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Borderwall:
Peace and the Future of the Korean Demilitarized Zone

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The Demilitarized Zone (DMZ) has divided the Korean Peninsula for over fifty years, and during this time, it has transformed into an accidental wildlife refuge. The Borderwall project preserves the DMZ as a wildlife refuge but allows for exchange and development to occur along a recently rebuilt railway-highway line that runs between the North and South. By rotating the border along a perpendicular axis, the project exaggerates the railway-highway's gesture of reunification and defies the existing borderwall condition. This line of development creates a compressed zone of interaction and produces a physical proximity and built world that the DMZ currently denies. The Borderwall project expands and contracts in time, and provides a symbol and architectural embodiment of evolving inter-Korean relations.
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Border between North and South Korea at the Joint Security Area. North Korea (top), South Korea (bottom).

BORDERWALL

PEACE AND THE FUTURE OF THE KOREAN DMZ
“Good fences make good neighbors.”
- Robert Frost, “Mending Wall”

PREFACE  Walls are an endless paradox. On an individual and a collective level, we love to “tear down walls,” yet we continue to build new ones. We long for a connection with the other on the other side, yet walls give us a sense of self and social order. Technology is generally defined as a physical tool and/or a method of organization with the purpose of controlling the environment and conceptualizing the world. Using this definition, walls can be understood as an ancient and contemporary geopolitical technology. The power of technology lies in its ability to transform practices into symbols that then perpetuate and reinforce the existing order, solidifying its existence (Kotchemidova 1). Walls operate as profound and complex geopolitical tools because they are self-reinforcing, cyclical systems that permeate our social and built world, including the economic, the psychological, the cultural, and the environmental.

Rem Koolhaas argued in his study of the Berlin Wall that there is no relationship between mass and program (Koolhaas 228). Using architectural terms within a framework of technology, walls are programs that produce additional programs; these programs, in turn, feed back into the cultural values that initially produced the wall. The wall as a means of social control hardly lies in its physicality, but rather, in its immaterial presence as a “real” form. Conceptually and physically, walls function as technology regardless of scale, ranging from a partition in a single-family home to a gated community to an international border. To maintain this theoretical understanding, walls that operate on an international, macro-scale within a contentious, militarized climate will be referenced in this thesis as “borderwalls”.
INTRODUCTION  At only 154 miles, the Korean Demilitarized Zone (DMZ) is not a long borderwall, but in terms of width, no other division in the world can compare. With approximately two million soldiers guarding the two-and-half-mile-wide divide, it is the most heavily armed border in the entire world. The buffer zone was established in 1953 when the North and South signed an armistice agreement that effectively ended the Korean War. Per the agreement, the DMZ cuts the peninsula in almost equal halves, while the Military Demarcation Line (MDL), which is the center line of the DMZ, serves as the actual national boundary. Soldiers are allowed within the DMZ but they cannot cross the MDL. Both countries never signed a peace treaty, and technically, they are still at war. Although several borderwalls fell after the Cold War, the DMZ remains one of the last survivors of that era.

Despite the seemingly static physical condition of the DMZ, contact and exchange between the two Koreas has increased exponentially in the last ten years with South Korea's adoption of the Sunshine Policy in 1998 and North Korea's interest in developing and stabilizing its economy.
Many South Korean businesses view the North's ready supply of low-wage labor as a major opportunity, and the North Korean government, believing such wages and investments are critical to its long-term survival, has been taking steps to grant interested parties access. Every year, more and more South Koreans travel to North Korea for business, tourism, and cultural exchange which have been made possible from summit meetings between the countries. "Reunification" remains the ultimate goal of both countries and many consider it to be just on the horizon.

The easing of military tensions has also heightened development in areas near the DMZ. On the South's side, cities sandwiched between Seoul and the DMZ are now the site of numerous construction projects, including industrial parks and apartment complexes. With approximately half of South Korea's entire population residing in the Seoul metropolitan area (located just twenty miles south of the border), the city requires new territory and natural resources to grow — and expanding toward the North is less of a public concern. Land values in cities once considered too dangerous and uninhabitable have doubled and quadrupled in land value as South Koreans are less fearful of living and working in such close proximity to the DMZ. To complicate this increase in development and exchange, in the last fifty years the DMZ has transformed into an untouched wildlife refuge that the international environmental community is lobbying to preserve. Within this climate of ever-changing geopolitical conditions, the status of the DMZ demonstrates how the program of a borderwall is ambiguous and constantly evolving and renegotiated.
“Until the ‘80s, the borders were very clear: if you transgressed, you would get into certain difficulties. It’s now a very different society with unclear borders and many people feel powerless.”

– Annette Simon, German psychologist (qtd. in Wallace)

**PROJECT PROPOSAL**

Any type of reunification between the two countries will have an enormous impact on the DMZ environmentally, and on the North and South Korean people economically, politically, culturally, and psychologically. This thesis therefore raises four questions:

– What does an international border and “reunification” mean in a capitalist global economy?

– If the DMZ is to be preserved as a wildlife reserve (hard program), how will its dual function as a border (soft program) conform to fluctuating geopolitical conditions?

– How will interactions between North Koreans and South Koreans be choreographed and facilitated? What will be the quality of these interactions? How will they contribute to the ultimate goal of “reunification”?

– Can a borderwall be a connection?

In an attempt to address the above concerns, this thesis aims to reprogram and reorganize an area of the DMZ that responds to developmental pressures, subverts existing divisions, adapts in time, and contributes to the “reunification” of North and South Korea.

