The Influence of the Roman Arch

Ancient Rome achieved many great accomplishments that have influenced numerous cultures. Elements of Roman law have been adopted by various governments, including the United States. Roman literature, such as the *Aeneid*, is still read today. This paper will examine the cultural influence of the Roman development of the arch, a supporting structure in building construction that could carry a lot of weight.

An arch is a curved structure that is usually made of stone, brick, concrete, or, more recently, steel. Its purpose is to support or strengthen a building. Most arches consist of wedge-shaped blocks. The top center stone, called the keystone, is the last block to be inserted. During construction, arches are often supported by a wooden frame. When the frame is removed, both sides of the arch press against the keystone and thereby support the arch.

The Romans did not invent the arch. Indeed, arches have been used since prehistoric times. The ancient Egyptians, Babylonians, and Greeks all used it. The purpose of the arch in these cultures, however, was limited to supporting small structures, such as storerooms, and people often used columns to support the roof. This design limited the size and scope of a building. As a result, builders could not construct extremely large palaces or government buildings.

The ancient Romans created an arch that could support huge amounts of weight. How did the Romans accomplish this? The answer lies with a material called concrete. Using a mixture that included lime and volcanic sand, the Romans created a very strong and durable type of concrete. Arches made of this substance could support a lot of weight. As a result, Romans were able to build massive structures, such as aqueducts, which provided water to cities. The Roman arch freed architects to explore different and larger structures.

Soon several cultures adopted the Roman arch. Both Byzantine architects in Eastern Europe and Romanesque architects in Western Europe used it constantly. Other cultures adapted the Roman arch and developed it further. For example, in the Arab world, Muslim architects developed pointed, scalloped, and horseshoe arches, which they used for mosques and

palaces. The borrowing and modification of the Roman arch meant that the architecture of ancient Rome would have a lasting impact.

The Roman arch solved the problem of arches not being able to support large amounts of weight. The Roman arch also caused the Romans themselves to make further architectural developments. They combined arches to form ceilings or roofs called vaults. The Romans also used the principles of the arch to form a hemispherical ceiling or roof called a dome. An early example of a dome is the Roman Pantheon.

What have been the long-term effects of the Roman arch, vault, and dome? Consider the grandeur of Gothic cathedrals such as Chartres in France, the majesty of the Taj Mahal in India, and the stateliness of the U.S. Capitol building in Washington, D.C. None of these structures would have been possible without the arch, vault, and dome. Indeed, many of the buildings you visit in your daily life may have some of these architectural elements.

The Roman arch solved an important problem by being able to support a large amount of weight. As a result, it enabled people to build larger and more varied buildings. The spread of the Roman arch and its cousins, the vault and dome, has had a lasting impact on architecture throughout the world.

Organization

An outline can help you organize your problem-and-solution composition. Your outline should begin with an introduction and end with a conclusion. The introduction creates interest and states the **thesis**—the main idea. After the introduction, explain the effect of an instance of cultural borrowing. Then, analyze how what was borrowed solved or created a problem and provide evidence to support your position. How will you outline your essay?

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I. INTRODUCTION

Ancient Rome achieved many great accomplishments that have influenced numerous cultures. Elements of Roman law have been adopted by various governments, including the United States. Roman literature, such as the *Aeneid*, is still read today. This paper will examine the cultural influence of the Roman development of the arch, a supporting structure in building construction that could carry a lot of weight.

thesis

An arch is a curved structure that is usually made of stone, brick, concrete, or, more recently, steel. Its purpose is to support or strengthen a building. Most arches consist of wedge-shaped blocks. The top center stone, called the keystone, is the last block to be inserted. During construction, arches are often supported by a wooden frame. When the frame is removed, both sides of the arch press against the keystone and thereby support the arch.

II. IDENTIFICATION OF A PROBLEM

The Romans did not invent the arch. Indeed, arches have been used since prehistoric times. The ancient Egyptians, Babylonians, and Greeks all used it. The purpose of the arch in these cultures, however, was limited to supporting small structures, such as storerooms, and people often used columns to support the roof. This design limited the size and scope of a building. As a result, builders could not construct extremely large palaces or government buildings.

III. SOLUTION

The ancient Romans created an arch that could support huge amounts of weight. How did the Romans accomplish this? The answer lies with a material called concrete. Using a mixture that included lime and volcanic sand, the Romans created a very strong and durable type of concrete. Arches made of this substance could support a lot of weight. As a result, Romans were able to build massive structures, such as aqueducts, which provided water to cities. The Roman arch freed architects to explore different and larger structures.

