How Cultural Diffusion Is Most Concretely Shown in Architecture

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INTRODUCTION

Houston Independent School District (HISD) has developed a common curriculum called Project Clear which is to be taught throughout the district (See www.houstonisd.org). In the first objective of the geography section of this curriculum, students are to learn the five themes of geography. One of these themes is movement, specifically "the diffusion of goods, ideas, people, culture, technology, and communication across the globe" (*Project Clear Curriculum*, 29).

The lessons provided in this document are designed to give students a firm grasp of how ideas, culture and technology are diffused across the globe, to use Project Clear language. Specifically, this set of lessons will show ninth grade students how Houston can be culturally interpreted as an integrated part of the world through the architecture styles found in Houston. These lessons will show how most of the ten regions described in Project Clear have influenced Houston and how Houston has possibly influenced these other regions. Further, these lessons will allow students to develop their own ideas of specific architectural cultural diffusion based on their own experience in their neighborhoods and information they are given in class.

WHAT STUDENTS WILL LEARN

The goal of these lessons is to teach students about cultural diffusion through architecture. To do this, they must first understand the idea that as "groups of people… move to new areas, they bring their culture with them" (38). Second, they will need to develop the skill of looking at a particular edifice and be able to visualize in their mind that there were outside influences affecting the design of that edifice, and what some of those influences where. To put this second idea into effect, they will need to be able to understand the geography and history in architecture.

Cultural Diffusion

This section will clarify what cultural diffusion is and what the teacher should know about it before the lessons below can be given to students. Teachers should know how people are agents of cultural diffusion and what constitutes a culturally diffused product.

What is meant by cultural diffusion? Culture consists of transmitted behavior patterns, beliefs, language, religion, aesthetic choices or any idea or knowledge we gain from our communities and use to define who we are. Diffusion is a noun which refers to a spreading out of an idea (at least in Social Science). The *American Heritage Dictionary* notes that diffusion makes the original item less brilliant (395). Therefore, what the

student will take into consideration is that ideas or knowledge we gain from our cultural community are spread around the globe by people, but somehow changed from their original form.

There are several other ideas that could be discussed with students regarding cultural diffusion before students work on the lesson plans below. These do not need to involve discussion on architecture. When discussing cultural diffusion, we can talk about such disparate ideas as agriculture or cable television (Parkes and Thrift, 285). The important thing is to keep in mind that this is a study of movement as required in Project Clear.

The first of these ideas that could be discussed is the roles people play in the diffusion of ideas. Different people play different roles as innovators, early majority, late majority, and laggards (286). Innovation occurs in "hearths" (Rubenstein, 30). In classroom discussion, these do not need to be the traditional hearths of Central America, Mesopotamia, India, Egypt, or China (although these should be known by students). Discussion could and probably should be focused on any of the countless hearths that have since risen for specific functions, for instance Silicon Valley. It is in hearths that innovators are allowed to thrive. There is something in these regions that allows for experimentation and a reason for that experimentation. In architecture, the question would be, where are these areas that have allowed for experimentation? The Early Islamic world, Renaissance Europe, and the recent modern art movements (from the late 1800s until the present) could be examples of these hearths. Note that these Hearths take place in time, as well as space. With this type of movement, "space and time become coincident, as space-time" (Parkes and Thrift, 279).

Once the student has the idea that someone had to originate the idea, the idea of the majority adopters should be understood. These are the folks who spread the idea and make it a part of human culture. The early adopters are from the same region as the innovator. They may even have had something to do with the idea or technology. Perhaps they just tweaked it a bit. The style is recognized as belonging to their culture, to their time and place. Again, this all takes place in time and even though we are calling someone an early adopter, they may actually have lived hundreds of years after the idea was created. The late adopters are the people who use the technology outside of the original culture. They spread the technology because they get some use out of it, either functional or aesthetic.

Laggards are retrospective people. These are people who take an idea and either use it for its antique quality, or somehow incorporate it into something new. Examples could be Sewall and Rayzor Halls at Rice University. Few people build public buildings in the old university style unless they are trying to copy that time period in an existing campus setting. In a sense, most technologies we use today are built on past technologies. This is truer in art and architecture. It is this ability to use past technologies in new combinations with new innovations that has created the architecture we see in Houston today. These thousands of cultural hearths that have existed, and exist today, combined with diffusion

as described here, are the reasons for the richness in diversity we enjoy in the twenty-first century.