To better understand how the DMZ functions as geopolitical technology and the effects it produces, I have compared and analyzed the Korean DMZ, U.S.-Mexico border, and Berlin Wall using four categories: psychology, economics, culture, and the environment.
Comparison of Border Lengths

- **Inner German Border**
  - 858 miles

- **Berlin Wall**
  - 96 miles

- **Korean DMZ**
  - 154 miles

- **U.S.-Mexico Border**
  - 1,952 miles

Construction of the Berlin Wall
Comparison of Border Widths

Korean DMZ
2.5 miles

Berlin Wall
300 feet (max)
PSYCHOLOGY Borderwalls need not exist or be physically known to exist in people’s minds. Through language and media, borderwalls such as the Korean DMZ and the Berlin Wall are “known” to people near and far as two of the world’s most devastating, inhuman divides. Conceptualization of a borderwall’s mass and program can be simplified through a repetition of words and images. This repetitive process transforms architecture and practices into powerful cultural symbols, which then can be manipulated for social control. Borderwalls can create anxiety and mitigate fears without ever being seen. Individuals who have never physically experienced a particular borderwall may still be rallied alongside thousands of others against it. In this way, borderwalls function as powerful geopolitical tools.
Korean DMZ: Psychogeographic Presence

Besides members of the military, very few North and South Koreans have actually encountered the DMZ due to additional buffer zones. On the South's side, military posts and several layers of barbed wire delineate an additional boundary called the Civilian Control Zone (CCZ). The CCZ is primarily occupied by military, but it is also home to some farming villages and limited entrance/exit farming. This area is especially treacherous because it is riddled with landmines, claiming several lives and injuring many others every year. A similarly stylized zone is reported to also exist on the North's side. The Joint Security Area (JSA), which is the only place within the DMZ where both sides converge, is a popular tourist destination for foreign visitors. Ironically, North Korean civilians are not allowed to visit the JSA and South Korean citizens require special permission. Even then, they may not tour all areas open to foreign tourists. Despite this lack of physical contact, the DMZ remains a "known" place to Koreans.
“Mr. Gorbachev, open this gate. 
Mr. Gorbachev, tear down this wall!”

– President Ronald Reagan, West Berlin, June 12, 1987

Berlin Wall: Architecture as Symbols

The Berlin Wall continues to be the ultimate symbol and reference point for borderwalls. Considered to be the most psychologically devastating divide, the Wall was no natural formation, but rather, one built by humans to be imposed upon other humans, separating thousands of families and a nation. Symbols are, by nature, reductive of complex situations and forms. When the Berlin Wall fell, it was a major televised event with viewers being treated to repeated imagery of celebrating Germans taking concrete slabs down by cranes and sledgehammers. After its destruction, pieces were distributed to cities and institutions across the world. All these acts simplified the public’s conception of its materiality, when in fact, the Berlin Wall (as it is popularly known) accounted for just ten percent of the German divide.
Berlin Wall: Spreading the Message

The Berlin Wall no longer exists, but its remnants continue to provide cultural validation. After its destruction, pieces of the Berlin Wall were distributed to cities, corporations, and institutions across the world. From the Imperial War Museum in London to the campus of Rice University, these “pieces of history” serve as tourist attractions and cultural reminders of western, capitalistic power. Below are just a few of the places the Wall now resides.

From top to bottom, left to right: Potsdamer Platz, Berlin, Germany; City of Truro, Nova Scotia, Canada; House on Kentuck Knob, Chalk Hill, PA; Chapman University, Orange, CA; Hilton Anatole Hotel, Dallas, TX; Ronald Reagan Library, Simi Valley, CA; Microsoft Headquarters, Redmond, WA; Rice University, Houston, TX; Memorial Park, Rapid City, South Dakota; Seoul, South Korea; JFK Presidential Museum, Boston, MA; Smithsonian Museum, Washington, DC.
"[S]acrifice is not a word that voters in free and prosperous societies tend to like. If voters in Western-style democracies are good at anything, it’s rationalizing their own selfishness."


**ECONOMICS** Borderwalls organize economies and global trade. By modulating opportunity and access to labor and capital, borderwalls often serve as a way of distinguishing between the “haves and have-nots,” or rather, the “who will have” and “who will not have”. Borderwalls are exploited by those in power to maintain and further existing hierarchies, and they are most effective when selective — allowing exceptions depending on the economic interest at play. Because economic stability is integral to social stability, borderwalls maintain the status quo and provide nations with security and order. Fear of change, the unknown, and social unrest assist in generating public support for a borderwall. Borderwalls also generate secondary, economically parasitic programs that depend on and validate its existence, such as tourism, bordertowns, and military spending.
Korea: "Abort" or Coexist and Prosper?

Although most Koreans long for reunification in theory, the division between the two countries does provide social and economic stability. South Korean companies and the government fear that if immediate reunification were to occur, a flood of North Korean refugees would cripple the South Korean economy. Germany’s continuing economic difficulties serve as a point of reference when speculating on such consequences. Several studies conducted by economists point out that the cost of reunification would be devastating, especially considering the North Korean population is larger than the 1990 East German population, and that while Germany was divided for almost thirty years, the two Koreas have been divided for over fifty years and under much more isolated conditions.

