**AP Human Geography Unit 1 Basic Concepts and Development Review Answers KEY Mr. Stepek**

**Instructions: While using the copy of this assignment that was posted with images/maps type your answers below into this word document. Submit this document through Google Classroom.**

**1. Theories of Cultural Ecology**

1. IDENTIFY and DEFINE in your own words the cultural ecology theory reflected in the first passage.

The cultural ecology theory that is reflected in the first passage is ENVIRONMENTAL DETERMINISM. Environmental determinism states that the primary reason for a society’s development is there physical environment such as climate, topography, etc.

1. IDENTIFY and DEFINE in your own words the cultural ecology theory reflected in the second passage.

The cultural ecology theory that is reflected in the second passage is ENVIRONMENTAL POSSIBLISM or just POSSIBILISM. Environmental possibilism states that although the physical environment has an effect on a society’s development these limitations can be overcome through the processes of adaptation or modification.

1. EXPLAIN why the viewpoint expressed in the first passage has fallen out of favor.

Environmental determinism has fallen out of favor because it claims that not only does the physical environment affect development but also the psychological mindset of a region’s inhabitants. For example, in the excerpt from Ellen Churchill Semple implies that people in river valleys will be less ambitious or that those people living in grasslands or deserts will be more prone to fanaticism because the physical geography gives them time to contemplate. These ideas are stereotypical and can lead to racism where certain physical environments create people who are “superior” to others. This was used by Europeans to justify their exploitation of black and brown people during the Age of Imperialism.

1. EXPLAIN an example in the contemporary world of the theory expressed in the second passage.

Examples of societies that have overcome or adapted to the limitations placed on them by the physical environment include Japan. Japan is a resource poor country. It has little access to the raw materials to industrialize. So instead of accepting their geographic limitations they used a highly educated but low paid workforce and international trade to first dominate cheap products and then reinvested in more complex, higher valued products like automobiles and electronics. By taking a possibilist approach (they followed the International Trade Model) they were able to become one of the most advanced countries in the world.

1. **Using Chicago as an example, demonstrate your understanding of the Five Themes of Geography (be complete this should include “Location”, “Place”, “Region”, “Interaction” and “Movement” including subcategories).**

|  |  |  |
| --- | --- | --- |
| Location | Absolute - 42°N, 87°W | |
| Relative – Chicago is on the SW tip of Lake Michigan, 90 miles south of Milwaukee | |
| Place | Big city (2.7 million, almost 10 million in metro area) diverse ethnically (≈30% each white, black and Hispanic) but known for being segregated, urban density (12k/sq. mile compared to 28k/sq. mile in NYC, 18k in San Francisco, 14k in Boston, 8k in Los Angeles, 4k in Dallas, etc. I included these density figures so that you have a better idea of the characteristics of Chicago as a “place”). Large diversified economy ($689b total which is approximately the same size as the country of Switzerland, no more than 14% in any one sector of economic activity). “Place” descriptions can go on and on, this should give you an idea. Place paints a picture of what a location is like. | |
| Region | Formal/uniform | All people in Chicago are subject to same laws (no plastic bags, 9pm curfew on liquor sales during pandemic, city sales tax). MUST define the area by a common or uniform characteristic. |
| Functional/nodal | Chicago Public School (the city serves as a region to provide education to its children, it is run from CPS headquarters downtown), CTA/RTA – Chicago serves as the transportation hub for the region, all train and el lines run downtown with the Loop serving as the center).  Chicago was a central place for commodity trading (meatpacking, Midwestern agricultural products)  Note each of these regions serves a purpose (function) and has a center (node). |
| Vernacular or Perceptual | “Chicagoland”, is SW Michigan part of Chicagoland? If you lived in Arlington Heights and were in China and somebody asked you where you were from you would say “Chicago”. Tourists may consider Wrigleyville to be “downtown”, touristy, hotels, bars, tall buildings along the lake, native Chicagoans would have a different interpretation. It is subjective, depends on your own perspective/viewpoint. |
| Interaction | Adaptation | Chicagoans modify their behavior due to the physical environment. We buy super heavy coats for subzero winter days. We don’t plant annual flowers until May because of the risk of a late frost. We use public transportation because parking is difficult. |
| Modification | Chicago reversed the flow of the Chicago River so that our sewage would not contaminate our fresh water source. |
| Movement | Chicago has been greatly influenced by the flow of people, ideas and goods through the area. An example would be the Great Migration and its effect on Chicago. During the Great Migration Chicago’s main source area of southern African-Americans was the Mississippi Delta region. This was also where blues music originated. Consequently, Chicago became the center of the “urban blues” musical genre. | |