A second idea that should be discussed is the nature of the diffused object. As mentioned above, changes occur to the original when things are culturally diffused.

The vast majority of buildings in Houston are of a design that was created elsewhere. A major difference can be found in the building materials. The original buildings of the University of Houston, for instance, are of a design common from an area farther north. They represent a Depression era or 1930s style common in buildings in California and perhaps other parts of the U.S. They are copies in that respect. However, much of their material is native to Texas, and therefore unique in their own respect. The grayish Texas limestone buildings with that unique 1930s to 1940s look are especially representative of Texas.

Another reason for diffusion to occur through a prism may have to do with cost. The Julia Ideson Library in Houston is an example of this. Original buildings in the northern Mediterranean where this style emerged were more likely to have solid stone façades, like marble. Apparently such solid stone was too expensive for the city of Houston at the time the city built the Julia Ideson building to be used as the city's library. To save money the architects used brick for all but the central portion of the front of the library. It is not uncommon to see less expensive versions of famous mosques, cathedrals, public buildings and other such edifices around the world. One couple even built their east Texas home to look like the Alamo.

Yet another way diffused ideas change from their original depends on how they got to the new region. Ideas can be moved either by the physical movement of people from one area to another or from expansion diffusion (Rubenstein, 30). People who moved here actually brought most of the architecture in Houston into the area. Since peoples who actually helped create these ideas imported them, originally these ideas were more true to form. Expansion diffusion occurs much more rapidly and usually involves people in one area influencing people in another area. This is becoming more common in Houston, and elsewhere in the world, with the explosion of media. While in the past local inhabitants under expansion diffusion saw their local arts replaced by the new, dominant culture, much of this diffusion today involves the media and popular desire for something better. In architecture circles, architects share ideas across the globe. For the most part, ideas (architecture) new to an area will depend on how it was diffused into the area.

Ideas, like architecture, are changed from region to region due to differing building materials, to save money, and method of import. Other reasons may include religion, differing functional specifications (different purposes), and differing sizes of populations served (an Islamic congregation in a small town in India does not need a mosque the size of the Grand Mosque, but they may want the Grand Mosque look).

Understanding these concepts of cultural diffusion is important to the geography teacher who intends to use architecture to show how cultural diffusion occurs with architecture.

Geography and History in Architecture

A second thing the geography teacher will need to understand is that by looking at a building one can understand something about the history of the people who built that building and perhaps something about the geography of the building. Understanding that the people who built these buildings had reasons is important. This section builds on the previous section.

In teaching physical geography, teachers can discuss what types of buildings are likely to be built in what regions. Regions with lots of forests will produce buildings quite different than desert regions. Indonesian, South American, North Asian, and European designers are much more likely to use wood. People in the Middle East and Southwestern North America are more likely to use brick. People with access to mountains where limestone can easily be extracted are more likely to use limestone. Therefore, by looking at an average building of a region, a student should be able to tell something about the region.

Also, if a student looks at a building and has some knowledge of the cost of various building materials, he or she can gather some indication of the state of economy at the time the building was built. Looking at public buildings in Houston is a good example of this. Original public buildings appeared to have been built with tight budgets. The original library and museum were relatively small, even for a city of perhaps 100,000. Architects and designers did not get to build their visions and had to settle for smaller visions built over time. As the Houston economy improved, not only were larger and more numerous libraries and museums built, but also play houses and concert halls. Additionally, movie theaters, malls, stores, and churches, began to be built on increasingly larger scales. Any history teacher in Houston, or any other city, can show this to students if they have available pictures of their modern city and what it used to look like.

Finally, in human geography we can tell something about the origins of a people by looking at their architecture (or anything physical about them). This is precisely what archeologists do. By looking physically at Houston we can see African, European, Islamic, Middle American, and Asian contributions. Looking at the Tudor houses in Broadacres and the shotgun cottages in the wards we can definitely see outside influences. Currently most of the residential housing in Houston follows a European and, to a lesser extent, an African model. Not surprisingly these are the two traditionally large groups of Houstonians. Other peoples have not yet had the opportunity to build houses to their liking, but when they do it is possible Houston may see more courtyard type houses from Mexico (a few already exist), which is based on the Spanish model, which is based

on the Roman model. Or perhaps new people will adopt current styles through their own prisms.