The Sunshine Policy, which was outlined in 1998, provides the basis for South Korea’s relations with the North. While reunification remains a long-term goal for the South Korean government, in the short term, the Sunshine Policy explicitly states that the government does not intend to "absorb" North Korea, but rather, to "peacefully coexist and prosper together".
75% of East Germans consider themselves to be second-class citizens (Connolly 14)

"As long as there is no parity in living standards between east and west, there will be no such thing as German unity. We could easily be waiting another ten, twenty, or even fifty years for the differences to disappear."

– Gerd Pickel, Europa University Viadrina (qtd. in Connolly 14)

East Germany: “Colonial Acquisition”

The reunification of Germany further demonstrates the problems that arise when two unequal nations immediately merge. Although the East and West reunited over fifteen years ago and pumped billions of Euros into reunification programs and projects, the country still faces major economic hurdles. At the time of the Berlin Wall’s destruction, East Germany was considered fifteen to twenty years behind West Germany economically and technologically. Unemployment remains a huge problem nationally, with ten percent of all Germans lacking employment and twenty percent of East Germans. On the whole, East Germans continue to earn less than West Germans. To further add to the strife, all Germans pay a substantial “solidarity tax” to support projects in the East, which fuels many West Germans’ resentment. In this contentious environment, political parties representing post-Communists and the far right have been making gains against the centrist Social Democratic Party (Schofield A13).
U.S.-Mexico and NAFTA: Contradiction in Program

Recent politics regarding the construction of a seven hundred mile long fence along the U.S.-Mexico border highlight the ability of capitalist interests to selectively utilize the borderwall for economic advantage. In 1994, politicians fighting for the passage of the North American Free Trade Agreement (NAFTA) crafted a rhetoric of freedom and barrier-elimination to generate public support for the legislation. Proponents of capitalism have long adopted a language of freedom and liberty, making abstract the actual economic interests underlying these concepts. While further materializing the U.S.-Mexico borderwall appears contradictory to the aims of NAFTA, the two are actually compatible programs economically. By stopping the flow of people but facilitating the flow of goods and capital, U.S. business interests are better served; goods are produced through cheaper means, but the labor that went into the manufacturing does not require U.S. governmental protection, oversight, and programs.

"I'll work to end tariffs and break down barriers everywhere, entirely, so the whole world trades in freedom. The fearful build walls. The confident demolish them... I am confident in American workers and farmers and producers. And I am confident that America's best is the best in the world."

— George W. Bush, June 12, 1999
"Why go to China when you can go to North Korea?"

– Alan Timblick, Invest Korea
(qtd. in Brooke 8)

Kaesong, North Korea: A New Maquiladora?

The Kaesong Industrial Park is a twenty-five square-mile industrial manufacturing complex built in 2004. The complex sits less than seven miles north of the DMZ and uses utility lines that run directly from South Korea. The Gyeongeui Line, a historic railway and highway that once connected Seoul and Pyongyang, was partially restored in 2003 and accommodates traffic between the former and Kaesong. Currently, over four thousand North Koreans are working light industrial jobs for fifteen South Korean companies, and twenty-five additional companies are in the process of building factories. Almost a thousand companies are on a waiting list with an eventual projected workforce of 700,000. The North Korean workers are paid $57.50 per month, which is less than half of a comparable worker’s pay in China and less than one-tenth of a South Korean worker’s pay. Because the South Korean workforce has become increasingly educated and professional, South Korean manufacturing companies have been facing a scarcity of low-wage
workers. In the past decade, South Korea have been reluctantly accepting migrant labor from China and the Philippines even though it is a passionately nationalistic country (Park). In a strange twist in ethnic-based nationalism, South Korean companies are eager to employ their “own” (i.e. “diligent” North Korean workers) over those of foreign origin (Kirk 12). To some, these business ventures are a neoliberal traversal of a borderwall, while to others, they are an exploitation of a division and a means for increasing global economic power. Kaesong raises the question of whether South Korea truly does not intend to absorb North Korea. Seemingly, South Korea will not absorb the North politically, but it will selectively absorb its labor and production.

“If I can get good workers, I would build factories anywhere, even if the country were ruled by a regime worse than that of Kim Jong-il.”

— Lee Woo-Chun, President, Dosco Company, President car component manufacturer (qtd. in Kim, “Gaeseong")
DMZ: The Economics of Tourism

The Korean DMZ has also spawned a cottage war tourism industry. The United Service Organization (USO) and dozens of South Korean companies operate DMZ tourism packages for around forty dollars that include trips to various monuments, war villages, the “World’s Most Dangerous Golf Course,” and even a gift shop. North Korea also offers tours of the DMZ to the few thousand tourists that visit the country annually.

In addition to the Kaesong Industrial Complex, the North and South Korean governments have worked jointly in developing the Mount Kumgang Tourism Project. Mt. Kumgang, which is the second tallest mountain in North Korea and holds great cultural meaning for many Koreans, has been visited by over one million visitors since opening to tourists in 1998. Hyundai Asan is the sole developer of the project and intends to transform the 772 square-mile tourism zone into a “South Korean tourist playground” (Brooke 8). Plans for golf courses, hotels, restaurants, and a family reunion center are underway. Although the resort was initially conceived around the mountain’s natural beauty, another underlying attraction is its ability to provide a rare look into North Korea.
Berlin: Recovering a Borderwall

In Germany, the Berlin Wall illustrates how a borderwall no longer needs to function as a military device to generate income. Over fifteen years after its fall, the Wall is Berlin’s biggest tourist attraction, a fact city officials just recently realized. Because the city rushed to tear down most of the Wall after the collapse of German Democratic Republic, it is now spending millions of Euros to preserve and recover its presence, including a bike trail that follows the Wall’s original path. Nevertheless, visitors still enjoy well-known sites such as Checkpoint Charlie, where they are given numerous opportunities to purchase memorabilia and wall souvenirs that symbolize its materiality.
CULTURE In addition to organizing economies, borderwalls shape and define cultures. As geopolitical technology, borderwalls are the product of culture, and culture - in response to the borderwall - becomes further normalized through the production of additional programs. Identity, language, the media, the arts, and institutions all fortify the borderwall. Borderwalls validate the social values of one side by demonstrating through the other side what those values are not. Borderwalls offer social security and stability in the face of the unknown.
“[O]ur name is division, and this soiled name, like an immovable destiny, oppresses all of us.”

