

BORDER CATALOG: INTEGRATED SENSE OF BORDER

HELEN JOHNSON
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Despite the popularity of border issues in today's media, the spatial organization which borders create remain unrecognized. This paper discusses the relationship between architecture and borders through a catalog which organizes borders into three categories; social, personal and a combination of the two types of borders. Looking at a border through the lenses of a designer offers a variety of perspectives into the different ways in which individuals and societies cross borders. From this perspective, they are no longer looked at as a physical line, but as a tool, which humans created to bring order to chaos within the mind and the physical world.

INTRODUCTION

Humankind is broken down into unique individual persons. These individuals all have distinct characteristics and personal opinions that make them who they ought to be. The personality of each person can create controversy, which causes borders to be created. I was motivated by the belief that architecture can highlight and honor differences that a border creates.

The goal of this research project was to bring awareness and educate others by creating a comprehensive understanding of border expressions through historical evidence and modern-day examples. My hope is that this research will reach out towards a diverse audience, but specifically I believe the content of this research project will lend towards those with international affair professions, people with international affair interests, government politicians who work closely with international borders, citizens of border communities, frequent travelers, and designers who have a passion to create intentional environments within designed spaces.

Borders are instruments that organize valuable differences. My research validates that architecture can be designed to honor these unique characteristics. Published theories, such as studies of all physical and virtual borders confirm my work throughout the project

GOALS

A BORDER ...

- SEPARATES | DIVIDES | ORGANIZES
- IS CROSSABLE
- EXCLUDES | INCLUDES

WHAT IS A BORDER?

Borders create division between two distinctly similar identities. On the border, a person has a direct sense of place to where he or she exists. For example, let's say that we are driving down Interstate 94 in North Dakota. When asked where his or her current location is, that driver may have a hard time explaining where he or she is at if there is not a border (a city or landmark) nearby. Once the driver passes over the Red River (a commonly known border), he or she has an accurate sense of place to where he or she exists. Cultural identity and diversity are celebrated at the border. People who are crossing borders come from all different backgrounds and carry distinct perspectives with them. It is at this place where collaboration takes place and where one can begin to identify all of the different cultures and viewpoints.

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What doesn't exist as a border? I have been frequently visiting this question throughout the research. Something that isn't a border exists in the interior or in the center. Diagram's I, II, and III illustrate the relationship between a border and a center to show how the crossing of borders can begin to answer how architects can design spaces that integrate community, security, and unity along with diversity, cultural identity, and a sense of place.

BORDERS

Diagram I on the following page illustrates a border's relationship to the center. Let us think of the center as two distinct cultural groups (Culture A and Culture B) that exist in two different physical places (Location A and Location B) to better understand this concept. Citizens in location A feel most connected to the community when they are near their cultural group, or in the center. In this place, citizens have similar views and perspectives with the people around them, which creates unity within location A. Community and unity evolve into feeling secure within the center of Location A. The center is viewed as the ideal place within location A.

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Location B is diagramed the same, but from a different perspective. Within the center of location B, citizens are in community with the people around them. They have similar views and perspectives to one another, but these beliefs differ from those of location A. Citizens within location B feel most secure at the center where they are in proximity to familiar people.

BORDERS

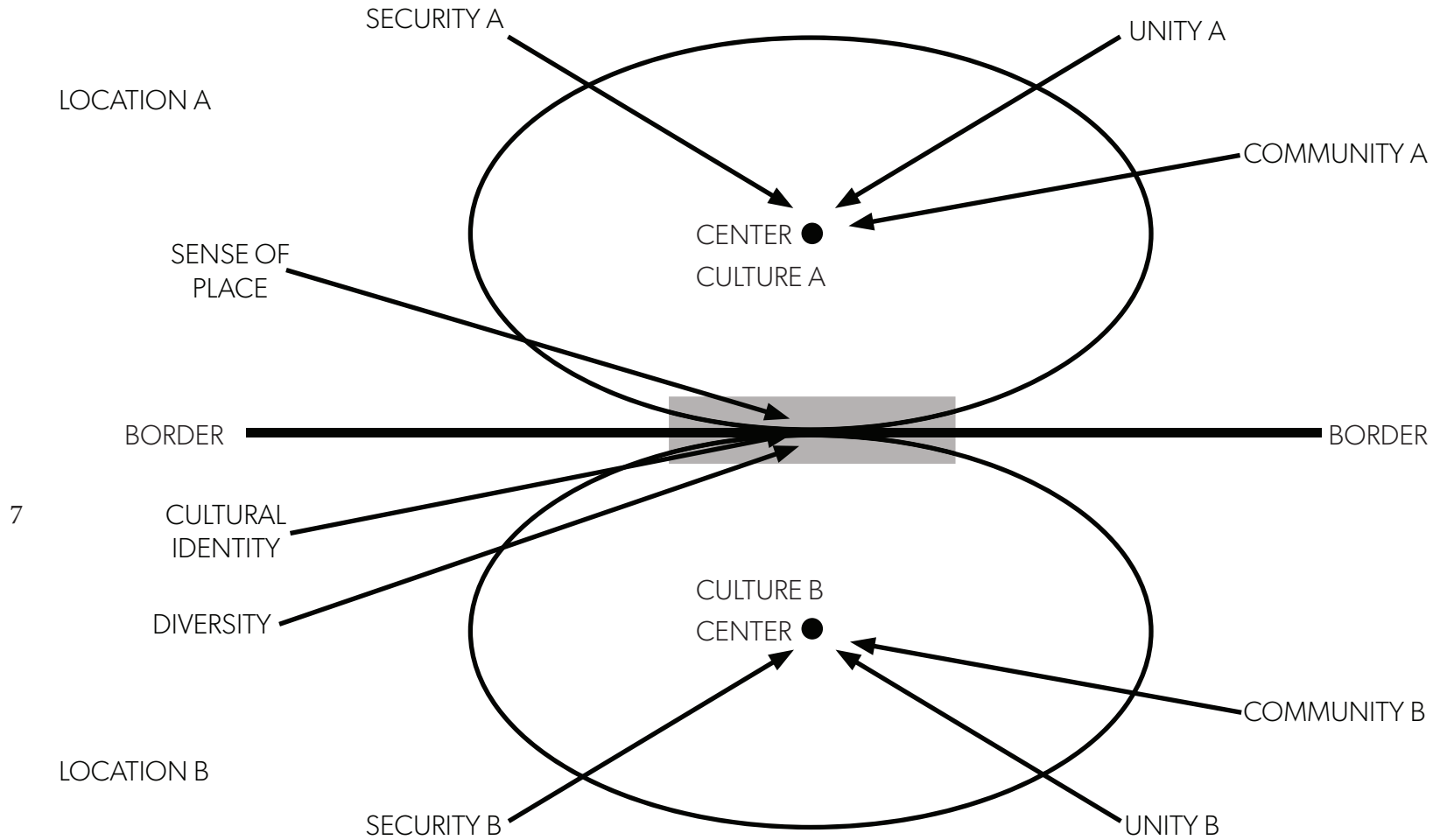


DIAGRAM I

Figure 1 | Borders I

Diagram II (page 9) illustrates the motion of two cultures crossing the border.

Diagram III (page 10) illustrates the proposed hypothesis. It proves that the crossing of borders creates a space that allows community, unity, security, diversity, cultural identity, and sense of place to coexist.

Diagram IV (page 11) illustrates the final step to crossing a border. In this diagram, Culture A exists within Location B and Culture B exists within Location A. As the two cultures cross over the border, their views and beliefs become seen in another perspective. This allows for the complete understanding and respect for each culture.

