resolve the conflict between Morocco and Polisario, but it did eliminate Polisario incursions into Moroccan-held territories, leading to a cessation of violence since 1991. Polisario, which had controlled nine-tenths of the Western Saharan territory before the berm was constructed, is now confined to a narrow strip of land, sandwiched between the berm and the Mauritanian border.⁶²

The Challenge of Estimating Effectiveness

How might we measure *ex ante* the effectiveness of a fortified boundary? As stated earlier, we define “fortified boundaries” as border control measures designed to ward off asymmetric, nonmilitary threats. We therefore define effectiveness in terms of the ability of a fortified boundary to prevent the influx of migrants, smugglers, and terrorists, on the one hand, and arms, goods, and diseases, on the other. In other words, we are interested in assessing the stopping power of fortified boundaries.

Yet measuring effectiveness along these lines for the cases in our dataset is unfeasible, with a few exceptions. Governments, reluctant to provide information on the existence of their fortified boundaries, let alone on the parameters of these boundaries, have not been forthcoming in sharing data on illegal border crossings into their territories. Those regimes that have advertised the effectiveness of their fortified boundaries may have done so to justify the construction of controversial fortifications, prompting us to suspect that data regarding success have been inflated.

Moreover, even where data on the stopping power of a fortified boundary are available, as in the case of the West Bank barrier, such data are insufficient for precise measurement of boundary effectiveness. First, calculating the efficacy of a boundary requires some counterfactual measure of what the movement of peoples and goods across a given border would have been like had no fortified boundary been constructed. Measures of illicit movement pre-fortification might offer some estimate for this figure, but these too can be difficult to acquire. Recent research regarding the Berlin Wall, for example, confirms that East German police killed between 100 and 200 individuals in the process of attempting to cross the wall in the period 1961 to 1989.⁶³ Yet there exist no equivalent data for successful crossings or for crossings pre-

62. Erik Jensen, *Western Sahara: Anatomy of a Stalemate* (Boulder, Colo.: Lynne Rienner, 2005), p. 34; Hodges, “The Western Saharans,” pp. 12–13; and Ruf, “The Role of the World Powers,” pp. 73–74.

63. “Todesopfer an der Berliner Mauer” (Potsdam, Germany: Zentrum für Zeithistorische Forschung, November 6, 2014), <http://www.chronik-der-mauer.de/index.php/de/Start/Index/id/593792>.

vented by means short of bloodshed. Most important, there are no data on would-be crossers dissuaded from attempting to defect into West Germany by virtue of the wall's formidable presence.

A second challenge in attempting to determine the stopping power of a fortified boundary is that measuring the effectiveness of existing boundaries without attempting to assess the effectiveness of boundaries that have not been fortified would introduce a selection bias into our analysis. Most if not all states suffer from some form of unwanted cross-border traffic yet, as our dataset shows, only 41 boundaries worldwide were fortified from 1945 to 2014. Similarly, many states that suffer from cross-border terror attacks have not constructed barriers: data on terrorism would have led us to expect Greece, Turkey, Ecuador, and Namibia, for example, to construct barriers along their borders with Turkey, Iran, Colombia, and Angola, respectively. We do not know, and are unlikely to learn, whether these states ever considered constructing fortified barriers, calculated that such barriers would not serve their needs, or intend to construct them but have not yet done so. Our analysis is thus skewed toward cases in which states, for one reason or another, chose to construct fortified boundaries. Because governments are likely to decide in favor of fortifying a boundary when they expect such fortifications to be effective, the analysis of already fortified boundaries can tell us little about the efficacy of fortification relative to alternatives.

Finally, any assessment of barrier effectiveness must ultimately account not just for its effectiveness at stopping CTAs, but also for its long-term strategic effects. Fortified boundaries may provoke outrage by target states and other affected actors, with significant economic, political, or reputational costs for the builder. Such blowback is particularly likely to occur if the barrier is extensive, coincides with a boundary dispute, and is perceived as successful at the tactical level, all features shared by the bulk of cases in our dataset. Moreover, by alleviating short-term security risks and creating a viable status quo, a successful fortified boundary can delay comprehensive dispute resolution, acting as a cure for a symptom rather than the underlying disease. In restraining violence from escalating to war, a seemingly effective barrier may create disincentives for compromise, imposing long-term costs on builders and targets alike.