– Kim Chi-Ha, South Korean poet

Korea: Two Countries, One People, and the Problem of Reunification

Even after over half-a-century of separation, the reunification of North and South Korea remains a primary and pressing concern for both countries. Thousands of families were separated during the war, and numerous organizations are committed to their reunion. Many Koreans, especially the older generation (i.e. those who lived through the war), still consider themselves as a people and culture unnaturally divided. For most Koreans, reunification is not a matter of *if* it will happen, but rather, *when* it will happen.

Reunited Korean families see each other for the first time

North and South Koreans marching together in the Opening Ceremony of the Olympics with the official reunification flag
Korea: Two Cultures, Two People, and the Problem of Reunification

Although dreams of reunification appear to challenge the division of the Korean peninsula, the DMZ's continued existence actually strengthens its program. In fact, the borderwall between the two Koreas solidifies with each passing day. Culturally, the two Koreas are becoming increasingly foreign to one another, especially in terms of language and ethnicity. Linguistically, South Koreans have adopted certain American English words into their language, while North Koreans have created their own neologisms. Demographically, North Korea has remained more "pure" after years of isolation, while South Korea, as a major player in global capitalism, is a more ethnically and racially diverse country. Both countries use these differences to validate and esteem their own national identity. North Koreans pride themselves as being more ethnically and culturally true, while South Koreans consider themselves more advanced and worldly.

These competing claims of national and cultural legitimacy and authenticity illustrate how Korean identity is not a stable construct, but rather, a flexible cultural mechanism that can be activated or deactivated depending on the issue at hand. In some situations, bi-national identity furthers certain political priorities, while at other times, national identity appears at the forefront to sanction other borderwall interests.
“Someday we will meet again, although no one knows where we’re going, someday we will meet again, in this very image of us separated.”

– Samsung, “Anycall” commercial, 2006 (qtd. in Ahn)

Korea: Samsung Supports Reunification

The division of the two Koreas is an integral aspect of Korean culture that is continually reinforced in the arts, media, and popular culture. In recent years, the most popular South Korean films have been based on the war. The hope for reunification is an integral aspect of both North Korean and South Korean life, and many South Korean companies have been involved in reunification efforts. In 2006, for example, Samsung launched a huge advertising campaign for their “Anycall” cellular phone, a four-part commercial series that united Cho Myong-ae from North Korea and Lee Hyo-lee from South Korea. Both are young female celebrities in their respective countries. Samsung’s campaign, which was a major popular culture event, further popularized the idea of reunification, especially amongst its target audience – the post-war, younger generation (Ahn). Having not lived through the horrors of the war and the following years of martial law, this generation is often more optimistic about engaging the North.
Germany: “The Wall in the Head”

In Germany, the term “die Mauer in den Kopfen” (the wall in the heads) has become a popular phrase to refer to the belief that although the Berlin Wall is no longer a physical divide between East and West Germany, it remains as a mental barrier to true reunification. According to a psychological study conducted in 1999, East Germans consider themselves to be “moralistic, idealistic, and egalitarian [while] West Germans are described as hedonistic, individualistic, and Americanized” (Leuenberger 29). Many sources cite West Germans as believing East Germans are ungrateful and against progress. Although forty years of separation have produced significant differences in culture, linguistics, values, and social norms, the “wall in the head” phrase reinforces antagonisms; it simplifies complex social interactions and psychological differences in an otherwise uncertain world.

According to a poll conducted in 2004, 25% of West Germans and 12% of East Germans said they wanted the Berlin Wall rebuilt. (Connolly 14)

“There is a difference between east and west here, a difference of political socialization. From a state perspective, we have created one Germany. But if you look into people’s hearts, we haven’t yet.”

– Chancellor Schroder (qtd. in Wallace)
ENVIRONMENT  Mike Davis wrote in 2005 that “[t]he border as a whole is not a thing, a line or wall. It’s a system of social relations” (qtd. in inSite). Although Davis’ statement contains truth, a borderwall does, however, have a “thing-ness” to it. Borderwalls possess architectural qualities that operate in time and space. As mentioned earlier, borderwalls are both tools and methods of organization. The tool-aspect of borderwalls – however wide-ranging – has geographic and environmental implications. Consequently, they possess the ability to preserve land and to destroy it.
Korean DMZ: Accidental Wildlife Refuge

