

## Letter to the Editor

## Burnt City and the Evolution of Cognitive Science

Abdorreza Naser Moghadasi, MD<sup>1\*</sup><sup>1</sup>Multiple Sclerosis Research Center, Neuroscience institute, Tehran University of Medical Sciences, Tehran, Iran**Dear Editor,**

Human development and the nature of his perception toward the surrounding world have undergone the great changes. According to the evidences found in the Burnt City (Shahr-e Sukhteh), Sistan and Baluchistan, Iran, it can be theorized that the civilization of the Burnt City has had the approximated theoretical and conceptual perception of the outside world to some extent. Theoretical perception is resulted from the surrounding world abstraction. Abstraction forms when human brain can pass the visual perception level and reach the abstract and conceptual perception. In fact, conceptualization and finding common roots among different processes in the universe is the basis for theoretical and philosophical perception of the universe.

As the possibility of a theory on visualization in the Burnt City was mentioned earlier,<sup>1</sup> here further information is provided in the following. The archeology team supervised by Dr. Seyed Mansour Sajjadi, found the first ruler of the world with the precision rate of 1 mm and the length of 10 cm (Figure 1).<sup>2</sup> It is quite interesting that, such a ruler is capable to indicate a type of perception regarding the concept of measurement with significant precision.

From a scientific perspective, “concept” refers to some kind of abstraction of our daily experiences, making us (humans) capable to classify according to abstract, non-objective features of the things or experiences. Conceptualization is very important for cognitive activities

like memory, learning and decision-making. It is not known that, when the human brain could process the first roots of conceptualization. However, if the development of the ideas can be explained in the most basic level directly related to the brain’s function, then it would be understandable that, at least a part of the ideas are resulted from human brain evolution in contact with the outside world and not as a result of a philosophical-analytical thought. It is assumed that, the Burnt City can reveal some parts of this puzzle. The previously mentioned ruler with 1mm precision shows that the idea and concept of dividing one unit into smaller ones had been established. There is an exclusive example of the Burnt City, evidently arguing the evolution of the mentioned concept at a considerably high level. The first animation of the world belongs to the Burnt City.<sup>2</sup> It has been drawn on a bowl picturing a goat moving toward a tree, and eating the leaves (Figure 2). As said earlier<sup>1</sup> the value of the animation is implied in its conceptual perception, i.e. one image loses its continuous mode in human mind, and it divides into smaller images. This is not the result of the visual deficiency or a problem in cognitive processing, but this happens due to the evolution of a conceptual perception regarding the concept of movement, through which a specific unit of location can be divided into several smaller ones. There is the same idea behind both the ruler and the animation discovered in the Burnt City. This may be regarded as a basic philosophical



**Figure 1.** The First Ruler Found in Burnt City.  
Source: <http://wikimapia.org/31637910/Shahr-e-Sukhteh>.



**Figure 2.** The First Animation of the World Belongs to the Burnt City. (Photo was taken by author).

concept for subsequent ideas on “movement”. The exceptional and outstanding features of the Burnt City civilization were previously mentioned.<sup>2-4</sup> There have been several examples in archeological excavations of the Burnt City indicating the direct and active interaction between human brain and the surrounding world. Therefore, the Burned City civilization can be considered among the valuable signs of the cognitive evolution of the brain in human species.

#### Conflict of Interest Disclosures


None.

#### Ethical Statement

Not applicable.

Received: April 22, 2019, Accepted: June 9, 2019, ePublished: August 1, 2019

**Cite this article as:** Naser Moghadasi A. Burnt City and the evolution of cognitive science. Arch Iran Med. 2019;22(8):480-481.

 © 2019 The Author(s). This is an open-access article distributed under the terms of the Creative Commons Attribution License (<http://creativecommons.org/licenses/by/4.0>), which permits unrestricted use, distribution, and reproduction in any medium, provided the original work is properly cited.

#### References

1. Moghadasi AN. Artificial eye in Burnt City and theoretical understanding of how vision works. Iran J Public Health. 2014;43(11):1595.
2. Sajjadi S, Casanova M, Costantini L, Lorentz K. Sistan and Baluchistan Project: Short reports on the tenth campaign of excavations at Shahr-i Sokhta, Iran. Journal of the British Institute of Persian Studies. 2008;46(1):307-34.
3. Moghadasi AN. The Burnt City and the Evolution of the Concept of “Probability” In the Human Brain. Iran J Public Health. 2015;44(9):1306.
4. Moghadasi AN. First skull surgery in Iran: The Burned City and a 4800-year-old skull. Iran J Public Health. 2014;43(2):249.