BORDERS II-IV

LOCATION A

SECURITY A

UNITY A

SENSE OF PLACE

COMMUNITY A

CENTER ●
CULTURE A

BORDER

BORDER

CULTURAL IDENTITY

CULTURE B
CENTER ●

COMMUNITY B

DIVERSITY

SECURITY B

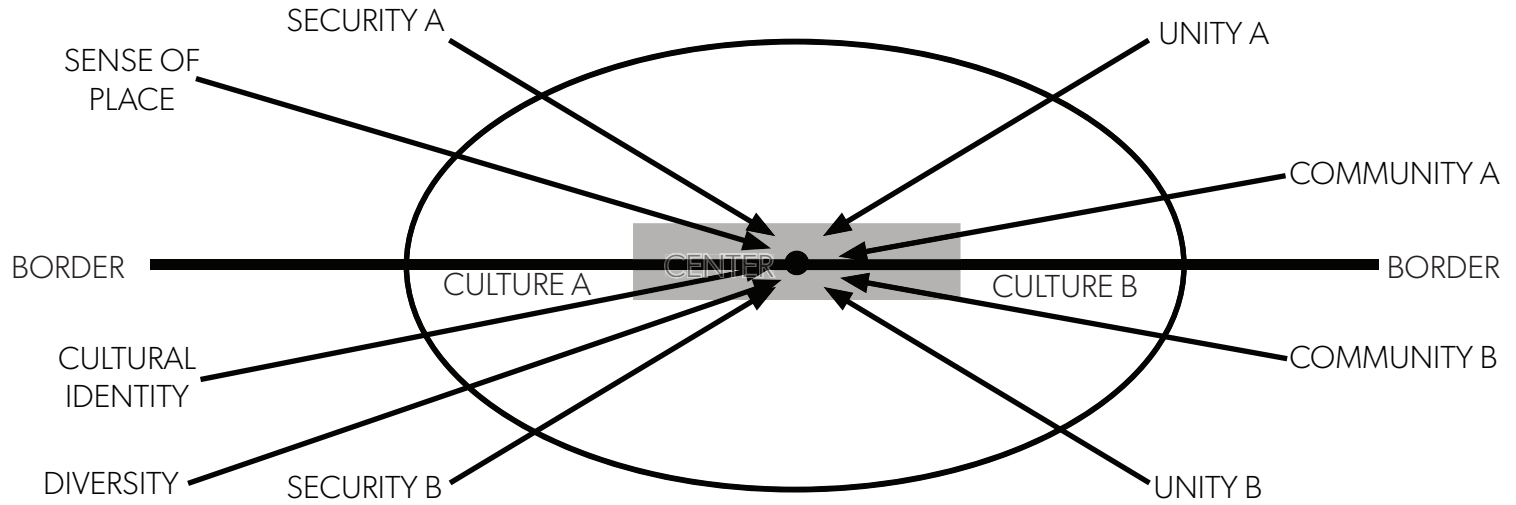
UNITY B

LOCATION B

DIAGRAM II

Figure 2 | Borders II

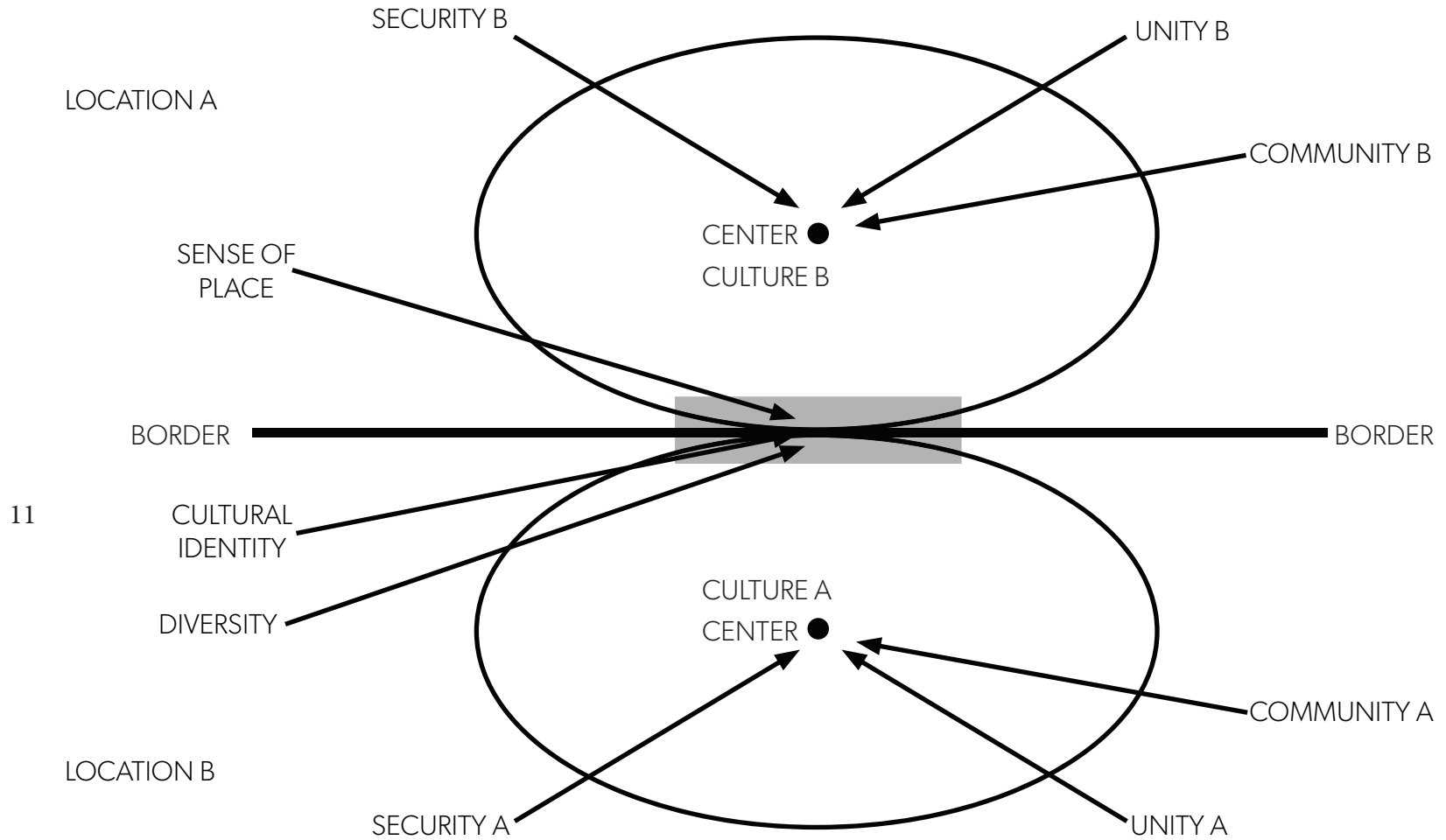
LOCATION A



LOCATION B

BORDERS III

Figure 3 | Borders III



BORDERS IV

Figure 4 | Borders IV

The goal of this research project was to produce a catalog of border crossings that correspond to architectural elements. The catalog was created using a combination of research methods. Qualitative research was the dominant method used throughout the catalog creation, while historical research was used as the less dominant method, which was primarily explored during the detailed research of each border type. The catalog was created through a series of steps including documentation, mind mapping, analysis, and vignettes. This process is detailed in the paragraphs below.

The research exploration began by collecting an ongoing list that described different types of borders. These terms were categorized into two different groups, "Virtual Borders" and "Physical Borders." This rough, handwritten document created a starting point for the creation of a mind map.

The mind map was created using "Mindly," a digital mind mapping software. It became an ongoing task throughout the research project to organize and then regroup different border types into their following categories. Throughout this process, three main questions guided the investigation into the different types of borders:

- 1. How is this a border?*
- 2. How is it crossed?*
- 3. How can this be represented architecturally?*

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These questions guided the exploration into each border type. The questions were first answered solely based on personal experiences and understandings before diving deeper into research articles to navigate the rest of the study.

Designers are true believers that illustrations are worth one-thousand words. Illustrations such as graphics and photography were used to represent each border type. The illustrations not only represent how the description is a border, but it also represented the architectural element within the border.










The descriptions, along with the illustrations created the catalog of borders, which was the final goal of this research project. The catalog describes every border type that humanity faces throughout their lives. This catalog will continue to be used throughout the design process of the thesis and will eventually become the program for the museum on Lake Champlain.

METHODOLOGY

In a research project that focuses on borders, it is important to not leave out the byproduct: space. Sandro Mezzadra and Brett Neilson write about the concept of space and border in the fifth chapter of, "Border as Method." The authors (2013) confirm Michel de Certeau's claim that "a space exists when one takes into consideration vectors of direction, velocities, and time variables." Space in this perspective, "is composed of intersections [borders] of mobile elements. It is in a sense actuated by the ensemble of movements deployed within it" (p. 133).