An unintended consequence of the DMZ’s architecture has been the area’s transformation into a wildlife refuge. Scientists have discovered that the DMZ is now one of the most well-preserved natural areas in the world because human access and development have been forbidden for over half of a century. Cutting across the entire width of the peninsula, the DMZ comprises of a variety of geographic features, such as wetlands, mountains, rivers, valleys, estuaries, and coastal islands. It is also home to an estimated twenty-two endangered species, including two of the world’s most rare birds. Of course, the possibility of reunification raises environmental concerns. Ironically, many environmentalists consider peace and the thawing of tensions between the two countries as a “threat” to the DMZ. They advocate adopting the zone as a wildlife refuge – or “Peace Park” – once/if reunification occurs. Although well-intentioned, such a maneuver would have major social implications. A huge, uninhabited swath of land would essentially function as an oceanic barrier between the two nations – two nations that will already require years to become psychologically one. This raises the question: can a park mend or divide?
Iron Curtain: Death Strip Then, Green Belt Now

In the same way the DMZ transformed into a wildlife reserve, parts of the former inner-German border also evolved into natural habitats for rare animals and flora. The border, which used to be referred to as the “Death Strip”, is almost 870 miles long and a quarter of a mile wide. Many areas are already under some environmental protection, but other areas are privately and state owned. Calls to link these protected areas and parks into a contiguous reserve are part of a larger, intercontinental European movement advocating to transform the entire line formerly referred to as the “Iron Curtain” into a “European Green Belt”. This line would run contiguously from Finland, through a coastal zone in the Baltic Sea, through Central Europe, then all the way down to Greece. Environmentalists argue that such action would be a poetic and symbolic gesture that would reunite Europe and heal old wounds through sustainability and conservation.

“It’s an extraordinary contradiction… What you see here is the beauty of nature juxtaposed with the horror of what once happened.”

– Jürgen Starck, Friends of the Earth (qtd. in Paulick)

photo source: www.dw-world.de
U.S.-Mexico: Ecological Destruction

The U.S.' continued construction of a borderwall along Mexico raises serious environmental concerns. An area of particular outrage is the Border Field State Park in San Diego. The park is 418 acres and includes the Tijuana River National Estuarine Research Reserve, which is home to hundreds of endangered species. Although fences already line the park's border-edge, the government intends to build a border patrol road and a more heavily fortified, fourteen mile long, three-layered wall system. Environmentalists argue that this construction would virtually destroy the already fragile reserve. Uproar over this segment of the border is part of a wider environmental contest over the construction of a seven hundred mile long fence through other ecologically sensitive lands in California, Arizona, New Mexico, and Texas. Forests, grasslands, and deserts along the border house a variety of endangered wildlife, and conservationists are desperate to preserve them.
DESIGN

To commemorate the reopening of the two inter-Korean railway-highway lines (the Gyeongeui and Donghae Lines), youngsters representing the two Koreas embrace outside the DMZ fence

photo source: National Geographic, July 2003
A Global Solution: A UNESCO Transboundary Biosphere Reserve

Simply preserving the DMZ as a kind of "wildlife reserve" will be a complex process requiring the support of both Korean governments and their citizenry, public and private interests, and of course, the international environmental community. North Korea's position on the environmental question remains unknown, as the government has not yet made any public statements on the issue. The South Korean government, on the other hand, endorses preservation (with varying levels of commitment), and it is involved in a number of feasibility studies and development plans. In terms of a concrete strategy, since 2001, the South Korean government has officially supported a plan to seek the DMZ's designation as a UNESCO Transboundary Biosphere Reserve (TBR) (Ministry of the Environment Republic of Korea).

The TBR designation holds several advantages over other preservation mechanisms because it follows well-established guidelines, provides legal protection, and offers international oversight and recognition (German MAB 12). Most importantly, the process would necessitate voluntary cooperation between the North and South. According to a report by Professor Kwi-Gon Kim of Seoul National University, in order to achieve the designation, a potential TBR must fulfill the four following criteria (Kim, "Status" 13):

- Spans the territories of two or more nations while maintaining spatial continuity;
- Meets the requirements for designation as a biosphere reserve;
- Provides for tourism and economic, cultural and personnel exchange to take place between transboundary nations; and
- Possesses a joint management plan and a mechanism to adjust the regional functions of each nation.

Almost two hundred TBR sites exist globally, including fourteen formalized in Germany during the country's division. During the 1970's, East and West Germany were among the first
countries to adopt the TBR concept, and the development of their reserves proved instrumental in refining the UNESCO guidelines (German MAB 23). TBRs are touted as successful tools for promoting peace and solving potential conflicts because they introduce ecologically and economically sustainable activities in otherwise contentious boundary zones.

To accommodate both preservation and exchange, a UNESCO TBR comprises of three zones (German MAB 11; Kim, “Feasibility” 25):

- **Core Zone**: Provides long term protection of the ecosystem and species; evolves without human interference
- **Buffer Zone**: Surrounds the core area and offers additional protection; allows research on the usage of natural resources and the management and rehabilitation of ecosystems
- **Transition Area**: Allows sustainable social and economic activities that benefit local residents; provides areas for residence, economic activities, recreation, eco-tourism, and landscape regeneration

![Typical zonation of a biosphere reserve](image)

Precise TBR zonation of the DMZ will require thorough knowledge of the DMZ’s natural features. Unfortunately, a comprehensive ecological survey of the DMZ’s habitats, topography, wildlife, and ecosystems has yet to be commenced due to restricted access. Nevertheless, the zones
outlined above can be generally applied to the current boundaries areas already in existence around the DMZ. The “Core Zone”, “Buffer Zone”, and “Transition Area” could easily describe the DMZ “proper”, the CCZ and its North Korean counterpart, and additional restricted adjacent areas, respectively.

