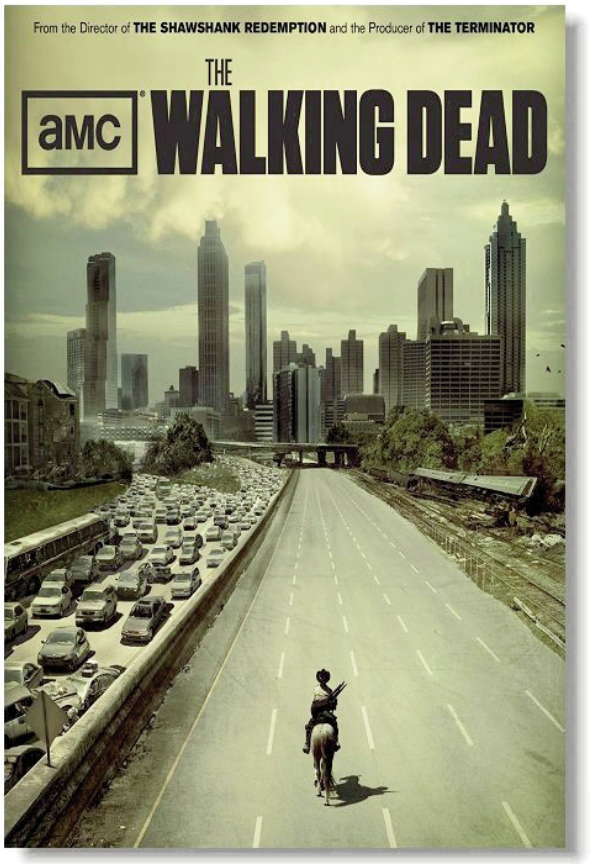
What neuroscience said in the zombie apocalypse: "The Walking Dead" TS-19 (2010)



American poster.

Technical Details

Original title: ***TS-19.***
Country: USA.
Year: 2010.
Director: Guy Ferland.
Music: Bear McCreary.
Photography: David Boyd.
Film editor: Hunter M. Via.
Screenwriter: Frank Darabont, Robert Kirkman, Tony Moore, Charlie Adlard, Adam Fierro. Based on the comic book series by Robert Kirkman.
Cast: Andrew Lincoln, Jon Bernthal, Sarah Wayne Callies, Laurie Holden, Jeffrey DeMunn, Steven Yeun, Chandler Riggs, Norman Reedus, Noah Emmerich, Melissa McBride, Jeryl Prescott, Irone Singleton, Madison Lintz,…
Color: Color.
Rumtime: 45 minutes.
Genre: Drama, Horror, Sci-Fi.
Language: English.
Production Companies: American Movie Classics (AMC), Circle of Confusion, Valhalla Entertainment, Darkwoods Produc-tions, AMC Studios.
Synopsis: "Having been allowed into the CDC building, the survivors meet Dr. Edwin Jenner who appears to be the only survivor in the facility. Dr. Jenner shows them how the infection works to reanimate a dead corpse but admits that he hasn't been able to make any advance on defeating it. Despair sets in at the realization that there is no cure for the plague that has enveloped them." (IMDb).
Available: *The Walking Dead* Season 1 (DVD). American Movie Classics; 2010.
Comment: "TS-19" is the sixth episodeof the first season of the television series The Walking Dead.
Link:
https://www.imdb.com/title/tt1628068
https://www.filmaffinity.com/pe/film561333.html

Trailer

A person before the collapse.

The beginning of brain death.

Brain death.

The zombi brain. A brainstem.

It is our conviction that the elements of modern culture can be useful to teach and learn serious questions of human medicine. We will apply this principle to the case of neuromorphophysiology.

For example, when we speak in spanish, usually say "cerebro" (cortex or cerebrum) to what we might say "encéfalo" (brain). Brain is the part of the nervous system that is inside the skull. We say: "brain" is not "cerebro", a better translation for "brain" is "encéfalo". An application of this point is the translation of "decade of the brain" that, in Spanish, is known as "década del cerebro" but we suggest it could be better to say: "década del encéfalo" (although marketing doesn't like this proposition).

In particular, the cerebrum is a part of the brain, and specifically refers to the cerebral cortex, ergo: to the laminar and columnar structure of neuronal cells that are distributed in two hemispheres. Histologically, the cerebrum is the only part of the brain where a layered cytoarchitectural organization is found (in the rest of the brain there is a nuclear type organization, the same as in the spinal cord and, although in lesser complexity, in the great sympathetic chain). In summary, the brain is a biological innovation in the course of phylogeny that begins with mammals and reaches its climax with the human being at the time of founding society (at least 30 thousand years ago)[1].

In order to graph the structure of the brain, and to differentiate its nuclear (subcortical) level and its laminar (cerebral) level, we are going to refer to chapter 6 (called: "TS-19") of the first season of the series "The Walking Dead" set in full zombie apocalypse. To our knowledge, it is the first time that the cinema dares to show a neuroscientific explanation of the zombie. The chapter shows the recording of an MRI of a person (*TS-19*) sick with zombism, in the trance of dying and reviving as a zombie (which is in essence the great artifact of all zombie cinema, the foundational paradox of existing to a "living dead"). What is shown in the following sequence is the previous moment of collapse: the whole brain enjoys a luminous electrical activity (Figure 1); then the continuous and voracious brain death continues (Figure 2). Once the cerebrum is gone, the brainstem dies, which leads to the death of the brain in its entirety (Figure 3). At this moment: the series shows us (with cinematographic grace) a silence shared between all the characters, wrapping with this (and this is the magic of cinema) the spectators who feel death as a presence: the absent affective skeleton that weighs in the living death[2]. What follows (Figure 4) is the obvious: the "revival" zombie: that is sustained only on the activity of the brainstem (the most primitive part of the brain).

Referencias

1. Marín-Padilla M. The human brain: prenatal development and structure. Heidelberg: Springer-Verlag; 2010.
2. Contreras-Pulache H. Neurología Fílmica. Lima: UCH Fondo Editorial; 2016.

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