1. **Answer the following questions based on the maps below:**
2. IDENTIFY the type of thematic map represented above.

The type thematic maps represented are choropleth maps.

1. IDENTIFY one strength of presenting data in this type of thematic map.

One strength of using choropleth maps is that they show the intensity of phenomenon across geographic areas in an easily understandable from through the darkness of color.

1. Provide two EXPLANATIONS for the difference in the presentation of the spatial distribution of the Hispanic population in the United States despite the fact that both maps use a common data source of the 2010 US Census.
2. One EXPLANATION for the difference in the two maps between the presentation of Hispanic populations in the U.S. would be the geographic scale or level of aggregation across which the data on the maps is displayed. For the map on the right the data is displayed on county level while the data on the map to the left is aggregated on a state level. This can mislead the reader of the map to the right to believe that states such as NY and Illinois have large Hispanic populations distributed evenly across the state when in fact the Hispanic population in those states is concentrated in large urban centers such as NYC and Chicago which is better reflecvted with a county level aggregation.
3. Another EXPLANATION for the difference in the two maps between the presentation of Hispanic populations would be the numerical scale across which the data is displayed. The map on the left displays Hispanic population as a percentage of the population while the map on the left displays Hispanic population based on total number of Hispanics. Therefore, based on the map to the left, the reader might overestimate the influence of the Hispanic culture in states with large populations like NY or Illinois because there are lots of Hispanics but they are a lower relative share of population. The map on the left better reflects where Hispanics make up a lager share of the population and therefore have more influence.
4. Using APHG concepts, EXPLAIN two reasons for the spatial distribution of Hispanics within the United States.
5. One APHG concept that EXPLAINS the spatial distribution of Hispanics within the U.S. is the gravity model. The gravity model states that the interaction between two places is inversely related to distance (distance decay) and directly related to the size of the population. This is demonstrated in the distribution of Hispanics because you can see the huge clustering of Hispanics in the Southwestern U.S. along the border with Mexico (the major historical source of Hispanic migration) demonstrating that places closer together are more influenced by each other. Furthermore, Hispanic clusters in larger urban areas outside the Southwest demonstrate the effect of population size on interaction per the gravity model. Hispanics were more likely to relocate to places like Chicago and New York because of their large populations which increased the likelihood that the migrant would have a connection to those places.
6. Another APHG concept that EXPLAINS the spatial distribution of Hispanics within the U.S. are migration patterns such as Ravenstein’s Laws and chain migration. According to Ravenstein’s Laws, migrants move a series of short steps (step migration). This would explain the cluster of Hispanics in the SW which is closer to the source area for Hispanic migration. In addition, Ravenstein’s Laws indicate that long-distance migrants usually move to areas of economic activity (cities) which would explain the large clustering of Hispanics in cities like NYC and Chicago. Finally, the APHG concept of chain migration would reinforce these concepts. Chain migration occurs when a migrant follows the migration pattern established by a family member who has previously migrated. This would show that many Hispanics have continued to chain migrate to large cities based on the pattern established earlier.