Assuming the DMZ will ultimately be adopted as a TBR, the criterion mandating tourist, economic, and cultural “exchange” to occur within the zone provides the programmatic basis for a design intervention. An optimal and logical area for this exchange to transpire is along the aforementioned Gyeongeui Highway-Railway Line. A similar proposition has also been suggested by Kim in his 2005 study (Kim, “Status” 13). The Line’s reintroduction as a working thoroughfare has already damaged the surrounding habitats and swamplands. Reportedly, the South Korean government failed to conduct a proper environmental impact study prior to the reconstruction, and crews had to dig nearly thirty-three feet into the land to remove landmines (Soh). Due to the existing damage, the project confines all development along the Line.
Currently, only three locations exist where average North Koreans and South Koreans come into physical proximity: the Joint Security Area, the Mt. Kumgang Tourist Resort, and the Kaesong Industrial Complex. With varying degrees, these sites are based around war, tourism, and work. Except for the JSA, movement between the North and South runs in only one direction. This movement is not continuous and requires numerous immigration “checkpoints” or stops. The final destinations function as quasi-South Korean satellite cities, and they are tightly contained and highly regulated. Most of the South Koreans permitted to enter the North are either managers at the industrial complex or tourists of the resort, and once inside, they face limited access to the outside world. South Korean employees in Kaesong, for example, may only return home once a month, while tourists at the resort may not bring cellular phones, newspapers, or computers.

Movement between the North and South and current modes of interaction
Based around war, tourism, and work, these programs offering interaction opportunities capitalize on existing hierarchies and inequality. Compounding this polarizing dynamic, the interaction only occurs on North Korea’s territory and includes numerous restrictions, both officially and unofficially. At the resort, verbal exchange typically involves mundane monetary transactions, such as purchasing gift items or ordering at a restaurant – with the South Korean tourists as the consumers and the North Koreans workers as the servers. Considering these restrictions, customs, immigration, and quarantine (CIQ) – along with surveillance – are programmatic requirements of a joint development project in the DMZ.

A Family Reunion Building

At the Mt. Kumgang Resort, Hyundai Asan is building a family reunion hotel expected to be completed in August of 2008. Although both countries agreed to the construction, the building’s future as an actual family reunion facility remains uncertain due to the constantly shifting political climate. Based on a personal interview with a Hyundai Asan senior vice president, the company accepts the uncertainties underlying the project and anticipates the building to be used
as an additional hotel for regular South Korean tourists in the short-term. As rendered, the hotel is designed around a static conceptualization of the border and state of inter-Korean diplomatic relations.

Rendering of the family reunion building under construction at the resort

Each country will have a “wing” dedicated to their respective citizens. The reuniting families will be permitted to visit with one another in the lobby and central part of the floors where they will be under surveillance, and they will not be allowed to cross wings and visit with one another in their individual hotel rooms. Additional buildings to the left and right of the hotel will serve as separate administrative support facilities for each country. The rendering above depicts a vast parking lot, assuming visitors will be able to freely drive to the hotel. Currently, such a scenario seems rather implausible, as very few North Koreans possess cars. South Koreans, meanwhile, cannot driving through the DMZ or even remotely approach it due to the CCZ described earlier, and those travelling to the resort must do so through strictly controlled tour bus caravans.
A New DMZ: Rotating the Border 90 Degrees

By running perpendicular to the Korean border, the rebuilt Gyeongeui Line acts as a powerful gesture of reunification. Programming an area along the Line further defies the border, emphasis this act of reunification, and challenges the existing physical relationship between the two countries. Creating a compressed zone of interaction produces an intense physical proximity and built world that the DMZ currently denies — and will continue to do so if it is to remain as a wildlife reserve. Due to the problematic nature of current modes of interaction in the North, the imperative becomes to create more neutral — possibly positive — sites of social exchange. Introducing new spaces and other programs has the potential of promoting peace, raising consciousness, and facilitating mutual respect and understanding, and thus, providing the foundation for reconciliation between the two countries. This new zone may function as a sociological and architectural testing ground for inter-Korean relations that the DMZ will never be able to provide as an off-limits, two-and-a-half-mile-wide divide. The project generates a new kind of DMZ: a constructed social zone rather than an environmental no-man’s land.

Linear Growth and Keeping It Wild

The development is initially phased at the intersection of the border and the Gyeongeui Line. If the first phase proves successful, the development will extend incrementally toward the edges of the DMZ, and eventually, into both countries.
In addition to supporting the TBR designation strategy, the South Korean government and other environmental supporters frequently cite "eco-tourism" as the answer to the DMZ's unique design problem. Proponents of eco-tourism believe it can both protect the environment and promote market enterprise. Most likely, such activities will be included in any preservation plan the North and South agree upon. Eco-tourism, however, is a flawed concept. Despite the recent popularity in "green" solutions, few advocates acknowledge the virtually impossibility for any kind of eco-tourist activity to not negatively impact the land (Buckley 389). While the opportunity cost inherent in eco-tourism is not reason to wholly dismiss it as a solution, in terms of the DMZ, its problematic nature is compounded by the fact there are over a million landmines still buried in the land. As restoration of the Gyeongeui Line demonstrates, a program as seemingly benign as a hiking trail would be a rather impractical

"Public officials trot out the venal word 'eco-tourism' in every other press release, with plans to make eco-resort towns, with eco-bridges for the eco-roads on eco-theme courses requiring tons of eco-concrete through the region. What nobody likes to talk about is that a true backcountry experience will never be possible with the presence of 1.2 million eco-landmines."

