Directions: Take this passage on your own (pacing is approximately 13 minutes for the passage and all questions). Then, review our videos on Evidence Based Reading Skills and we'll discuss all the strategies to use in order to crack questions like these.

The article is adapted from "Social media images of culture can predict economic trends in cities" by Rachael Bishop, Copyright 2018, FrontiersIn.Org.

Line

The rise and prosperity of a city neighborhood is not predicated on economic capital alone — the presence of a vibrant arts, music and science culture is equally important. So says a study in which researchers used social media images of cultural events in London and New York City to create a model that can predict neighborhoods where residents enjoy a high level of well-being — and even anticipate gentrification by 5 years. With more than half of the world's population living in cities, the model could help policymakers ensure human well-being in dense urban settings.

"Culture has many benefits to an individual: it opens our minds to new emotional experiences and enriches our lives," says Dr. Daniele Quercia, Department Head Nokia Bell Labs, Cambridge, UK. "We've known for decades that this 'cultural capital' plays a huge role in a person's success. Our new model shows the same correlation for neighborhoods and cities, with those neighborhoods experiencing the greatest growth having high cultural capital. So, for every city or school district debating whether to invest in arts programs or technology centers, the answer should be a resounding 'Yes!'"

The term cultural capital was first coined by French sociologist Dr. Pierre Bourdieu in the late 1970s, as a way of understanding how a person's knowledge, cultural interests, degrees and exposure to creative pursuits — including travel, art and technological innovation — are forms of 'wealth' that individuals bring to the 'social marketplace,' their personal relationships, and their communities. Bourdieu demonstrated that people with similar cultural capital tend to associate with each other, rather than going outside these bounds to build relationships. These relationships attract people of like mind and grow neighborhoods and societies.

While Bourdieu's ideas of cultural capital as applied to individuals produced fascinating snapshots of social function, the concept has potentially profound applications when applied to cities and neighborhoods. This motivated Quercia and colleagues Dr. Desislava Hristova, from the University of Cambridge, and Dr. Luca M. Aiello, also from Nokia Bell Labs, to find a way to track how cultural capital plays out in urban areas.

The researchers accessed millions of Flickr images taken by people attending cultural events in London and in New York City over ten years. The events included festivals, libraries, cinema, art exhibitions, creative performances, technological demos, handicraft artisans, restaurants, museums, and newspaper stands. The team organized the images, which all had GPS tags indicating the place and time taken, into 25 categories. They also cleaned the data to adjust for outliers, accounting for issues such as many museums not allowing photos of exhibits and different generations gravitating to different choices.

"We were able to see that the presence of culture is directly tied to the growth of certain neighborhoods, rising home values and median income. Our model can even predict gentrification within five years," says Quercia. "This could help city planners and councils think through interventions to prevent people from being displaced as a result of gentrification."

"We already have data from wearable technology showing that both the 2016 US presidential election and 2016 Brexit referendum greatly impacted people's sleep and even heart rates," adds Aiello. "Information on cultural consumption could similarly be used to track the impacts of large-scale change."

The model does have limitations. It focuses on only on world-class cities, areas with populations exhibiting high rates of social media use. Furthermore, it depends on the independent use of technology and software by people to capture authentic images of what moves them.

The model also does not explain what causes gentrification— namely, which occurs first: increasing cultural offerings that reorient social identity and thus, capital, or people seeking more cultural capital as they climb the economic ladder.

Even so, the insights generated by this and other models could help people to successfully live in dense urban settings— an increasingly relevant issue. The United Nations estimates that 54 percent of the world's population lived in urban environments in 2014 and predicts the figure to rise to 69 percent by 2050.

"Next, we want to measure the relative health of communities, looking at the availability of healthy food, farmer's markets, sports, parks, beautiful architecture and so forth," says Quercia. "By overlaying different maps upon each other, we can create a vertically integrated map showing how exposures to different influences can accurately reflect a neighborhood's sense of well-being."