(note: I am defining terms within the explanation to provide a better understanding to the reader of what I am arguing. You should be doing this in your responses)

1. **Other Thematic Maps**
2. IDENTIFY the type of thematic map displayed to the left.

The thematic map displayed to the left is a dot density map.

1. DESCRIBE one advantage to the user of how data is displayed on this type of thematic map.

An advantage in using a dot density map is that it displays the specific location of the phenomenon being displayed. For example, if you were moving to Washington D.C. understanding where exactly within the city burglaries were higher might affect your decision on where to rent an apartment. Whereas other less geographic specific maps might generalize the data over too broad a geographic area for you to make an informed decision. (note: an example is needed because it is a “describe” prompt)

1. IDENTIFY the type of thematic map displayed to the left.

The thematic map displayed to the left is a graduated symbol map.

1. DESCRIBE one advantage to the user of how data is displayed on this type of thematic map.

One advantage of using a graduated symbol ma is that the reader can easily judge the impact of a phenomenon across broader geographic areas. For example, when examining the coronavirus map we can see that the biggest impact outside of China (the source area) at the time this map was created was in MDCs like Europe and North America demonstrating the impact of globalization (tourism, air travel) on the spread the disease. It is also informative because we can see that the impact (at the time the map was created) was lower in LDCs which are less connected through globalization. (this is probably overkill but better safe than sorry)

1. DESCRIBE one disadvantage to the user of how data is displayed on this type of thematic map.

* One disadvantage of using a graduated symbol map would be that the data is too generalized. For instance the data for the U.S. does not display differences in coronavirus cases between areas like NYC and North Dakota.
* Another disadvantage of using a graduated symbol map would be that the data can be difficult to see. For example in the map it is difficult to see the magnitude of coronavirus cases in Italy as opposed to those is say, the Czech Republic because the symbols overlap.

1. IDENTIFY the type of thematic map displayed to the left.

The thematic map displayed to the left is a choropleth map.

1. DECSRIBE a flaw in how data is presented in this particular example.

One flaw in the way the data is displayed in this particular example is that is uses ineffective coloring. One of the strengths of a choropleth map is that it is easy for the reader to judge relative intensity quickly and them be able to focus on extremes of high or low numbers. In this example, a variety of colors are used (brown, purple, orange, etc.) rather than using one color with different shades (blush, pink, rose, red, etc.) with darker shades indicating intensity. The coloring of this map does not make it easy for the reader to understand the distribution of English ancestry without much closer examination.

1. IDENTIFY the type of map displayed to the left.

The type of map displayed to the left is a cartogram.

1. DESCRIBE an advantage to the reader of presenting data as it is displayed in the map to the left.

A cartogram is really a graph in map form. The advantage of using is that It manipulates the size of a geographic area to reflect a value in order to help with comparison. For example, in the map of the Electoral College the sizes of the states are altered to reflect the number of electoral votes (population) each state has. States like Montana that have a large area but few electoral votes have been shrunk while states like Massachusetts that have more electoral votes but small geographic size have been enlarged.

1. IDENTIFY the type of map displayed to the left.

The type of map displayed to the left is an isoline map

1. DESCRIBE in general what the lines depicted on a map like the one to the left are connecting.

Isoline maps use lines to connect locations with similar values. For example, the lines on the map are connecting locations with the same barometric pressure.

1. IDENTIFY for what two purposes is this type of map most commonly used?

Two common purposes of using isoline maps are for weather maps like the one displayed and in creating topographical maps of elevation.

1. IDENTIFY the term that describes a map like the one displayed to the left but with colored bands in between lines depicted.

A map like the one displayed to the left but with colored bands in between the lines is called a isopleth map.

(note: examples needed from the map because it is a “describe” prompt)

1. **The Properties of Spatial Distribution**
   1. DEFINE spatial concentration and COMPARE the concentration between A and C.

Spatial concentration is the extent a feature’s spread over a geographic area. The spatial concentration in A is more dispersed (spread out) while the concentration in C is much more clustered (grouped together).