– James Card, MidCurrent.com
and risky proposition, requiring thorough excavation of the land so that tourists may “experience” nature. In weighing these factors, the project takes a more environmentally extreme position and raises the developed, “exchange zone” above ground on a viaduct. The project does not deny such a maneuver produces another kind of deleterious environmental effect, but it does attempt to eliminate the damage that would occur if the project were sited at ground level.

The highway and railway of the Gyeongeui Line run parallel, and at the intersection with the border, the width between them is approximately 210 feet.

With the objective of minimizing the footprint to the greatest possible extent, the project is narrower than the Line at 204 feet.

Within this zone, new north-bound and south-bound lanes provide symmetry so that neither country is at an advantage or disadvantage in accessing the site.
The viaduct allows wildlife to cross and adapts to changes in the topography. The height measures uniformly against the sea level to form a controlled datum along the skyline. At the intersection with the MDL, this elevation is fifteen feet.

Where developments are approached, two decks with ramps are added for civilian access and for commercial and security parking and loading.

The south-bound lane is dedicated to North Korean program while the north-bound lane is dedicated to South Korean program.
Two Hotels with a DMZ View

The first phase of the development is two mid-size hotels placed on the viaduct at the intersection with the border. The hotels provide North Koreans and South Koreans with unprecedented access to the DMZ. The direct location allows visitors to contemplate the border, appreciate the beauty of the DMZ, and occupy the land without actually damaging it.

Despite the problematic nature of tourism, the hotels cater to such activities. In fact, the hotels’ success and the DMZ’s ongoing preservation depend upon it. Based on Germany’s own experience with TBRs, the German UNESCO committee identifies the positive element of eco-tourism, writing that “tourism can help to improve the image of and acceptance for pure protected areas for nature… and for nature conservation measures” (German MAB 67). By embracing tourism, the hotels heighten the public’s awareness of the DMZ’s natural qualities, remind visitors of its historical and environmental importance, and provide a truer sense of the DMZ as a “known”
place. The location of the hotels reaps the benefits of tourism while their elevation mitigates environmental damage from tourist activities.

Also implicit in the program is the expectation the hotels are to be used as a family reunion facility. Although the two Koreas disagree on many issues, family reunions remain a shared goal for both countries and they are always a high-priority in inter-Korean negotiations. An emphasis on this humanitarian concern promotes goodwill between the two Koreas, and perhaps most importantly, garners public support for the project nationally and internationally. Different programs will eventually be introduced along the viaduct, but it is critical for the success of the entire development for the first phase to include reunion-based activities.
A Generative “Face-Off”

The future is uncertain and it is unknown whether the two Koreas will ever come to some kind of reunification. As designed, the hotels create a “face off” that possesses the potential of generating different relationships, territorializations, and connections between buildings, and ultimately, between the two countries. Different types of connectivity include bridges for entering the other side, a third and separate space not “owned” by either side, or an expansive third-space that bleeds into the two territories.

Success of the project is also uncertain, and consequently, architectural and programmatic elongation along the viaduct can be symmetrical, asymmetrical, or nonexistent. In this way, the buildings’ continual evolution and growth offers a reading of the status of inter-Korean relations at any given point in time.
Spatialization Scenarios and Outcomes

Initial Spatialization

Types of Connectivity

- **stasis**
- **bridging**
- **third space**
- **expansive space**

Types of Elongation

- **stasis**
- **symmetry**
- **asymmetry**
Hotel Design: Enabling Change

The hotels are designed to perfectly mirror each other even though the two Koreas bear little resemblance. Given the often contentious nature of the countries’ diplomatic relations, it is necessary to provide the appearance of symmetry and even-treatment. In section, in plan, and through structure, the hotels possess flexibility both internally and externally for future connectivity, repeatability, adaptability, and elongation.

The two hotels offer traditional amenities expected in a mid-range, mid-size hotel. Above the viaduct are ten additional floors in ascending order:

- immigration and security offices: a necessary program requirement that serves as the gatekeeper for passage to the rest of the building, and the structural transition between the reinforced concrete of the viaduct and the steel of the hotel
- hotel lobby: a double height floor with the front desk, a large multipurpose space, conference rooms, and administrative offices
- worker dormitories: two floors with twenty rooms each for a semi-resident worker population
- hotel dining: a double height floor that offers three different dining options
- hotel recreation: a double height floor with expansive outdoor spaces, a day spa, multipurpose spaces, and game rooms
- hotel rooms: three floors with twenty singles and ten suites each for a total of ninety rooms
- green roof: outdoor space with wading pools, walking paths, and a cafe
Circulation

The hotels accommodate three autonomous populations: hotel visitors, workers, and security personnel — and possibly a fourth population — reuniting family members. Due to the secure nature of the project, the circulation of these occupant groups is isolated from one another. Openly visible to the opposite side, hotel visitors travel throughout the structure along the façade. The workers, meanwhile, are situated in the core in order to access and service all other floors. Their dormitories are also offset from the rest of the hotel to prevent public entrance and to provide private outdoor patio space. Security personnel, whose circulation must remain separate, independent, and opaque yet accessible to all floors and spaces, travel along the
DMZ-facing side of each hotel. As mentioned earlier, surveillance is also a necessary program requirement. Therefore, observation catwalks connect to the security stairwell and run through all double-height spaces, enabling officers to monitor public activities from above. Scaffolding attached to the facade structurally facilitates future connections and modifications, tying into the existing column-and-beam system of each hotel.