When space is arranged, borders are created. The assumption is made that borders were first created from the human desire to organize space. Contrarily, which has been historically related to borders appears when a struggle is introduced. Mezzadra and Neilson (2013) write, "when the subjective dimension of border crossings and struggles is introduced, the border acquires a temporal thickness and diversity that is not fully discernible within an analysis that systematically privileges spatial qualities" (p. 133). Suddenly, a struggle allows a space to fall within the border – the greater the struggle, the thicker the border, the larger the space within the border, and the longer the interruption of time.

BORDER & SPACE

Organization does not stop at space; people inheritably organize everything around them. A border catalog was created as a part of the research to organize borders, in which organize our thinking and everyday life. While the term "border," has many meanings, the action of crossing is relatable concept throughout each definition. The border catalog defines the many different types of borders while describing the struggle and the way it is crossed. To breakdown and organize the types of borders, the catalog organizes borders into three broad categories: **Social**  **Personal**  and a combination of **Social And Personal Borders** . **Social Borders** are organized in three subcategories: **Physical**  **Percieved**  and a combination of the two . **Personal Borders** are broken down to three subcategories as well: **Phsiological**  **Psychological**  and a combination .

BORDER CATALOG

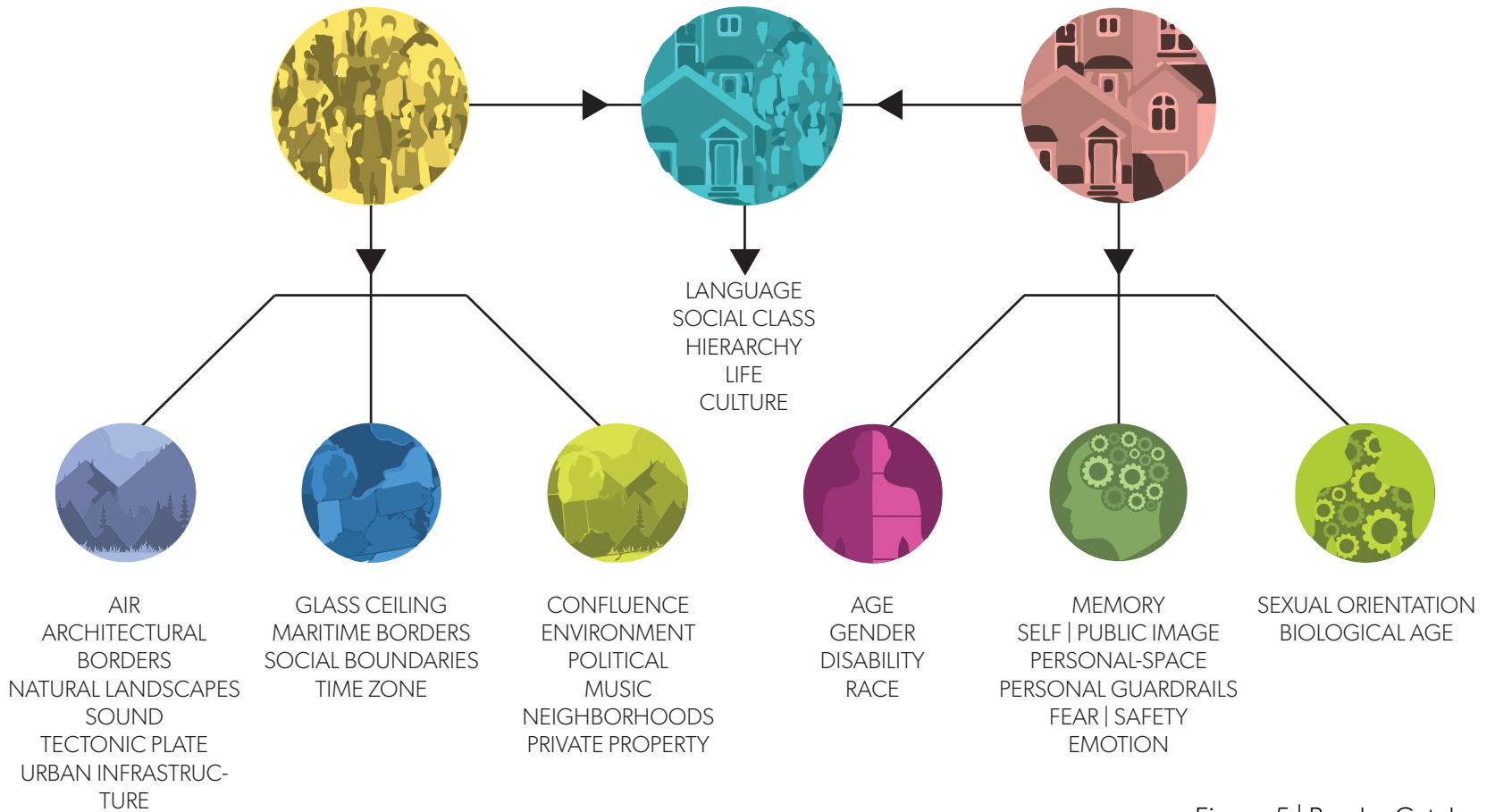


Figure 5 | Border Catalog

BORDER CATALOG

Social borders are borders that are recognized by an entire social group. They create a basis for a one-reality perspective because their existence cannot be disproven. Crossing these borders can range in intensity. Some border crossings have a general consensus on the easiest way to cross, such as a door being the simplest way to cross through a wall, while others borders require a more creative and intense method, such as a women bypassing through a glass ceiling within a career. This intensity of crossing is directly correlated to the theoretical thickness and the time needed to cross the border. Although social borders can affect social groups differently, it can be concluded that the entire human population is affect by these types of borders. Social Borders contain crossings that physically exist in the world (Physical Borders), others that exist within the minds of society (Perceived Border), and some that physically exist in one scenario but are imagined in another scenario.

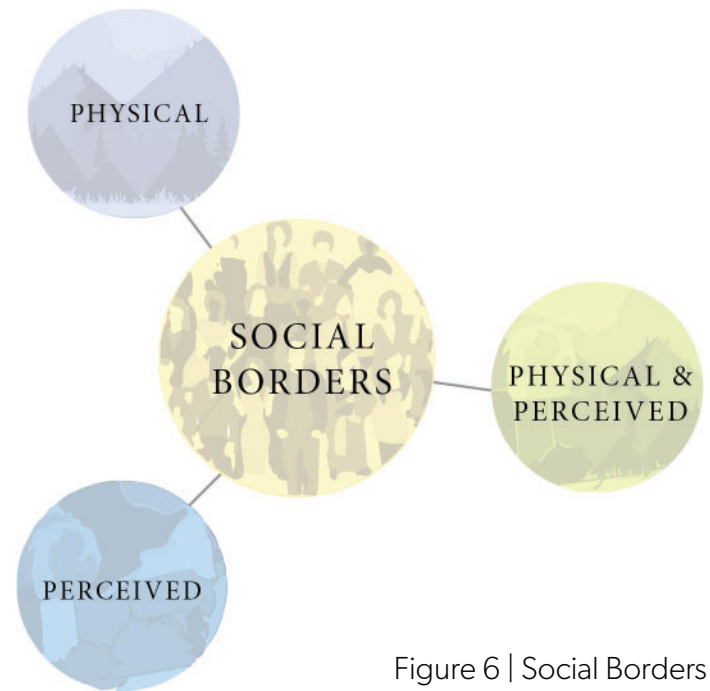


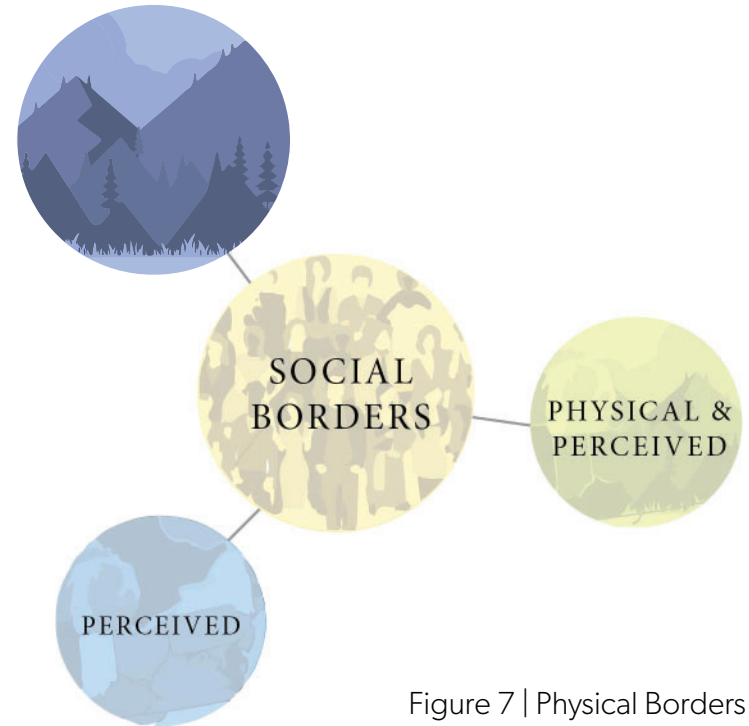
Figure 6 | Social Borders

I | SOCIAL BORDERS



Physical Borders are the first subcategory of social borders. They can be seen, touched, and experienced. The existence of these borders is absolute because everyone can cross them. Borders that fall into this category include:

1. Air
2. Architectural Borders
3. Natural Landscapes
4. Sound
5. Tectonic Plate
6. Urban Infrastructure



I | SOCIAL BORDERS

BORDERS

Figure 7 | Physical Borders

How is this a border?