The most serious unintended consequence of barrier construction is a substitution effect: the shifting of an opponents' resources into alternative areas of threat. Obstructing the flow of immigrants and goods increases the financial rewards for smuggling and may thus encourage rather than deter cross-border illicit activities. Impediments to movement along a fortified section of border may shift traffic to regions previously free of trafficking. Thwarting particular manifestations of cross-border violence is unlikely to persuade op-

ponents to capitulate and is likely to force them to develop alternatives, as in Gaza, where Palestinian terrorists stymied by the barrier substituted short- and medium-range rockets and mortar attacks for suicide attacks.⁶⁴ States have the means of addressing these perverse effects as well, but the ensuing interaction can lead to escalation.

Two Hypotheses on Barrier Effectiveness

Our analysis of existing barriers suggests two hypotheses regarding the short-term effectiveness of fortified boundaries. First, we expect the effectiveness of a fortified boundary to increase if its construction is coupled with other defensive measures against CTAs. This hypothesis is based on the assumption that fortified boundaries cannot provide an effective barrier to cross-border traffic unless they are integrated into a broader repertoire of border control measures. Of those measures, the most crucial are means for protecting the fortified boundary itself. Absent such measures, CTAs can circumvent the fortified boundary or even target the fortifications in an attempt to weaken or destroy them. The most effective means for a state to protect a fortified boundary is to control territory on both sides of the boundary. The wider the strip of land controlled by the state on the CTA side of a fortified boundary, the easier it will be for the state to preempt and prevent attempts at breaking through the boundary. Such control may entail cooperation or intelligence sharing with the state on the other side of the border, unilateral or bilateral surveillance, or the ability to use force on the other side of the border. The most extreme cases of such control involve states that effectively occupy the territory on the far side of the fortified boundary: the fortified boundaries erected by Israel are successful in large part because the state is able to target CTAs on both sides of the boundaries.

Second, we hypothesize that fortified boundary effectiveness will decrease if CTAs can find alternative routes for crossing into the state that circumvent the fortified boundary. CTAs faced with a barrier along a particular boundary will seek other ways to enter a target state. Should they succeed, the fortified boundary would become irrelevant. One of the primary reasons for skepticism regarding the effectiveness of a U.S.-Mexico border fence, for example, is the ease with which illegal immigrants from Mexico might enter the United States elsewhere, be it across the U.S.-Canada border or at any U.S. port or airport. Where a particular boundary holds monopoly over entry and egress, on the

64. Frisch, "(The) Fence or Offense?" pp. 15–16; and Brom and Shapir, "Erecting a Separation Fence."

Figure 4. A Typology of Fortified Boundary Effectiveness

	state lacks alternative to fortified boundary	state has alternative to fortified boundary
clandestine transnational actor has alternative access route	<p>weak</p> <p>(Kazakhstan-Uzbekistan; Thailand-Malaysia)</p>	<p>intermediate</p> <p>(U.S.-Mexico; India-Pakistan)</p>
clandestine transnational actor lacks alternative access route	<p>intermediate</p> <p>(Saudi Arabia-Yemen; Saudi Arabia-Iraq)</p>	<p>robust</p> <p>(Israel-West Bank; Morocco-Western Sahara)</p>

NOTE: The columns are labeled according to whether or not the builder state lacks or has means besides the fortified boundary of deterring the cross-border movement of clandestine transnational actors. The rows are labeled according to whether the clandestine transnational actors have or lack alternative routes that circumvent the fortified boundary.

other hand, fortifications stand a better chance of deterring and preventing illicit movement. These hypotheses result in a typology of fortified boundaries of varying effectiveness (see figure 4).

Boundaries in the top left quadrant of figure 4 should prove the least effective: they are constructed by states as the only available means of deterring the cross-border movement of CTAs, along one of multiple possible entry points for CTAs. We should expect to see such relatively ineffective boundaries where states of limited means that lack the ability to control both sides of a border attempt to secure the weakest of their boundaries. CTAs are likely to respond by simply targeting the next weakest access point.

We expect boundaries in the bottom left and top right quadrants of figure 4 to be of somewhat greater effectiveness. States in the bottom left quadrant cannot operate on both sides of the relevant boundary but do control a primary CTA access point. CTAs may find it easy to physically undermine the fortified boundary, but will encounter difficulties seeking alternative access points. The ability of the boundary to withstand CTA assaults will thus determine whether the fortified boundary is effective.

States in the upper right quadrant of figure 4 are in the opposite position. They have some measure of control over CTAs on both sides of the boundary. In the U.S.-Mexico case, for example, extensive security cooperation between the governments of the United States and Mexico enable these regimes to collude to some extent in preventing CTA access to the border. The ease with

which these CTAs can locate alternative means of entering the United States, however, ensures that a U.S.-Mexico fence, of questionable effectiveness in stemming border crossings along the southern border of the United States, will be of limited use in reducing the influx of illegal immigrants. Similarly, India is able to survey both sides of the Indo-Pakistani boundary and even conduct limited operations on the Pakistani side of that boundary. The boundary is not the only pathway through which insurgents can enter India, however.