* 1. DEFINE spatial pattern and COMPARE the pattern between A and B.

Spatial pattern is the geometric arrangement of a phenomenon is space. The spatial pattern of A is random without a regular geometric arrangement, while B’s spatial pattern can be described as “diagonal.”

* 1. DEFINE and CALCULATE (per square mile) the arithmetic density between A and B.

Arithmetic density is the frequency with which something occurs in a space. The arithmetic density of A is 1.75 dots per square mile while arithmetic density of B is 1.67 dots per square mile.

1. **Density Measures and their Implications**
2. DEFINE carrying capacity.

Carrying capacity is the maximum population *(this can mean more than just people, “population” of anything like particles for pollution etc., but we mostly use in context of human population for APHG)* size an environment can sustain given available resources. *(inserted for your learning)*

1. EXPLAIN which country above would have the most difficult time supporting the needs of its population without trade or development.

The country that would have the most difficult time supporting its population without trade or development would be Egypt. This is because its physiological density is the highest. Physiological density is the measure of population compared to arable land. Since Egypt is mostly desert it has little arable land to support its population resulting in a high physiological density and difficulty feeding its population without trade or development.

1. EXPLAIN which country above would have the least technologically advanced agricultural sector.

The country that would have the least technologically advanced agricultural sector would be Bangladesh. This is because Bangladesh has the highest agricultural density. Agricultural density is calculated by taking the number of farmers and dividing it arable land. If the agricultural density is high (as is the case for Bangladesh) this means that there are many farmers per unit of arable land implying that most of the farm work is done by hand and without the benefit of machinery.

1. COMPARE the agricultural sectors of Japan and India with regards to its ability to meet the needs of its population without trade and the efficiency of the sector.

Based on its high physiological density (which measures the total population divided by arable land) Japan should have a much harder time meeting the needs of its people without trade than India which has a much lower physiological density. However, we can also see that Japan, based on its much lower agricultural density (# of famers divided by arable land) has a much more efficient agricultural sector. Therefore, we can conclude that Japan is much more highly developed than India and has an easier time meeting the needs of its population.

**7. Cultural Diffusion**

a. IDENTIFY and DESCRIBE the diffusion pattern represented by diagram A.

The diffusion pattern represented by diagram A is hierarchical diffusion. Hierarchical diffusion is when a feature moves from its hearth or place of origin to other connected or influential nodes first while skipping over places that may be physically closer. An example of this is the spread of hip-hop music that began in the Bronx borough of NYC in the African-American nightclub scene. It then diffused, not to adjoining boroughs such as Manhattan or Queens, but to other African-American nightclubs in Brooklyn. From there it spread to other areas with influential African-American cultural communities such as Atlanta and Oakland, CA.

b. IDENTIFY and DESCRIBE the diffusion pattern represented by diagram B.

The diffusion pattern represented by diagram B is stimulus diffusion. Stimulus diffusion is when an underlying characteristic of a feature moves from its hearth to a destination but not the final product. An example would be a Christian missionary who proselytizes to non-Christian indigenous people. After the missionary leaves, the indigenous people accept his ideas about monotheism but not specifically a belief in Christ. An underlying principle has diffused but not what the missionary intended.

c. IDENTIFY and DESCRIBE the diffusion pattern represented by diagram C.

The diffusion pattern represented by diagram C is contagious diffusion. Contagious diffusion is when a feature spreads from its hearth without regard to rank to the next recipient. An example of contagious diffusion spreads like a disease like coronavirus or when a popular culture phenomenon goes viral on youtube or when a fashion item becomes widely accessible at stores.