Air is abundantly available on the Earth, but there are times where it can't be breathed by humans (water) and where it is very thin (high elevation/mountains).

Photo Description:

Architecture flies in the form of an airplane. A border exists in the space between grounded architecture and architecture that can fly.

How is it crossed?

For humans, life-supporting air is crossed when they enter the water or by reaching high elevations. This can ultimately be broken down into life and death.

Architectural Element:

Air borders can be architecturally represented by placing the structure between different levels of oxygen, such as on the top of a mountain, between air and water, or by traveling in a plane, submarine, or rocket.

Figure 8 | Airplane | Sam Willis



AIR



How is this a border?

Within an architectural plan, there are border that separate the exterior from interior such (building envelope) and borders that separate function (partitions).

How is it crossed?

Architectural borders are crossed by humans walking through a doorway, light traveling through a window, or heat/cool air escaping through the envelope.

Photo Description:

The border between the interior and exterior of the Grand Mosque is a beautifully detailed colonnade that allows views through the space as well as circulation across the entire façade.

Architectural Element:

Doorways are used as a passageway for humans to cross building envelopes while windows allow light to pass through.

Figure 9 | Grand Mosque | Helen Johnson



ARCHITECTURAL BORDER

social



physical



Figure 10 | Mountains | Pixabay

How is this a border?

Changes in landscapes create a physical separation between two regions or places.

Photo Description:

The river creates a border between the two mountain ranges.

How is it crossed?

The difficulty of crossing natural landscapes is assessed by how dramatic the change is in the landscape. They are crossed by anything that moves on land, water, or air.

Architectural Element:

Staircases, elevators, and catwalks form the means of circulation between spaces that are at different elevations or are not connected by a doorway or hallway.



NATURAL LANDSCAPE

social



physical



How is this a border?

A sound border results when there is a difference in sound from one area to the next.

Photo Description:

Record players are a visual representation between the border of sound and silence.

How is it crossed?

It is crossed when one travels from spaces that have different levels of sound.

Architectural Element:

Sound borders are architecturally represented through acoustic design.

Figure 11 | Record | Pixabay



SOUND

social



physical



How is this a border?

The Earth is separated into 13 major and approximately 20 total plates. A person cannot see the borders of these plates, but we can see the results of the collisions that these plates make when met such as mountains, earthquakes, volcanoes, ridges, and trenches.

How is it crossed?

The borders between tectonic plates cannot be physically seen but the reaction that occurs when one plate meets another can be. In this case, humans can directly interact with these borders by climbing mountains and ridges or swimming in trenches caused by the plates diverging, converging, or transforming past one another.

Photo Description:

Tectonic Plates create physical destruction that becomes a border on the Earth's crust.

Architectural Element:

Let us think of a floor plan as a mapping of tectonic plates and the interior and exterior walls as the fault lines or borders of these plates. What reactions occur at these borders? Architecturally, the reaction of the fault line such as a mountains or ridges become the divider between two or more separate functions in a plan such as a wall, a curtain, steps, change in materials, etc. What is its purpose? What type of structure is holding up the divider? Is it efficient? What materials and colors are used to distinguish the functions?

Figure 12 | Fault Line | Australian Museum



TECTONIC PLATE

social



physical



How is this a border?

Infrastructure is a border within a community that separates different districts or neighborhoods.

How is it crossed?

The difficulty of crossing of urban infrastructure is determined by the mode of transportation. It is very difficult for pedestrians to cross a highway system, while a vehicle can cross a highway with little risk.

Photo Description:

Sheikh Zayed Road in Dubai becomes a border between developments.

Architectural Element:

Urban Infrastructure can be represented architecturally through the wayfinding within a building. Is it simple to find the bathrooms or are there signs needed to show the location?

Figure 13 | Level 13 Sky Lounge View | Wojtek Pietrusiewicz



URBAN INFRASTRUCTURE

social

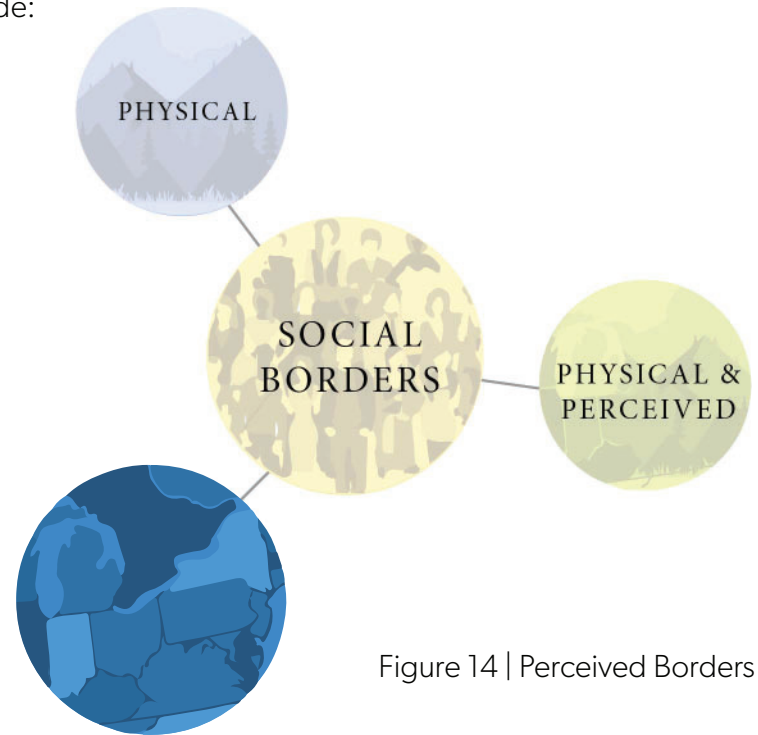


physical



The second subcategory of Social Borders are borders in which are perceived. These types of borders are generally agreed upon by the social group even when the border cannot be physically seen or felt. Borders that fall into this category include:

1. Glass Ceiling
2. Maritime Borders
3. Social Boundaries
4. Time Zone



SOCIAL BORDERS

Figure 14 | Perceived Borders

How is this a border?

The glass ceiling is a conceptual border that appears in different positions within companies that limit professional advancement of women, minorities, and other nondominant groups.

Photo Description:

The glass ceiling becomes a border between the sky and the built environment.

How is it crossed?

The border is crossed when a professional, who is a minority, can climb the corporate ladder and be equally paid with nonminority's.

Architectural Element:

The conceptual meaning of a glass ceiling can be literally represented architecturally through a glass ceiling, such as an atrium, a sunroof, or a glass floor.

Figure 15 | Chicago High Rise | Trashhand



GLASS CEILING

social



perceived



How is this a border?

A maritime border is a conceptual division that divides Earth's water surface and extends rights of a nation out into the ocean or sea.

How is it crossed?

Humans can cross over a maritime border on a water vessel. This border is crossed without physically bypassing over a line. Sea life crosses these borders on a regular basis and is not affected by the conceptual line.

Photo Description:

The wake of a boat is a visual representation of the imaginary political border that exists on the water.

Architectural Element:

Maritime borders can be architecturally represented by gradually outreaching the border of the building out onto the site, just as the border of a country reaches out into the ocean. The users of the building should feel as if they are entering the building before physically opening the doors.