WHY STUDENTS WILL LEARN

There are many aspects of cultural diffusion. Art, music, food, language, and religion are just some of the many ways culture can be shown. However, because of time constraints only a few elements can really be carefully looked at. By concentrating on a few elements of culture and cultural diffusion, students are more likely to remember (cite) something than if they are bombarded with every aspect of culture. Architecture is a very real, concrete way this diffusion can be shown. Also, personal experience has shown that students are very much interested in architecture. For instance, the writer of this paper had the assignment of scheduling students into small learning academies within his high school. The Academy of Architecture was the eighth most requested despite the facts that no such academy exists nor was one offered as an option to students on the academy request form (there are nine total).

A related goal is for students to be able to recognize well-known buildings from around the world, such as the Petronus Towers, the Sydney Opera house, or the Eiffel Tower. By concentrating on well-known buildings from around the world during the comparisons, students will receive reinforcement in their ability to recognize these landmarks.

Basis and Emphasis

The emphasis will be placed on generic styles and less on individual architects. For instance, architectural movements across space. Individual houses in Houston as well as grand, public buildings will be compared. Students will not have to prove actual relationships, but possible relationships. This frees up the student's creativity to compare.

The strategy in this series of lessons is to use resources teachers already have at their disposal, especially their textbooks.

LESSON ONE: DIFFUSION IN A CONCRETE MANNER

The purpose of this lesson is to show students how building and architectural ideas are diffused across space. While much of this lesson is structured for the teacher, much of its success depends on the teacher's ability to build on student responses to ask further questions to reach the desired conclusion.

Procedures

Step One

Students are divided into groups of four or five depending on class size and maturity. Each group is told to design a building or geometrical shape (again depending on the students). It is preferred that students create actual buildings. However, if they are unable to, rather than spend a lot of time describing how to design a building, the teacher may opt for simple items like circles in triangles and so on.

During this step each group of students is also given Handout One. (See Appendix for handouts.) They can use the back of Handout One to come up with their original design. Alternatively, the teacher may want to have Handout One copied on seven or eight transparencies to make Step Five easier to accommodate. If this is the case, students will require dry erase pens.

Step Two

One person migrates from each group to another group. Tell the students each immigrant is still a part of their original group (their name must remain on the Handout One of the original group they worked with); they have just moved from their own "country" to another one for work or freedom. Here the teacher can be as creative as he or she wants. For instance, the teacher can mirror real world situations by saying something like "Group A has become intolerant of Joey's belief, so Joey must migrate for his beliefs," while pointing to Group A and Joey. Be sure not to be specific about beliefs, races, or ethnicities when explaining why some student's have to migrate, you may accidentally hit a sore spot somewhere. However, it is important to be a little creative here, but only be as creative as your knowledge of your class and relationship with your class will allow.

Step Three

Each group minus their migrant but plus their immigrant(s) will then create a new design. They can base this on their previous work, what the immigrant has to say, or perhaps a new design created without their migrant.

Step Four

Steps Two and Three are then repeated up to five more times.

Step Five

The teacher will then compare each group's pictures in class and ask the group where they got their ideas and who came up with them. Students will be able to see how

sometimes ideas were created from within the group, sometimes the migrant brought an idea in, and sometimes the group came up with a new idea when they lost what had previously been a powerful influence (the migrant). If the teacher was unable to provide students with transparencies, then he or she may want to scan the picture onto a computer for projection to the class. How the teacher chooses to show each set to the class will depend upon what technology the teacher has available.

LESSON TWO: ARCHITECTURAL COMPARISONS

The purpose of this lesson is to get students to begin to think about the architecture they see in their neighborhood and how it compares to architecture from around the world. This will be the only lesson that will take an entire 100-minute period. The remaining lessons will take ten to fifteen minutes each and will be used either as short introductory lessons to each of the units or in conclusion lessons in association with *The Wall Street Journal's Emerging Powers* series or a similar type program most geography teachers will have access to.