1. IDENTIFY and DESCRIBE the diffusion pattern represented by diagram D.

The diffusion pattern represented by diagram D is relocation diffusion. Relocation diffusion is when a person takes a feature with them when they physically migrate. It is not a form of expansion diffusion like hierarchical, stimulus or contagious diffusion because overall new adherents or users of the feature are not gained. The number of adherents in the hearth is lower while in the destination they are higher. An example would be a Spanish-speaking person who relocates from Mexico to Chicago. They are not here to teach or spread the Spanish language, but here is one more Spanish speaker in Chicago and one less Spanish-speaking person in Mexico.

(note: examples are needed for a “describe” prompt)

**8. Measures of Development**

* 1. DESCRIBE the factors used in the actual mathematical calculation of the Human Development Index.

The factors used in the actual mathematical calculation of HDI are GNP per capita, life expectancy and years of schooling. GNP per capita is the measure of the economic activity of a country divided by its total population, for MDCs this number averages around 44k while in LDCs the average is 12k. Life expectancy is how long a child born today can expect to live, for MDCs the average is around 80 years old, the worldwide average is 72 while sub-Saharan Africa averages around 61 years old. Years of schooling is measured by both average years of schooling and expected years of schooling. In MDCs average years of school is 12.2 years while in LDCs it is 7.3 years.

* 1. DEFINE the five job sectors (another factor considered when discussing”).

There five job sectors are:

Primary sector employment involves extracting resources form the Earth such as agriculture, fishing, mining, forestry etc.

Secondary sector employment involves taking raw materials and manufacturing them into useful products.

Tertiary sector employment is the provision of a service such a fast food, janitorial, banking, etc.

Quaternary sector employment is subsector of tertiary employment that involves intellectual activities incl. govt., culture, libraries, scientific research, education, and info tech., accounting and law, etc.

Quinary sector employment is also a subsector of tertiary employment which involves highest levels of decision-making in a society or economy incl. the top executives or officials in such fields as govt., science, universities, nonprofit, healthcare, culture, and the media.

* 1. IDENTIFY the three global tiers in Wallerstein’s World Systems Theory.

The three tiers in Wallerstein’s World Systems Theory are the cope, semi-periphery and the periphery.

* 1. EXPLAIN how the five job sectors correlate with Wallerstein’s World Systems Theory.

In Wallerstein World System’s Theory, all countries participate in a global economy that is divided into tiers.

These tiers interact with one another often in an exploitative manner.

Core processes require a high level of education and are dependent on technology. They are the centers of global finance and transnational corporations (quaternary sector) and global decision-making and policy setting (quinary sector). Consequently, the core is the wealthiest tier and the core economies are primarily tertiary focused. They have some primary jobs but even those require an education as they require the heavy use of technology and are integrated into agribusiness. The core used to dominate manufacturing as it became the dominant tier through industrialization but in recent years many secondary jobs have shifted to lower cost areas in the semi-periphery. The core exploits the periphery for its resources and the semi-periphery for its low wages.

The semi-periphery is not a set of processes but areas where both core and periphery processes are happening simultaneously. In areas of a semi-periphery country you will find high tech/high education core processes while in other areas of the same country you will find periphery processes like resource extraction being done by hand. In recent decades, secondary employment has shifted to the semi-periphery. Transnational corporations have relocated their factories in pursuit of low wages and lax environmental regulations. The semi-periphery exploits the periphery for resources and supplies the core with products.

Periphery processes do not require an education and involve a low level of technology. Many people in the periphery are engaged in the primary sector either through subsistence farming, mining or plantation agriculture. They are exploited by both the semi-periphery and periphery for their raw materials. The semi-periphery needs their raw materials to use in manufacturing while the core exploits the periphery for export crops such as coffee, tea, tropical fruits and offseason products for core consumers.

1. **Distribution of Development**
   1. EXPLAIN an example of how the spatial distribution of development has changed since Brandt conceptualized the North-South split in the 1980s.