Figure 16 | Wake | Clem Onojeghuo



MARITIME BORDERS

social



perceived



How is this a border?

This is a border because it separates social groups into what is acceptable and what is not.

How is it crossed?

It is crossed when one group travels to another country and is educated on social boundaries of other cultures. It can also be crossed when two people from different social backgrounds form a friendship and respect each other's social boundaries.

Photo Description:

The action that a person makes to greet another person displays a social boundary.

Architectural Element:

Social boundaries can be architecturally represented by highlighting how different social groups do a similar act, such as representing how different social groups greet one another.

Figure 17 | Greeting | Fauxels



SOCIAL BOUNDARIES

social



perceived



Figure 18 | Clock Work | Pixabay

How is this a border?

Time zones divide different parts of the globe by time.

Photo Description:

Time Zones create borders around the world and represents when a society is sleeping and when they are working.

How is it crossed?

Living organisms can travel across a time zone without knowing that they have crossed a border. These man-made borders are physically drawn on a map, result in a change of time, but are not physically seen by the human eye. The sun and the rotation of the Earth are natural phenomenon's that required humans to create these borders. The Earth rotates around its axis and around the sun that allows the sun to bring day and night across the time zone borders.

Architectural Element:

Time zones can be architecturally represented through the passing of the sun over the building to create different experiences from the morning to afternoon to the evening.



TIME ZONE

social



perceived



The third subcategory of social borders is a combination between physical and perceived borders. These borders can sometimes be seen by the human eye and other times are conceptual lines on a map. There is a consensus across a variety of social groups that these borders exist, even in areas where they cannot be seen. Borders that fall into this category include:

1. Confluence
2. Environment
3. Political
4. Music
5. Neighborhoods
6. Private Property

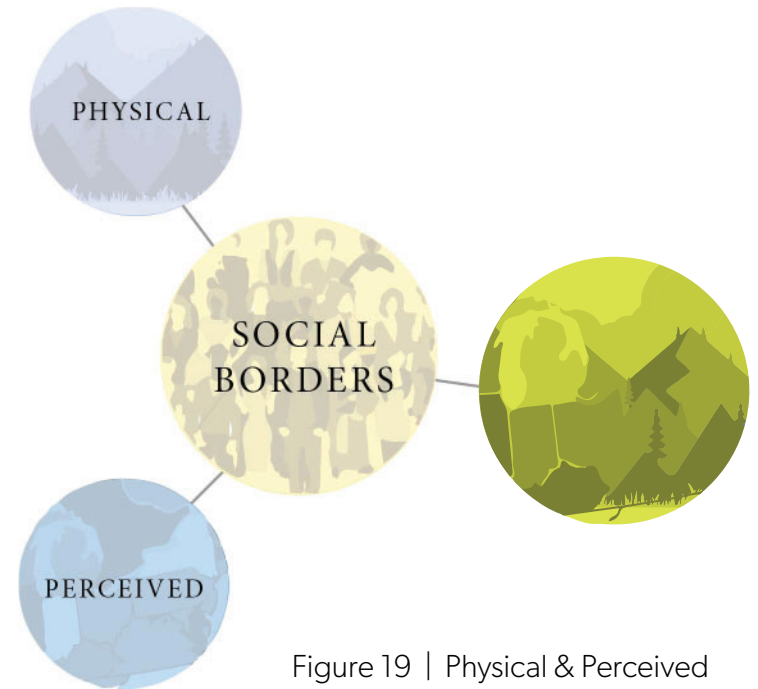


Figure 19 | Physical & Perceived

SOCIAL BORDERS



How is this a border?

Two bodies of water that are not separated by a land mass meets another body of water at certain points. These borders can form a reaction to create a physical border and other times can only be shown as a line on a map.

How is it crossed?

Water vessels can cross over confluences, many times not even realizing it. Sea life are constantly crossing through confluences as well.

Photo Description:

Two types of water meet to form a confluence, a physical representation of the two river waters.

Architectural Element:

Confluences can be architecturally represented through water features or through the separation of space without a partition.

Figure 20 | Colorado River & Havasu Creek | Brendon Kahn



CONFLUENCE

social



physical +
perceived



Figure 21 | Desert Oasis | Juan Fernando Escobar Ochoa

How is this a border?

Environmental borders exist between ecosystems, climate zones, and habitats.

How is it crossed?

Environmental borders are crossed when people, animals, or plants are implemented into a nonnative environment

Photo Description: A desert oasis is a natural underground source of water that provides a habitat within a desert.

Architectural Element:

Honoring environmental borders architecturally would mean using sustainable materials that are native to the environment as well as using native plants in the landscape. The crossing of environmental borders can be architecturally represented by using materials and plants that are not native to the building site.



ENVIRONMENT

social



physical +
perceived



How is this a border?

Political border separates political units from another including countries and states/provinces. International borders divide two countries with different forms of government while states divide political values within a country. The border can be physically visible on earth, such as a river dividing two countries, or it may only be visible as a conceptual line on a map.

Photo Description:

The marker at the front door splits the house in half – one side being in Canada and the other side residing in the United States.

Architectural Element:

International borders can be architecturally represented through the form of a building. The building may show a strong axis of separation between two parts of the development.

Figure 22 | Marker | Helen Johnson



POLITICAL BORDERS

How is it crossed?

Political borders are physically crossed by traveling across a border such as by foot, water vessel, aircraft, or other types of transportation. Theoretically, international borders are crossed when two countries cooperate, collaborate, compromise or lend a helping hand in times of need.

social



physical +
perceived



How is this a border?

Borders in music exist as an organizational method to create a melody. Bar lines, double bar lines, end bar lines, and repeat symbols create division between a group of beats to make the music easier to interpret. Borders also exist as a breathing point, such as a rest. Musical rests give the musician space to breath or rest.

Photo Description:

The measures within the music staff create a universal understanding on how to play the piece on the piano.

Architectural Element:

Musical borders can be architecturally represented by giving space for users to rest and by creating breaking points to organize thought and function

Figure 23 | Music | Viktoria



MUSIC THEORY



How is this a border?

Neighborhoods create borders around the outside edges of the region. This creates an inside/outside effect.

How is it crossed?

Neighborhood borders can be physically straight forward, such as a gated neighborhood or may cause uncertainty where it physically ends, and therefore the border becomes a drawn line on a map.

Photo Description:

Neighborhoods within a city are not only divided by a line on a map – many can be differentiated by the architecture within the neighborhood.

Architectural Element:

Neighborhoods can be architecturally represented through space planning and creating regions (or neighborhoods) within the plan to separate functions.

Figure 24 | Chicago Neighborhood | Danial Acker



NEIGHBORHOODS

social



physical +
perceived



How is this a border?

Private property is divided by borders that are owned by different entities. The border may be a river dividing the property or it may be surveyed and drawn on a map.

How is it crossed?

Physically, private property is crossed by all modes of transportation. Conceptually, private property borders are crossed when the property is purchased by another entity, or when it is used to benefit more than just the owner, such as a property that contains a community garden.

Photo Description:

The ownership of property was the original American dream. In this case, the farm is separated from the land around it by trees and canola.

Architectural Element:

Private property can be architecturally represented materials that combine to create the surface of the floor.