Procedures

Step One

This step takes place before the actual lesson begins. During the meeting before the learning activity is to take place, students are given homework (this lesson is just full of puns). Students will have two things to do that night. First, they are to walk around their homes and notice features that they think may have been influenced from other parts of the world. Most ninth graders in HISD will have some difficulty with this concept, so the teacher needs to be sure students understand they are to look at the outside of their house, such as the windows, roof, and doors. They are then to write a few sentences describing their home and write down any similarities they noticed between their homes and what they know of buildings elsewhere.

The second part of their homework involves looking at other building in their neighborhood or areas. They can look at newspapers, or actually go out and look at these buildings. They will then write a few sentences on any two buildings in their area. These buildings can be anything from strip centers and fast food restaurants to churches – basically any building they see.

It is recommended these directions be written on the chalkboard or dry erase board so students can write them down. These sentences will be taken up the day the activity is actually to take place.

Step Two

Each student in the class is assigned pictures from their textbook below and asked to pick a picture they can compare to buildings they are familiar with in their neighborhood. In HISD's currently adopted book, there are about 98 pictures and they should be divided among all students in the class. The teacher can either photocopy this and the next sheet and cut picture assignments out, or simply tell the students in class which pictures they are assigned. If students do not like pictures assigned to them, they may "trade" them. This will help insure fewer students receive pictures that have absolutely nothing in common with buildings they know about.

Be sure to tell the students to concentrate on the architecture. Among questions they will be asking themselves:

1. How is this similar to building(s) I know about?
2. Is it possible this building style is related to the building(s) I know about?
3. If so, did this building style influence the building(s) in my neighborhood, or did my building(s) style influence this one?
4. Do you think it's possible there is a third set of buildings somewhere that may have influenced the building(s) you are familiar with and the building(s) you were assigned to study?

Remind students of these facts before they begin their comparisons:

1. They are not limited to only their homes or buildings they wrote about for homework. They are free to use their imaginations on this one.
2. Houston is a relatively new city and most architectural influence has come from other areas, although probably not all.
3. They can "trade" pictures to find one that more fits the buildings they observed in their neighborhoods.

It is recommended that if Handout Two is used, along with verbal directions, to communicate this information to the students. Inform the students not to write on this handout so it can be used for multiple classes. (See Appendix for handouts.)

Note: When students make their comparisons between their assigned buildings and the building they are familiar with locally, they should not write their notes down, but retain them in their head. This will prevent them from simply moving from student to student and copying the information down.

The following are examples of usable items taken from *World Geography, Texas Edition*, which is the geography textbook currently (as of 2002) adopted by HISD. This example of lists would be used for the North American Unit, but similar lists could be

developed for each of the geographical units. However, similar lists can be quickly prepared from any geography textbook.

- Mesa Verde, Colorado (page 112)
- French street in Quebec City showing traditional French architecture (page 113)
- Colonial cottage, New Brunswick (page 114)
- City scape, Toronto, Ontario (page 128)
- Church in Old Town section, Albuquerque, New Mexico (page 189)

Step Three

Students will then pair and share with other students. Each paring and sharing should last about four minutes. During this time, one student will explain how the pictures he or she was assigned to compare with buildings in his or her neighborhood. The student receiving the information will write this information down. Handout Three can be used, or students can be told to do this on their own paper depending on teacher preferences. (See Appendix for handouts.)

Teachers should come up with a signal to announce when the four minutes are up and students need to find new partners. In a loud room, a good symbol is to turn the lights off and then back on again.

At the end of class the teacher will take up Handout Three (or the notebook paper) for assessment.

LESSON THREE: INFLUENCES ON ARCHITECTURE

The purpose of this lesson is to tie the other two lessons together. The first lesson dealt with diffusion. The second lesson made simple comparisons between edifices. This lesson should be given toward the end of the year after students have had an opportunity to learn about the world's environments. This could be used during "dead week" as a part of the review process.

Step One

Students are divided into groups of three or four and given Handout Four: Building Descriptions. (See Appendix for handouts.) Students are given about ten to fifteen minutes to read the descriptions and explain what region each description is referring to. Along with building descriptions, students are also given other characteristics of the region as clues to what may be going on. They should use the process of elimination. Each student is to turn in their own sheet with the answers and notes taken from the discussion.