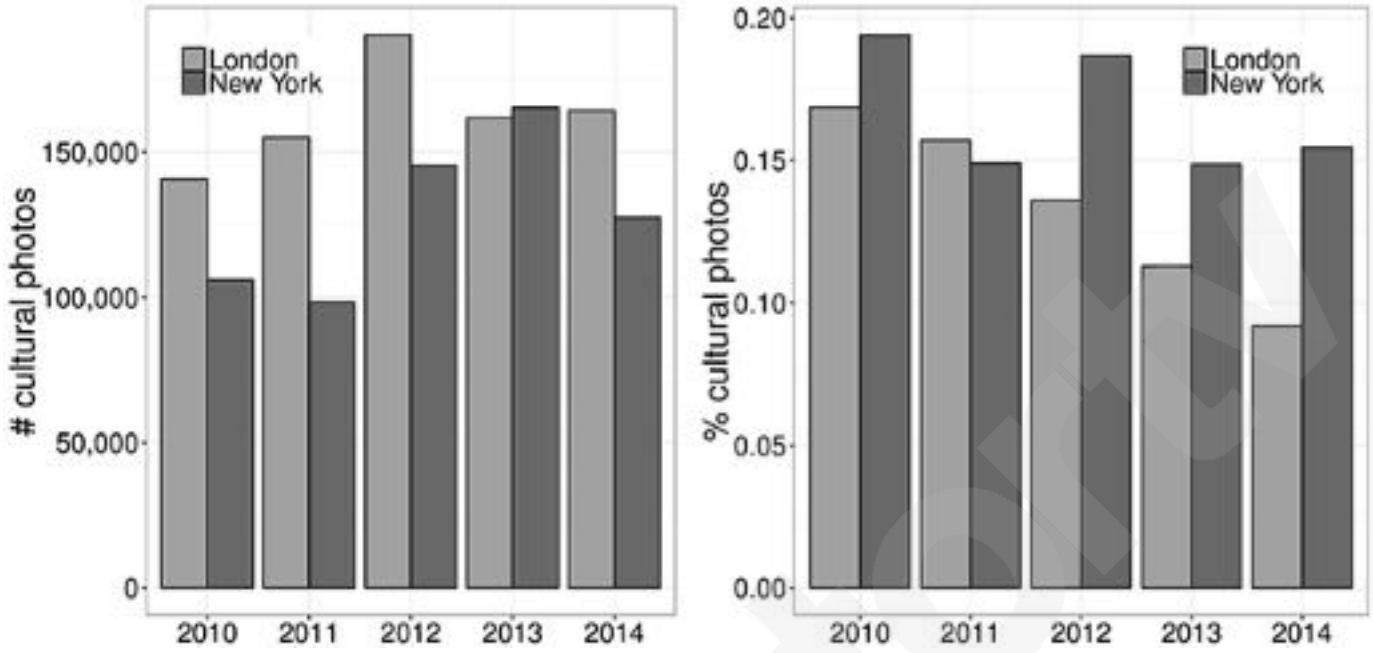

Figure 1. Presence of cultural content over the 5 years under study: photos per annum **(left)** and fraction per annum **(right)** Sourced from geo-referenced pictures in London and New York posted on Flickr. (Adapted from "The New Urban Success: How Culture Pays" in Frontiers in Physics Copyright © 2018 Hristova, Aiello and Quercia.)

1. Over the course of the passage, the main focus shifts from:
   A) A discussion of the value of cultural capital, to an analysis of the activities that produce that value.
   B) A claim that gentrification can be predicted to a discussion of its possible causes.
   C) An explanation of a historical definition of cultural capital to an exploration of a perspective that revises that definition.
   D) A presentation of a finding regarding social capital to a description of the associated study and its implications

2. The central idea of the passage is to:
   A) Provide support for the claim that event photography correlates with neighborhood prosperity.
   B) Dispute the claim that a neighborhood's well being results from economic growth
   C) Discuss why investment in the arts provides an economic benefit in urban neighborhoods
   D) Suggest that data from cultural activity is a potential indicator of broader change

3. It can most reasonably be inferred from the passage that many city planners believe
   A) economic growth in a neighborhood poses a threat to some households
   B) gentrification categorically benefits neighborhoods
   C) investment in the arts is a clear priority for cities
   D) economic factors were previously unreliable in predicting widespread prosperity

4. Which choice provides the best evidence to the previous question?
   A) Lines 1-2 ("The rise...alone")
   B) Lines 16-22 ("Our...Yes!")
   C) Lines 53-56 ("We...years")
   D) Lines 56-59 ("This….gentrification")

5. Which question was Quercia's study of Flickr images primarily intended to answer?
   A) Does increased cultural capital promote higher real estate prices?
   B) Can social media be used as a marker of a city's "relative health"?
   C) How do cultural offerings reorient the social identities of neighborhoods?
   D) Is a neighborhood's changing status informed by its proportion of cultural activity?

6. Which choice best supports the view of Bourdieu?
   A) Creative pursuits inspire cohesiveness in a community.
   B) Forms of 'wealth' that individuals offer the 'social marketplace' include political affiliation
   C) Artistic endeavors undermine a city's potential for economic transformation
   D) Citizens use cultural capital to compensate for economic disparity

7. Based on the passage, which of the following would most clearly indicate the presence of cultural capital?
   A) A collection of handmade scarves from a recent vacation abroad
   B) A helicopter that transports local residents to regional hospitals in medical emergencies
   C) A hat with the insignia of a popular local sports team
   D) Soft rock music that plays quietly in the background at a grocery store

8. Which of the following, if accurate, would undermine the researchers' findings?
   A) Cultural photos in other parts of the US are posted at a different rate than those in London and New York.
   B) Gentrification of neighborhoods is more probable in large metropolitan cities than in smaller ones.
   C) Several poor neighborhoods in New York and London exhibit relatively infrequent social media use.
   D) A population's level of education is shown to lead to economic growth.

9. Based on the passage, what is the most likely explanation for the findings for the percent of cultural photos in London between 2011 and 2015 represented in the figure?
   A) Many museums in London increased restrictions on photography in their exhibits during that time
   B) A decrease in cultural capital triggered a decrease in images depicting that cultural capital
   C) Evolving patterns of social media use reduced the public's interest in cultural experiences
   D) There is not enough information to determine the cause of the trend in these findings

10. According to the figure, in which year did photographs from New York and London portray cultural activity in the greatest proportion relative to other photographs in the data set?
   A) 2010 for both cities
   B) 2010 for New York and 2012 for London
   C) 2012 for London and 2013 for New York
   D) 2010 for London and 2012 for New York

11. Which of the following claims is best supported by both Figure 1 and the passage?
   A) Though an abundance of cultural photographs were taken in New York and London during the study, the small percentage of total photographs they constitute makes the data set questionable.
   B) World class cities foster conspicuous levels of sharing online.
   C) Culture's influence on London society decreased from 2010 to 2014, though its influence varied in New York.
   D) Spikes in social media references to culture may precede economic recovery.

Answer Key:

1. D
2. D
3. A
4. D
5. D
6. A
7. A
8. C
9. D
10. A
11. B