Figure 25 | Farm | Helen Johnson



PRIVATE PROPERTY

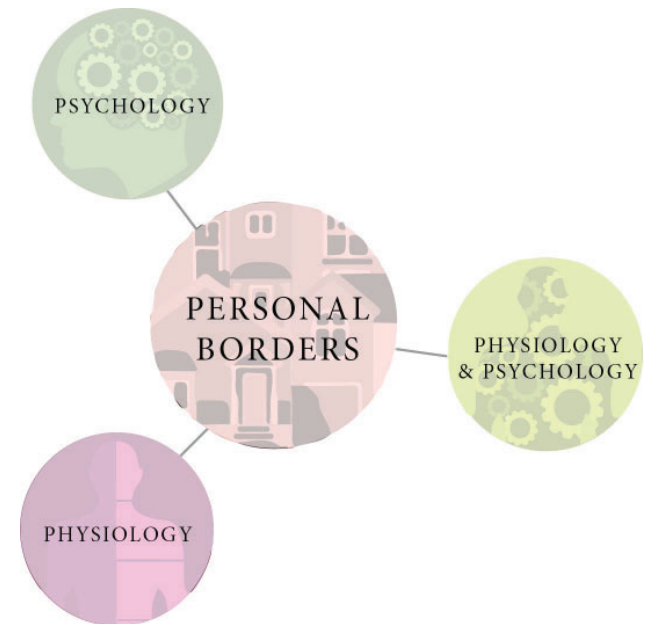
social



physical +
perceived



Personal Borders are borders that are unique to the individual. These borders are known throughout a society but are crossed at different times and in different ways throughout someone's life, thus creating a perspective with multiple realities. Personal borders contain crossings that an individual cannot control (physiological), others that are created within an individual's mind (psychological), and some that are controlled by one's biological makeup and then transferred to one's psychological processes. Historically, personal borders are the types of borders that cause controversy within a society. Controversy, in this scenario, is the result of a difference in perspectives, which are formed due to the uniqueness of these types of borders. The individuality of these borders is caused by the timing and the overall experience of the border crossing. To better understand this concept, let us look at the border type, "age." Division is created when a certain age is assigned to someone such as people who are eighteen and older. In the United States, people who are eighteen are considered an adult. Eighteen-year-olds can vote, buy tobacco, be criminally charged as an adult, and in many other countries, drink alcohol. Even though an eighteenth birthday is known as a common border that is crossed by the general population today, it is experienced in many different ways according to each individual such as, leaving for college, starting the workforce, leaving home, or the stopping of accumulating financial support from family. Personal borders look at how borders create personal crossing experiences for each individual within a society.



II | PERSONAL BORDERS

Figure 26 | Personal Borders



The first subcategory of Personal Borders is Physiological Borders. These borders are not controllable by the individual. Physiological Borders are created at birth such as gender and birth date. Borders that fall into this category include:

1. Age
2. Gender
3. Disability
4. Race



II | PERSONAL BORDERS

Figure 27 | Physiological Borders

How is this a border?

Age creates a division and organization between people in different stages of life.

How is it crossed?

A popular approach to crossing an age border is when one has a birthday. To better understand an age border, it can be examined as a crossing point when a person meets a goal that was once limited by his or her age.

Photo Description:

Age diversity in the workplace is a way to cross borders to allow for better solutions through collaboration.

Architectural Element:

Architects design spaces for people throughout the span of one's life. What differences are seen between the design of a preschool and one of an assistant living facility? How do they compare? The border does not exist at a certain numerical age, but at a place where the design for preschoolers starts to influence the design for elderly men and women.

Figure 28 | Age Diversity | Jacqui Barrett-Poindexter



AGE

personal



physiological



How is this a border?

Gender is a border because it divides humans by how their anatomical development.

Photo Description:

Gender diversity is an important aspect of any business. Crossing this border allows for a greater perspective.

Architectural Element:

Architecture is genderized. There is a current debate in architectural writing that describes the issue of categorizing design as "masculine" or "feminine." Orana Velarde is an artist who wrote a blog post about gender-neutral design. She describes and compares masculine, feminine, and general-neutral design. Color is the most common way to stereotype design. Women generally enjoy light colors and tints while men are attracted to bright colors and shards. Colors that are gender-neutral include monochromatic grays, light browns, black, white, yellow, and greens.

How is it crossed?

The borders that gender creates is crossed when a one gender sees the other gender as equal and as valuable. The border can also be crossed when a person decides to make a sex change or identities as being transgender.

Figure 29 | Workplace Gender | Catalina Albeanu



GENDER

personal



physiological



How is this a border?

Borders appear in an individual with disabilities when a task becomes more difficult to achieve due to the disability. A border can also be present between a person with a disability and a person without.

How is it crossed?

A disability border is crossed with the disabled individual can do a task without frustration. The border can also be crossed when someone without disability sees themselves as equal to someone with a disability and vice versa.

BORDER CATALOG: INTEGRATED SENSE OF BORDER

Photo Description:

Physical disabilities create borders between the able and the disabled. The Paralympics allows for people who are physically disabled to cross borders.

Architectural Element:

Disability is architecturally represented through universal design, which is designing a space that can be used by everyone and is not favoring one side.

Figure 30 | Paralympics | Neil Munns Photography



DISABILITY

personal



physiological



How is this a border?

Race is a border because it divides humans into their unique physical features.

Photo Description:

Different colors in skin tone create a physical separation between people.

How is it crossed?

The borders that different races create are crossed when different races can see themselves as equal and as valuable as another race.

Architectural Element:

The architectural element to showcase the borders between races can begin by honoring each race through its traditional architecture separately. Racial borders are crossed in architecture through inclusive design, where the space is inviting, comfortable, and honors all races.

Figure 31 | Human Hands | Matheus Viana



RACE

personal

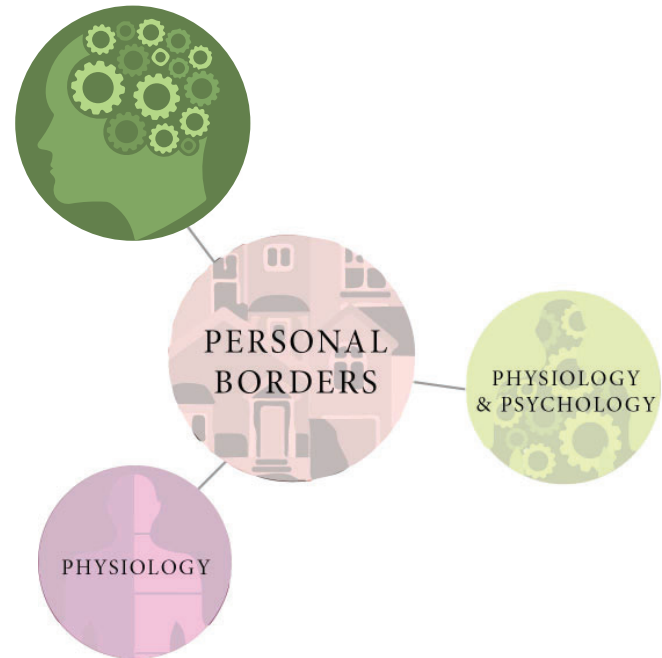


physiological



The second subcategory of Personal Borders is Psychological Borders. These borders are controlled within the individual's mind. Psychological Borders can many times be affected by one's childhood and mental health. Borders that fall into this category include:

1. Memory | Past | Present
2. Self-Image | Public-Image
3. Personal Space
4. Personal Guardrails
5. Fear | Safety
6. Emotion



PERSONAL BORDERS

Figure 32 | Psychological Borders

Figure 33 | Milwaukee Then and Now's | Eau Claire Photography Gallery

How is this a border?

The present day is a border that exists between a memory and the future.

How is it crossed?

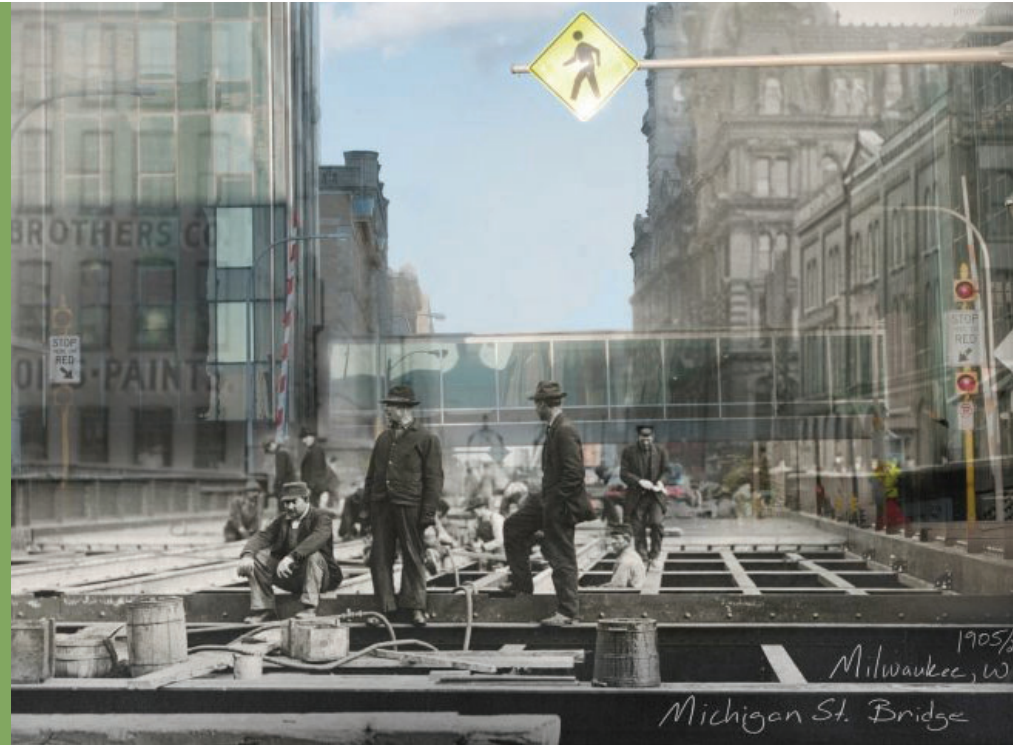
This border is crossed when something in the future becomes a memory of the past.