Only fortified boundaries in the bottom right quadrant of figure 4 are likely to be truly effective. The regimes constructing these fortifications have done so at the only significant point of entry for CTAs, thus forcing their opponents to confront the fortified boundary. Yet they are able to defend not only their home territory by means of the boundary, but also the boundary itself by controlling territory on its far side. In addition to blocking the CTAs path, these regimes confront CTAs directly by means of intelligence-gathering missions, cross-border raids, and aerial attacks. This integrated strategy makes it difficult for CTAs to advance on, let alone destabilize, the fortified boundary.

The Morice Line, completed by French counterinsurgency forces in September 1957, exemplifies the potential resilience of a fortified boundary to infiltration. The line was designed to prevent Front de Liberation Nationale (FLN) guerrillas, based, armed, and trained in Tunisia and Morocco, from entering Algeria. It stretched 285 miles along the Algerian border with Tunisia and 435 miles along the Algerian border with Morocco. The core of the line consisted of an 8-foot-high electric fence, charged with 5,000 volts, and equipped with alarms, radars, and searchlights. It was flanked by barbed wire, patrol paths, and minefields extending 50 yards to each side. Sensors detected attempts at breaching the line and directed radar-guided artillery and mobile pursuit units, *commandos de chasse*, to the relevant sector.⁶⁵ The line created a no-man's land, under constant surveillance from land and air, transforming the FLN's sanctuary into "a kind of closed hunting preserve."⁶⁶

At the height of the French-Algerian conflict, in 1957–58, maintaining the integrity of the Morice Line became France's foremost priority while breaching it became the FLN's supreme objective. The former prevailed: despite repeated and escalating FLN attempts to overwhelm the line by means of novel tactics, ingenious tunneling, ramping, wire-cutting tools, and brute numbers, the line

65. Alistair Horne, *A Savage War of Peace: Algeria, 1954–1962* (London: Macmillan, 1977), pp. 263–264; and "Special Issue on France and the Algerian War, 1954–1962: Strategy, Operations, and Diplomacy," ed. Martin Alexander and J.F.V. Keiger, special issue, *Journal of Strategic Studies*, Vol. 25, No. 2 (June 2002).

66. John Talbott, *The War without Name: France in Algeria, 1954–1962* (New York: Alfred A. Knopf, 1980), p. 184.

held and decimated the FLN. According to French estimates, the percentage of infiltrations prevented rose from 35 percent in January to February 1958 to 60 percent the next month to 80 percent by the end of April 1958. In the first seven months after its completion, the line is said to have cost the FLN 6,000 men and 4,300 weapons.⁶⁷ Overall, the line is estimated to have blocked 90 percent of all infiltrations.⁶⁸

In a final, desperate attempt to breach the line, FLN forces launched an all-out assault on two sectors of the line east of Souk-Ahras in April 1958, throwing 820 men against the line. Of those, 620 were killed or captured, a “crippling . . . decisive defeat” for the FLN.⁶⁹ The Battle of Souk-Ahras signified the last concerted FLN attempt to breach the Morice Line.

Conclusion

This article has explained the increasing prevalence of a type of interstate border, the fortified boundary. More formidable than conventional borders but less robust than militarized boundaries, a fortified boundary is intended to thwart the flow of unwanted people and goods from a neighboring state. We identify 51 such boundaries that have been built since 1945, roughly half of which were built from 2000 to 2014. We find that rich countries tend to erect barriers against poor countries, and that Muslim countries are the principal targets but also the major builders of such barriers.

Analysts disagree on the reasons why states erect such barriers and whether they can ever be effective. We argue that there are good theoretical reasons to believe that fortified boundaries can stem unwanted cross-border flows. First, clandestine transnational actors cannot walk through walls. Barriers substantially raise the cost of crossing a border illicitly. The French Morice Line surrounding Algeria and the Spanish walls around Ceuta and Melilla provide at least a partial illustration of the power of such boundaries to turn what had been a tide into a trickle. Second, effectiveness increases where fortified boundaries are integrated into a broader repertoire of border control measures. The most effective of these measures appears to be the control of territory on the far side of the fortified boundary. Both Morocco and Israel can prevent potential breaches of the berm and West Bank barrier, respectively, by targeting potential illegal entrants before they even reach the fortification. Third, effectiveness increases to the extent that entrants have no choice but to enter

67. Horne, *A Savage War of Peace*, pp. 264–265.

68. Talbott, *The War without Name*, p. 184.

69. Horne, *A Savage War of Peace*, p. 266.

through the barrier. This may be the case with the Saudi-Yemen border fortification, where there are few other avenues for entry.