The two best explanations to this question are:

The Four Asian Tigers have achieved a high level of development since the conception of the North-South split in the 1980s. The Four Asian Tigers have achieved this by following the International Trade Model of development

Whereby they exploited low cost wages to dominate the manufacturing of cheap consumer goods which they sold to developed economies. They then used those profits to invest in the infrastructure, education and technology required to produce higher value consumer goods like automobiles and electronics. They have developed technologically advanced economies based on higher incomes and consumption.

The oil-rich states of the Persian Gulf have also achieved a higher level of development since the conception of Brandt’s line in the 1980s. They exploited their vast oil resources to gain money with which they invested in infrastructure, education and in other industries in attempt to diversify their economies.

* 1. EXPLAIN how differences in development are worsening tensions in a shatterbelt region.

A shatterbelt where differences in development are worsening tensions is in the Sahel region of West Africa. A shatterbelt is a transnational region where larger global political or cultural forces are in conflict. In West Africa, the shatterbelt conflict is between the forces of Islam in the north and the Christianity/animism to the south.

Differences in development between the Muslim North and Christian South can be seen on the map with the North mainly pastoral nomads or herders are much less devloped than the Christian largely farming South. As the North goes through desertification many herders are moving south and coming into competition for the central grasslands with the Christian farmers.

* 1. IDENTIFY a regional difference in development within the United States.

In the United States a regional difference in development can be seen with the Southeast U.S./Appalachia having a lower HDI than the rest of the country.

* 1. EXPLAIN how the sub-state development differences in China are related to the core-periphery model.

In China there are significant sub-state development issues which is expected in a semi-periphery country. The interior of China is still engaged in many periphery processes such as subsistence farming. However, the coastal region of China (place like Shanghai) have advanced economies dependent on global trade with the core. Many transnational corporations have located along the coast of China to take advantage of low wages and lax environmental regulations. The Chinese communist government has encouraged this by setting up Special Economic Zones with tax and other incentives for transnational corporations headquartered in the core (Apple, etc.) to locate their manufacturing there This has led to much higher development in coastal areas of China connected through trade to the core as opposed to isolated peripheral areas in the Chinese interior.

1. **Distribution of Development (cross-over concepts)**
2. Examine the maps above closely (you can use the zoom feature from the previous link). DESCRIBE a common feature in the distribution of development WITHIN European countries.

A common feature in the distribution of development within European countries is that development is higher in capital cities. For example, by examining the map, it can be seen that Paris, Rome, Madrid and Warsaw all have higher levels of development than other regions with their countries.

(note: “describe” prompts require an example)

1. EXPLAIN how differences of development in Europe have affected migration patterns with the expansion of the European Union.

One of the key policies of the EU is the free movement of people within the union but across state borders. As the EU expanded into Eastern Europe and the former USSR starting in 2004, they began to include countries like Poland, Czechia (the Czech Republic), and Hungary which had considerably less development than those of Western Europe. Therefore, this has caused a large migration stream from Eastern Europe to Western Europe as workers seek higher wages offered in the West.

1. EXPLAIN two examples of how differences in development may be increasing centrifugal tensions.

Two examples of how differences in development are increasing centrifugal tensions in Europe are:

* + - 1. Belgium. In Belgium there is a development difference between the wealthier north which speaks Flemish (a dialect of Dutch) and Wallonia, the poorer French-speaking region in the south of the country. So, in addition to cultural, linguistic differences, the Flemish resent paying taxes in support of the Wallons and the Walloons are resentful of Flemish wealth and what they see as privilege in Belgian society and government increasing separatist tendencies.
      2. Another similar example of a centrifugal force caused by differences in development is the separatist movement in the Catalonia region surrounding Barcelona in Spain. From the map you can see that Catalonia has a higher level of development than most of the rest of Spain. In very recent years, many Catalans have advocated for independence from Spain because they resent having to send tax money to the national government in support of poorer Spanish regions. They believe they would be better off as an independent state (as a member of the EU) rather than being burdened with their commitment to the Spanish state.