IV. EFFECTS OF CULTURAL BORROWING

A. ON THE RECEIVER

Soon several cultures adopted the Roman arch. Both Byzantine architects in Eastern Europe and Romanesque architects in Western Europe used it constantly. Other cultures adapted the Roman arch and developed it further. For example, in the Arab world, Muslim architects developed pointed, scalloped, and horseshoe arches, which they used for mosques and palaces. The borrowing and modification of the Roman arch meant that the architecture of ancient Rome would have a lasting impact.

B. ON THE GIVER

The Roman arch solved the problem of arches not being able to support large amounts of weight. The Roman arch also caused the Romans themselves to make further architectural developments. They combined arches to form ceilings or roofs called vaults. The Romans also used the principles of the arch to form a hemispherical ceiling or roof called a dome. An early example of a dome is the Roman Pantheon.

V. LONG-TERM OUTCOMES OF CULTURAL BORROWING

What have been the long-term effects of the Roman arch, vault, and dome? Consider the grandeur of Gothic cathedrals such as Chartres in France, the majesty of the Taj Mahal in India, and the stateliness of the U.S. Capitol building in Washington, D.C. None of these structures would

have been possible without the arch, vault, and dome. Indeed, many of the buildings you visit in your daily life may have some of these architectural elements.

VI. CONCLUSION

The Roman arch solved an important problem by being able to support a large amount of weight. As a result, it enabled people to build larger and more varied buildings. The spread of the Roman arch and its cousins, the vault and dome, has had a lasting impact on architecture throughout the world.

Supporting Evidence

Evidence in the form of details and examples is necessary to support your position. What **details** and **examples** will you include in your composition?

The ancient Romans created an arch that could support huge amounts of weight. How did the Romans accomplish this? The answer lies with a material called concrete. Using a mixture that included lime and volcanic sand, the Romans created a very strong and durable type of concrete. Arches made of this substance could support a lot of weight. As a result, Romans were able to build massive structures, such as aqueducts, which provided water to cities. The Roman arch freed architects to explore different and larger structures.

details

Soon several cultures adopted the Roman arch. Both Byzantine architects in Eastern Europe and Romanesque architects in Western Europe used it constantly. Other cultures adapted the Roman arch and developed it further. For example, in the Arab world, Muslim architects developed pointed, scalloped, and horseshoe arches, which they used for mosques and palaces. The borrowing and modification of the Roman arch meant that the architecture of ancient Rome would have a lasting impact.

examples

Development of Ideas

In well-written compositions, **ideas** are clearly and logically presented. Notice in the example how each idea builds on the one before it.

(1) The Roman arch also caused the Romans themselves to make further architectural developments. **(2)**They combined arches to form ceilings or roofs called vaults. **(3)**The Romans also used the principles of the arch to form a hemispherical ceiling or roof called a dome. **(4)**An early example of a dome is the Roman Pantheon.

development of ideas

Sentence Variety

The example below contains **statements**, **questions and answers**, and **short** and **long** sentences. The beginnings of sentences are different. Below is the complete passage followed by the labeling of the different parts.

The ancient Romans created an arch that could support huge amounts of weight. How did the Romans accomplish this? The answer lies with a material called concrete. Using a mixture that included lime and volcanic sand, the Romans created a very strong and durable type of concrete. Arches made of this substance could support a lot of weight. As a result, Romans were able to build massive structures, such as aqueducts, which provided water to cities.

The ancient Romans created an arch that could support huge amounts of weight. — **statement**

How did the Romans accomplish this? The answer lies with a material called concrete. — **question and answer**

Using a mixture that included lime and volcanic sand, the Romans created a very strong and durable type of concrete. — **Beginning of sentence. Vary how sentences begin. Instead of using "The"—"The Romans created . . .", begin with "Using"—"Using a mixture that . . ."**

Arches made of this substance could support a lot of weight. — **short sentences**

As a result, Romans were able to build massive structures, such as aqueducts, which provided water to cities. — **long sentences**

Word Choice

Precise **words** help the reader to picture, or visualize, what is being described. Choose words that will make the writing more interesting to read.

What have been the long-term effects of the Roman arch, vault, and dome? Consider the grandeur of Gothic cathedrals such as Chartres in France, the majesty of the Taj Mahal in India, and the stateliness of the U.S. Capitol building in Washington D.C. None of these structures would have been possible without the arch, vault, and dome. Indeed, many of the buildings you visit in your daily life may have some of these architectural elements.

word choice