Plan

In addition to mirroring across the border, the hotels also reflect internally and laterally as individual buildings. This reflectivity allows for the possibility of splitting the hotels in half for different types of uses. One wing of a building, for example, may be utilized as a family reunion facility while the other wing remains a private hotel. In another situation, one wing may be upgraded into a luxury resort while the other wing stays a mid-range hotel. The worker circulation core and support spaces are centrally positioned in plan so that both wings may continue to be serviced by a single workforce. Throughout the hotel, the larger public spaces are adjacent to the public circulation core and the exterior scaffolding in anticipation of the need for expansion into the opposite hotel. Other spaces such as the service support areas and security conference rooms are similarly designed for the possibility of bridging and/or sharing a workforce population. A plan of the fifth floor demonstrates this organizational logic (see appendix for additional floor plans).
Elevation
Development Scenarios and Outcomes

A multitude of scenarios may develop from the initial design. Scenarios include dystopic and utopic transformations, symmetrical and asymmetrical growth, and of course the most plausible of conditions, hybrid developments that include elements from the other types of scenarios.

**Scenario: Stasis**

The first scenario to consider is the possibility of “stasis”. As mentioned earlier, it is unknown whether both countries will continue on a path towards reconciliation. It is possible that despite all good intentions, the initial phase will be maintained as an isolated development with no connectivity and elongation. Under the stasis scenario, the hotels remain as separate entities much like their representative nations.
Scenario: Forced Symmetry

Another possible scenario is “forced” symmetrical elongation. In this outcome, growth occurs at a one-to-one ratio. Additions are made to the hotels in a competitive fashion, so that neither side appears “weaker” than the other. This appearance of symmetry, however, is entirely illusory; in such a scenario, the hotels may have to make adjustments to the buildings internally and lose all transparency.
Scenario: Asymmetry

Unlike the symmetry scenario, elongation could also occur asymmetrically. It is likely one hotel may prove successful and thus warrant growth, while the other hotel remains in stasis and/or becomes opaque.
Scenario: Utopia

In a utopic scenario, each side maintains its own integrity, but a free interaction space develops and fills the space between them.
Scenario: Dystopia

Under dystopic circumstances, immediate reunification occurs and the hotels merge into one building to provide refugee housing for North Koreans.
Scenario: Hybrid

Most likely, a hybrid situation would arise that combines qualities from the different scenarios. In mirroring more contemporary border conditions, the division between the hotels blur and modulates in time. The scenario below demonstrates one possible outcome that could transpire.

- joint space
- immigration and security
- green roof
- public hotel space
- hotel rooms

Half of the two hotels remain separate and opaque ventures while the hotel workers service both wings.

A single family reunion meeting space is built between Levels 9, creating "reunion hotel" wings on both sides; the space between is closely monitored and all other spaces of the hotel are off-limits to the opposite side.

A bridge between the two immigration offices is built for joint conferences regarding hotel security and administrative issues.
the success of the South Korean hotel produces more space and elongation

the success of the family reunion hotel wings produce the need for additional space, which results in symmetrical elongation

a family reunion dining space is built between Levels 8, expanding upon the reunion meeting hall on Levels 9

the South Korean hotel continues to enjoy success, producing additional elongation
bridges between Levels 8 and 9 on the private hotel sides provide visitors with limited access to the public amenities of both hotels.

a bridge joining the two roofs provide reuniting family members with joint outdoor recreational space.

bridges are built between the hotel room floors, allowing for reuniting family members to visit each other’s rooms during regulated times.

the family reunion dining space on Level 8 is no longer contained in the space between and expands to the South Korean side.

an additional bridge is built between the green roofs to provide additional outdoor space for non-reuniting hotel visitors to enjoy.

several bridges are built between the middle of the two hotels, joining the worker circulation cores; North Korea takes over management of the two hotels.

the joint dining space that expanded into the South Korean side at T-5 also expands into the North Korean side.

In the final outcome of the hybrid scenario, the two hotels finally merge, and what was considered dystopic under different circumstances becomes utopic.
CONCLUSION  The first phase of the development provides the seeds for reunification. In time, other programs based on work and culture will populate along the viaduct, much like railcars attached to a train. The project offers North Koreans and South Koreans with continual exposure over time in a “third” space for interaction. The dialogue created may succeed or fail depending on geopolitical conditions, but the hope remains for a continued conversation. In the meantime, the development evolves as a symbol of both the division and reunification of the two Koreas; it represents the current political climate while also serving as an artifact of past relations. If successful, the project will transform the “wall” as devastating symbol of division into an inspiring icon of reunification.
WORKS CITED


APPENDIX
Level 2 – Hotel Visitor Drop-Off

Level 3 – Loading and Security Parking
Level 4 - Immigration and Security

North Korea

South Korea

Scale: 0 25 50 75 100 feet
Level 5 - Hotel Lobby

North Korea

South Korea

0 25 50 75 100 feet
scale
Level 6 – Worker Dormitories
Level 7 – Worker Dormitories

North Korea

South Korea
Level 8 - Hotel Dining

North Korea

South Korea
Level 8.5 – Hotel Dining

North Korea

South Korea
Level 9 – Hotel Recreation

North Korea

South Korea

Scale: 0 25 50 75 100 feet
Level 9.5 – Hotel Recreation

North Korea

South Korea
Level 11 – Hotel Rooms

North Korea

South Korea
Level 12 - Hotel Rooms

North Korea
South Korea
Level 13 – Cafe and Outdoor Recreation

North Korea

South Korea

scale