Photo Description:

The time-warp creates a visual representation between the past and present city of Milwaukee.

Architectural Element:

The passing of time from memory to present to future can be architecturally represented through the creation of space that evokes emotions from the past while creating a motivation for the future.



MEMORY, PRESENT, FUTURE

personal



psychological

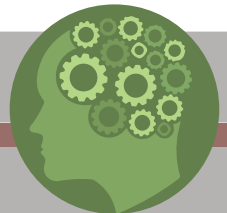


Photo Description:

The ones who look the strongest on the outside may hurt the most on the inside.

Architectural Element:

When we think of ourselves as a "higher-up" or as "less popular," we create borders around ourselves. It becomes impossible to see oneself as an equal to others when one is degrading or elevating oneself or the people around them. To architecturally represent this concept, space will be constructed to create illusions such as, being looked up to by a group of people, being looked down on, looking up towards someone, ganging up to look down on an individual, and seeing all people as equal. These illusions will cause the individual to think about their own position and the image that they are portraying towards the public.

How is this a border?

The border exists between the way one is perceived in the public eye and the way the individual sees oneself.

How is it crossed?

The border between Self Image and Public Image is crossed when one perceives themselves accurately with how the world sees the individual.

Figure 34 | Self Confidence | Unknown



SELF-IMAGE & PUBLIC-IMAGE

personal



psychological



How is this a border?

One's personal space bubble is like an invisible shield that surrounds someone and creates a barrier for comfort and safety.

Photo Description:

People are attracted to spaces that relate to the individual's personal space bubble.

How is it crossed?

The border is crossed when another individual crosses into one's personal space.

Architectural Element:

Personal space bubbles can be architecturally represented through spaces that make the user feel uncomfortable.

Figure 35 | Personal Bubble | The Praying Woman

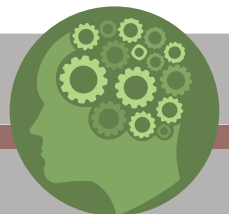


PERSONAL SPACE

personal



psychological



How is this a border?

We create guardrails and guidelines for our own lives. Many times, these guidelines are based off what our parents expected of us, other times, they are set on our own willingness or trial and error.

Photo Description:

Guardrails protect us from going off the edge of a cliff – on the road and in our lives.

How is it crossed?

This type of border is crossed when the individual does something that goes outside of his/her personal guardrail.

Architectural Element:

Personal guardrails are architecturally represented through wayfinding that attempts to alter the decisions of the user.

Figure 36 | Guardrails | Unknown



PERSONAL GUARDRAILS

personal



psychological



Figure 37 | Alone | Anders Eriksson

How is this a border?

We all have places or people who make us feel safe and we all have experiences or places that make us fearful.

How is it crossed?

This border can exist when least expected. It is crossed once you enter a place of safety from a place of fear, or vice versa.

Photo Description:

People will travel far distances through fear to find safety.

Architectural Element:

Fear and safety are represented through the entry into a building. Does the building create a feeling of safety once entered?



FEAR & SAFETY

personal



psychological

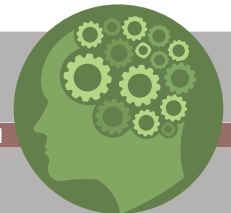


Figure 38 | Woman | Kat Jayne

How is this a border?

Emotional borders exist when something/ someone triggers a quick emotional transition.

Photo Description:

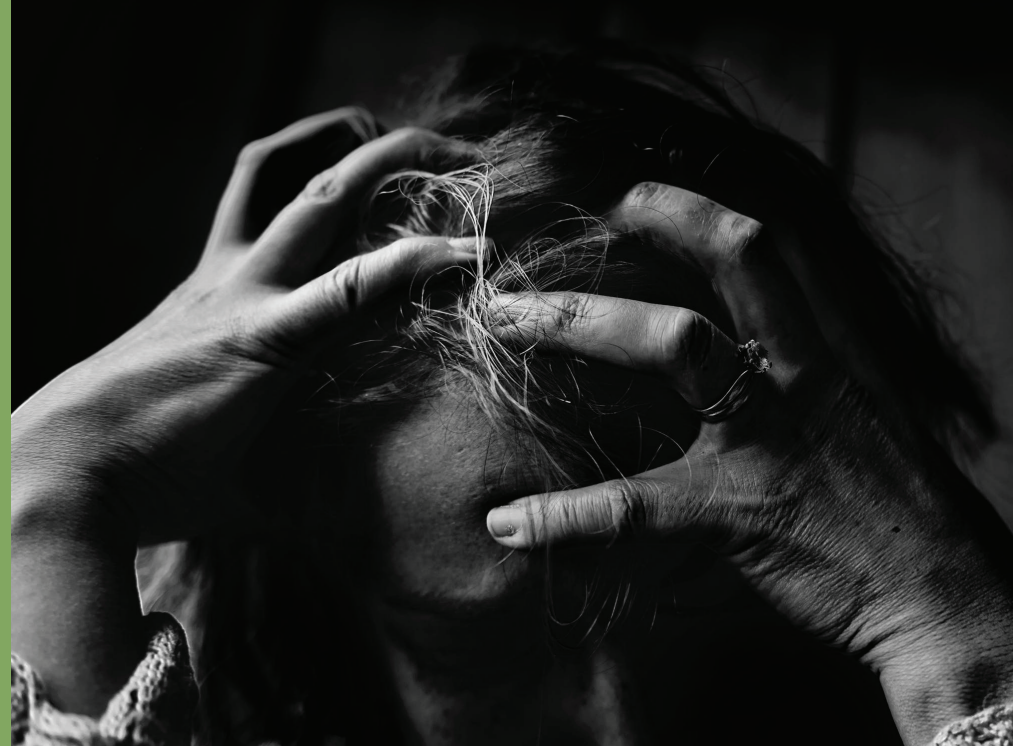
One's emotions can separate those who have negative emotions from others who have positive emotions.

How is it crossed?

It is crossed when someone transitions from one emotional feeling to another, such as being joyful and suddenly feeling sorrow.

Architectural Element:

Emotional borders can be architecturally represented through cognitive triggers such as color, sound, or visual interpretation.

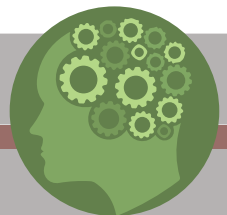


EMOTION

personal

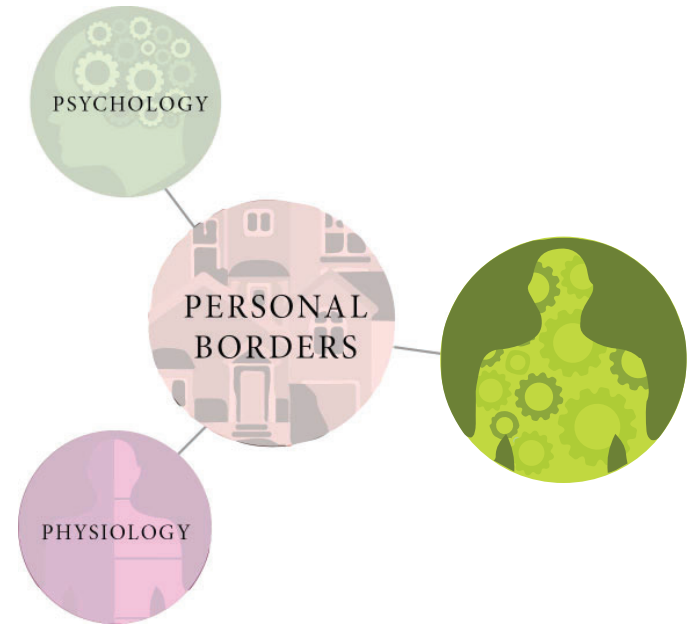


psychological



The third subcategory of Personal Borders is a combination between Physiological and Psychological Borders. These borders are first created biologically and then executed within one's mind. Borders that fall into this category include:

1. Sexual Orientation
2. Biological Age



PERSONAL BORDERS

Figure 39 | Physiological & Psych Borders

How is this a border?