Step Two

The teacher will then read a description, starting with "Description A" below. He or she will then ask a group which region they think it is and why. The descriptions are given below with the answers and an explanation.

A. This is a church in a large city with lots of car traffic. It is made of stone and is perhaps 800 years old. People come inside to pray. It has tall spires and Gothic windows.

   This region is referring to Europe. If the students have not indicated it, the teacher should point out that stone is a common building material in Europe because of the mountains and large treeless regions in the South. On the historical side of this, Europe is the only place that would have an 800-year-old church with a lot of car traffic around it.

B. This is another building in a large city, but people travel by animal almost as much as cars. People also come here to pray, but their head touches the ground as they pray. Spires also surround this building, but people can go to the tops of these spires and chant prayers that can be heard for some distance. This building is made of sun backed brick with a stucco covering.

   This is referring to the Middle East. In this region buildings tend to be made of brick with a plaster covering of some sort. Also, the people in this building appear to be praying in the style of Moslems.

C. This is a house a fairly wealthy family lives in. The outside has few windows, but there is an inside court with windows. Plantain trees grow just outside it. It is made of brick with some stone. Timber is used for support. Spanish can be heard.

   This is referring to a house in Latin America. It appears to be built in the villa style. It is made of materials common to a people who do not have many trees, but do have some for building supports.

D. This is a tall building made of steel and glass. Below it are streets packed with cars. There is moderate pollution. English can be heard. None of the buildings in the city this building is in are over 200 years old. The vast majority are less than 50 years old.

   This is in North America. It is made of modern materials requiring an industrial complex. North America has only recently in the last 100 years developed cities like this, so the buildings would not be too old.

E. This is a building on stilts. It is lifted perhaps two floors off the ground. A middle class family lives here. The building is made completely of wood. Many boats can be seen nearby. It appears to be on a heavily wooded Island. This region obviously gets lots of rain.

   This is in Southeast Asia, a region with lots of wood. Flooding created the need for the stilts.

F. This building is similar to the building in E, except it is on a mainland and not an island and there are not as many trees around. Also, it has much fabricated material in its construction (metals, plastics, glass). The family is much poorer and there are thousands of such houses in all directions. In fact, over a billion people live in the region.

   This is in Southeast Asia, a region which can flood a lot as well (especially in the Northeast). There are not as many trees so fabricated material must be brought in.

G. This house sits high on a mountain. It is made of wood and some stone. Snow covers it most of the year. Russian can be heard. It is rather isolated and a family of frontiers type people lives in it.

   This is in the former Soviet Union, probably Siberia or the Urals. Trees are abundant and used frequently, especially in remote buildings.

H. This 14-story apartment building is in a very crowded city. Over a billion people live in this region. Chinese is most often heard. Hundreds of lower class families live in this building. This building is made of concrete with steel, iron, and wood support; it appears rather shaky.

   This is in East Asia. There are so many people here that anything that can be used to build buildings will be used. In this case the building is tall and actually uses wood in the support. This can be dangerous.

I. This building is made of wood and stone. It is isolated and surrounded by a fence. English can be heard, as well as some Aboriginal. It is a farmhouse for a large sheep ranch.

   This is in Oceania, particularly Australia. Wood is available, but not all too common, so stone will also be used.

Step Three

Each student will then turn in their answers with notes from the discussion. The criteria is:

1. They either gave the correct answer the first time or corrected it during discussion.
2. They took notes as to why they got their answer.

Since the answers are given in class, this should be a good grade for all students.

APPENDIX

Handout One: Fill-in Chart

Original Group Names:
Date:
Class:

In each of the following boxes your group is to come up with a new design based on your original design, something the immigrant to your group told you about, or something totally different. If you like your original design more than what the new person is describing, then keep it. If you like the new persons design, then draw that. If you want to combine the two or come up with something different, then do so. This is your chance to be creative.

1.	2.	3.
4.	5.	6.

Handout Two:
While You Are Comparing Your Architectural Pictures

Do Not Write on This Sheet

Answer the following questions in your mind. Do not write your answers on paper.