Nonetheless, our hypotheses on barrier effectiveness and our typology must remain in the realm of speculation given even the rudimentary information necessary for assessing state control on the other side of barriers and alternative CTA access points for the cases we have identified. We hope that, as additional information about fortified boundaries becomes available and scholars engage in careful analyses of existing cases, our propositions will find some confirmation.

We envision several additional trajectories that the study of fortified boundaries might follow that could build on the data we accumulated for this project but that might challenge some of our premises. The first possibility problematizing our materialist and rationalist emphasis, is the exploration of the global norm of barrier construction from a social constructivist vantage point. The increasing pace at which these barriers are appearing among neighboring states that share similar socioeconomic profiles and that face similar cross-border threats suggests a process of emulation. States seem to be learning fortified boundary “technology” from nearby states and from regional powers that they perceive as having implemented the technology successfully. If constructivists are correct, this cascading technological spread should be accompanied by a growing normative acceptance of physical barriers as an appropriate form of state defense.⁷⁰ For this practice to spread, it would have to tip the balance against the prior enthusiasm for globalization and permeable borders that has characterized the post-Cold War world and the stigma attached to barriers as symbols of oppression, such as the Berlin Wall.

Beyond the empirical evidence of the global trend we have presented above, scholars might find indicators of such a growing norm in elite discourse about barriers. Such discourse would seek to securitize the dangers posed by CTAs: leaders would adopt language that portrays CTAs as threatening and provide normative foundations for barrier construction.⁷¹ Moreover, if barrier construction is a product of a global trend, and not just a series of isolated state reactions to objective threats, then these barriers and the justifications that accompany them will exhibit isomorphisms and decoupling: states will copy

70. On cascades, see Martha Finnemore and Kathryn Sikkink, “International Norm Dynamics and Political Change,” *International Organization*, Vol. 52, No. 4 (Autumn 1998), pp. 887–917. On the diffusion of security technology, see Michael C. Horowitz, “Nonstate Actors and the Diffusion of Innovations: The Case of Suicide Terrorism,” *International Organization*, Vol. 64, No. 1 (January 2010), pp. 33–64.

71. On securitization, see work by the Copenhagen School—for example, Barry Buzan, Ole Wæver, and Jaap de Wilde, *Security: A New Framework for Analysis* (Boulder, Colo.: Lynne Rienner, 1998).

the types of barriers others have constructed, as well as their rationalizations for their construction, regardless of specific local circumstances.⁷² Finally, if the international community is experiencing the spread of a global norm of barrier construction, scholars should expect formerly reluctant states to adopt the practice at an accelerated pace, particularly now that influential members of the international community, such as the United States and members of the European Union, have begun doing so. The ongoing construction of a series of fortified barriers by Turkey against Syrian and Kurdish CTAs offers an example for a vociferous barrier critic turned barrier enthusiast.⁷³

A second avenue of analysis involves exposing the domestic interests, bargaining, and decisionmaking processes that precede the construction of barriers. We have included several domestic variables in our statistical analysis and have touched on some of these mechanisms in our discussion of the Israel–West Bank barrier, but they bear greater scrutiny. Who are the constituencies that barriers are designed to pacify? What groups inside the state tend to benefit and lose most from their construction? And if, as our analysis shows, economic and not security considerations are the primary motivators for barrier construction, why do leaders continue to emphasize terrorism when they justify barrier construction to their supporters?

A third, and closely related, line of inquiry involves the political economy of barrier construction. The starkness of fortified boundaries belies their complexity: their construction demands an expertise in topography, engineering, defense, and intelligence; materials ranging from construction hardware to electronics; and a detailed doctrinal conception for integrating the barrier into the state's broader border security. How do states acquire these skills, materials, and plans? It is hard to obtain reliable information about the construction firms and defense contractors behind these challenging international construction projects. It stands to reason that states share more than just the inspiration of fortified barriers with one another.⁷⁴ Barrier construction is a lucrative international business.

72. On isomorphism and decoupling, see work by sociological institutionalists, including Paul J. DiMaggio and Walter W. Powell, "The Iron Cage Revisited: Institutional Isomorphism and Collective Rationality in Organizational Fields," *American Sociological Review*, Vol. 48, No. 2 (April 1983), pp. 147–160; and John W. Meyer and Brian Rowan, "Institutionalized Organizations: Formal Structure as Myth and Ceremony," *American Journal of Sociology*, Vol. 83, No. 2 (September 1977), pp. 340–363.