This is a border when it comes to someone who identifies different than their physiological makeup.

Photo Description:

A person's physical appearance may not translate directly to one's sexual orientation.

How is it crossed?

It is crossed when the mind can cross the physiological stereotypes and declare one's sexual orientation.

Architectural Element:

Sexual Orientation can be architecturally represented like the gender representation which is deciphering between masculine, feminism, and gender-neutral design. This can be directly looked at in bathroom design and for creating personal spaces that create comfort for everyone.

Figure 40 | Body Painting | Sharon McCutcheon



SEXUAL ORIENTATION

personal



psychological
+ physiological



How is this a border?

This is a border because there are different stages that our bodies go through that determine our biological age.

How is it crossed?

This type of border can vary in the amount of time and work it takes to cross. It is crossed when lifestyle changes are altered (for the worse or better) to change an individual's biological age.

Photo Description:

We can alter our biological age by making positive lifestyle choices.

Architectural Element:

Biological age is architecturally represented through the elements in which create a positive lifestyle, but still accommodate those who may have a higher biological age than their actual age. Introducing wellness and healthy eating into the architectural program can assist in making small adjustments towards someone's lifestyle.

Figure 41 | Title | Oleg Magni

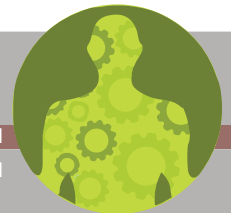


BIOLOGICAL AGE

personal



psychological
+ physiological



Social & Personal borders are borders that fall into both categories depending on the scenerio. The border types and crossings that are found in this category allow an individual to feel secure when one is with a societal group of people that are experiencing the same border, but when separated from the group, the individual is left find a way to cross the border alone.

The intensity of struggle of these types of borders are most often the highest when the individual is separated from a group that is experiencing the same border. The language border can be used to give an example of this scenario. When in America, an English-speaking citizen does not experience a linguistic border. The border starts to appear when that individual travels to a non-English-speaking country, such as China. Suddenly, there is a border between the English-speaking individual and the Chinese-speaking individual. Personal and Social borders examine an individual within a society and once the individual has left his or her society. Borders in this category include:

- | | |
|-----------------|------------|
| 1. Language | 4. Life |
| 2. Social Class | 5. Culture |



Figure 42 | Social & Personal Borders

III | SOCIAL & PERSONAL BORDERS

How is this a border?

A border exists when one meets another person, who doesn't share the same language. A language border implies a lack of mutual intelligibility, which is a relationship between people with different languages that can understand each other without special effort.

Photo Description:

This art piece of the Arabic language translates to "Civilization that is not valued in cement, but is action and triumph oriented, We are the epic poem, the melody, and the instrument; A civilization that is based on intellect, reasoning, and thought."

Architectural Element:

Language is architecturally represented in architecture today, especially in the middle east, where the Arabic language is seen beautifully unscripted within the architecture.

How is it crossed?

The language border can be difficult to cross. For a quick cross, there needs to be help on the border to assist in translation. For a timelier and more permanent crossing, the language can be learned by one or both individuals.

Figure 43 | Al Naseem Lobby | Helen Johnson



LANGUAGE



social + personal

How is this a border?

Social classes divide people with different levels of wealth. Sometimes these borders happen along borders between countries, other times it can fall within a single country or city.

Natural resources can play apart in the creation of economic borders. People who live in areas rich in resources (underground oil or fertile soil) are more likely to be wealthier than people that live in areas without many resources. Wealthier people have access to better resources such as beautiful views, excellent schools, hospitals, or access to shopping.

How is it crossed?

Social Class borders can be very difficult to be crossed in one direction but very easy to be crossed in the other. An individual in the working class will need to put in long hours, have a great work ethic, and make wise investments to cross into the middle class. On the contrary, it can only take one quick and terrible choice to drop a person from Middle class to lower class. This is an interesting case because there can be multiple borders crossed at the same time. Social Class Borders are crossed when people from different social classes collaborate with one another.

Photo Description:

Architecture can physically represent the user's social class.

Architectural Element:

How does architecture differ when designing for those in a higher social class than those in a lower social class? Historically, one can determine that an attention to detail and the uniqueness of a project is what sets apart social classes within architecture. Architecture for the upper class has detail and is creatively set apart from the buildings in which surround the project. Lower class design is lacking time, detail and creative/integrated design.

Figure 44 | Slums | Helen Johnson



SOCIAL CLASS



social + personal

How is this a border?

Hierarchy is another border that can happen in a wide variety of ways. It can be seen in the professional world where an individual is climbing over the borders of a corporate ladder or it can be looked at in family patterns.

How is it crossed?

In the corporate setting, the border is crossed when an individual is promoted into a role with greater responsibility. In the family example it can be crossed when the patriarch/matriarch of the family passes away and the next male or female takes over the role.

Photo Description:

Chess is a tangible strategic game of hierarchal power.

Architectural Element:

Hierarchy is architecturally represented through the space planning of a building, specifically a museum. Where does one begin in the process of going through the museum? What hierarchies are created within the process that create curiosity that continues to move the user through the museum?

Figure 45 | Chess | Pixabay



HIERARCHY



social + personal

How is this a border?

Life and death are borders that can appear at any given time in a person's life. It also can be the border between something that is living and something that is not.

How is it crossed?

The border between life and death can be crossed similarly to air (See: Physical Borders) or it can be crossed when something living borders something not living

Photo Description:

Life (a living plant) can cross between a border of death (concrete).

Architectural Element:

The border of life can be architecturally represented between architecture, in which is not living and the living landscape.

Figure 46 | Life in Concrete | Engin Akyurt



LIFE



social + personal

How is this a border?

Cultural borders exist when people or a person is exposed to another culture. Heewon Chang explains a cultural border in the article, "Re-examining the Rhetoric of the "Cultural Border"."

Chang explains how borders between cultural groups are diverse. He writes, "When a group is small and specific, the extent of sharedness among members may be higher. However, if a group presents a large, cross-sectional or cross-national cultural identity, such as "female culture," "middle-class culture" and "Muslim culture," the sharedness of that particular culture is blurred by other cultural identities." The cultural border condition looks at a culture in a whole and at the individual. "Cultural borders within individuals become blurred as components from diverse cultures become incorporated into their

individual cultural identity, instead of remaining separate from each other" (Change, 2019).

How is it crossed?

"People are the carriers, movers, consumers, and inventors of a culture" (Chang, 2019).

Photo Description:

Cultural traditions allows a society to close borders as well as cross borders to experience other traditions.

Architectural Element:

Cultural are architecturally represented by using elements from different cultures to create a multicultural design. "Everyone is cultural and multicultural:

"cultural" in that culture is not a property of an exotic people but "standards" that all human beings adopt for their daily operations; "multicultural" in the sense of being competent in multiple macro or micro cultural systems" (Chang, 2019).

Figure 47 | Paper Lanterns | Min An



CULTURE



social + personal

This paper serves as a collection of borders crossings and how they can be architecturally represented. The research gives guidance on how borders can be used in the architecture field to design spaces that create community while keeping an identity and sense of security. If designers begin to intentionally think about the borders that are created within a space, users will be able to more easily navigate and feel a sense of place within a building.



PROJECTION

The border catalog outlines the many border conditions that individuals and societies experience. The examples range in form, but they all represent borders that were either created by humans or are purely human nature. To design at a human scale, it is important to look at what is human nature. The catalog proves the human instinct to organize chaos, which is illustrated and experienced as a border.

Borders represented through architecture creates physical and emotional experiences that can be better understood by designers. Common goals within architecture, such as creating community while feeling secure, are conflicting. The border catalog disguises this same need within the individual and the world throughout history. Borders used as instrumental methods of pre-design and schematic design followed by the execution of construction will assist architects in creating spaces that have intentional interruptions.

CONCLUSION

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