1. How is this similar to building(s) I know about?
2. Is it possible this building style is related to the building(s) I know about?
3. If so, did this building style influence the building(s) in my neighborhood, or did my building(s) style influence this one?
4. Do you think it is possible there is a third set of buildings somewhere that may have influenced the buildings you are familiar with and the buildings you were assigned to study?

While comparing these buildings, keep these facts in mind:

1. You are not limited to only your home or buildings you wrote about for the homework. You are free to use your imaginations on this one.
2. Houston is a relatively new city and most architectural influence has come from other areas, although probably not all.
3. If you want to "trade" pictures with other students, you are free to do so, but they then cannot use the picture you traded. Also, you cannot use a picture for comparison purposes once you traded it.
4. Do not write your comparisons down.

Handout Three: Fill-in Chart

Names: Date: Class:

	Houston Building	Book Building	Similarities	Differences	Who Influenced Who?
1.					
2.					
3.					
4.					
5.					
6.					
7.					
8.					
9.					
10.					
11.					
12.					

Handout Four: Building Descriptions
Do No Write on This Sheet

Read the following building descriptions and tell which region they are in: North America, Latin America, Europe, Former CIS, East Asia, South Asia, Middle East, Sub-Saharan Africa, Southeast Asia, or Oceania.

Each region will only be used once.

A. This is a building in a large city with lots of car traffic. It is made of stone and is perhaps 800 years old. People come inside to pray. It has tall spires and gothic window.

B. This is another building in a large city, but people travel by animal almost as much as cars. People also come here to pray, but their head touches the ground as they pray. Spires also surround this building, but people can go to the tops of these spires and chant prayers that can be heard for some distance. This building is made of sun backed brick with a stucco covering.

C. This is a house a fairly wealthy family lives in. The outside has few windows, but there is an inside court with windows. Plantain trees grow just outside it. It is made of brick with some stone. Timber is used for support. Spanish can be heard.

D. This is a tall building made of steel and glass. Below it are streets packed with cars. There is moderate pollution. English can be heard. None of the buildings in the city this building is in are over 200 years old. The vast majority is less than 50 years old.

E. This is a building on stilts. It is lifted perhaps two floors off the ground. A middle class family lives here. The building is made completely of wood. Many boats can be seen nearby. It appears to be on a heavily wooded island. This region obviously gets lots of rain.

F. This building is similar to the building in E, except it is on a mainland and not an island and there are not as many trees around. Also, it has much fabricated material in its construction (metals, plastics, glass). The family is much poorer and there are thousands of such houses in all directions. In fact, over a billion people live in the region.

G. This house sits high on a mountain. It is made of wood and some stone. Snow covers it most of the year. Russian can be heard. It is rather isolated and a family of frontiers type people lives in it.

H. This 14-story apartment building is in a very crowded city. Over a billion people live in this region. Chinese is most often heard. Hundreds of lower class families live in this building. This building is made of concrete with steel, iron, and wood support. It appears rather shaky.

I. This building is made of wood and stone. It is isolated and surrounded by a fence. English can be heard, as well as some Aboriginal. It is a farmhouse for a large sheep ranch.

ANNOTATED BIBLIOGRAPHY

Boehm, Richard G. *World Geography: A Physical and Cultural Approach Texas Edition*. New York: Glencoe, 1995.
A textbook currently (as of June 2002) adopted by Houston Independent School District to be used by ninth grade geography teachers. This book is written to match Project Clear Geography in that it has eleven sections that align with Project Clear Geography.

Houston Independent School District. *Project Clear Curriculum: World Geography Studies, Grade 9* (2001).
A curriculum all Geography teachers in Houston Independent School District are required to teach. Project Clear Geography is a sub-set of the entire curriculum taught by HISD. Project Clear Geography has eleven sections. The first section deals with geographical knowledge while the last ten sections each cover a region.

Parkes, Don and Nigel Thrift. *Times, Spaces, and Places*. New York: John Wiley and Sons, 1980.
A book on theories of time and space written for human geographers. This book describes some of the theories on diffusion taught in this unit.

Rubenstein, James M. *An Introduction to Human Geography*, Upper Saddle River, N.J.: Prentice Hall, 2002.
A textbook that concentrates on human geography. This book discusses diffusion issues, as well as other major geographical topics.