73. Jonathan Burch, "Turkey Builds Wall at Syrian Border after Deadly Bombings," Reuters, May 25, 2013; Contanze Letsch, "Turkey's New Border Wall Angers Kurds on Both Sides of Syrian Divide," *Guardian*, November 8, 2013; and Dasha Afansieva, "Turkey Builds Wall in Token Effort to Secure Border with Syria," Reuters, May 5, 2014.

74. Michael Goodwin, "Border Battles: Hillary Wants to Build a U.S.-Mexico Fence First—and She's Right," *Daily News* (New York), April 23, 2006.

The financing of these projects raises additional questions. The U.S. and Israeli barriers are estimated to cost \$1 million to \$2 million per mile, while the European Union paid closer to \$5 million for every mile of the Spanish barriers.⁷⁵ The projected billion-dollar cost of a comprehensive U.S.-Mexico barrier is already dwarfed by the \$8.5 billion that Saudi Arabia has sunk into its barrier along its border with Yemen.⁷⁶ How do states make the funding allocations for these barriers? Given the impact of construction on the movement of illegal goods and labor, are these barriers a worthwhile financial investment?

Many states seem to think so: the proliferation of fortified boundaries shows no signs of abating. Since the start of 2015, several more states have declared their intention to construct fortified boundaries, confirming several of the trends we have identified in this article.⁷⁷ Kenya has initiated a barrier on its border with Somalia to deter al-Shabaab militants from crossing into its territory.⁷⁸ India has started replacing the barbed-wire along its border in Jammu and Kashmir with a 68-mile-long “border embankment” that will be 33 feet tall and 135 feet wide.⁷⁹ Algeria is contemplating the construction of a 75-mile electric fence on its border with Libya to prevent the entry of armed fighters.⁸⁰ One opinion editorial on the barrier “epidemic” concluded: “If good fences make good neighbors, then the world is experiencing an unprecedented outbreak of neighborliness.”⁸¹

75. Hus, “Delay Seen for Fence at U.S.-Mexico Line”; Vallis, “Congressman Proposes Wall along Border with Mexico to Block Illegal Immigrants”; Willsher, “Mustafa, the Swimming Fridge Smuggler, and His Macabre Pact”; Winter, “Attacking Europe’s Border Fences”; and Frisch, “(The) Fence or Offense?”

76. Gwynne Dyer, “The Good Fences Epidemic,” *Jerusalem Post*, February 15, 2007.

77. The planned barriers include a “Great Wall of Ukraine” to be constructed by Ukraine on its border with Russia. This project does not fall under our definition of a fortified barrier because it amounts to a military fortification in its design and function. See Thomas Barrabi, “Great Wall Of Ukraine Is ‘A Priority,’ Petro Poroshenko Says: Donbas Defense Construction Set For April,” *International Business Times*, March 27, 2015, <http://www.ibtimes.com/great-wall-ukraine-priority-petro-poroshenko-says-donbas-defense-construction-set-1862040>; and “Ukrainian Border Guards Get First UAH 10 MLN for ‘Great Wall of Ukraine,’” *Ukraine Today*, April 3, 2015, <http://uatoday.tv/news/ukrainian-border-guards-get-first-uah-10-mln-for-great-wall-of-ukraine-419470.html>.

78. Aislinn Laing, “Kenya Erects a Wall along Border with Somalia to Keep Out al-Shabaab,” *Telegraph*, April 22, 2015; and Isma’il Kushkush, “Kenya Envisions a Border Wall That Keeps Shabab Violence Out,” *New York Times*, April 21, 2015.

79. Nazir Masoodi, “To Prevent Infiltration and Shelling, Government to Build 110-Km Long Embankment along Jammu Border,” *NDTV*, April 8, 2015, <http://www.ndtv.com/india-news/to-prevent-infiltration-and-shelling-government-to-build-110-km-long-embankment-along-jammu-border-752766>; and Ravi Krishnan Khajuria, “Embankment Work to Start Soon,” *Tribune* (Chandigarh), February 6, 2015.

80. Mary Atkinson, “A New Walled Border for Algeria and Libya?” *Middle East Eye*, October 4, 2014, <http://www.middleeasteye.net/news/libya-algeria-509293117>; and M. Oudina, “Algeria to Build a Wall along Its Border with Libya,” *Ennahar Online*, April 8, 2015, <http://www.worldaffairsjournal.org/content/algeria-build-wall-along-its-border-libya>.

81. Dyer, “The Good Fences Epidemic.”