



# International Journal for Innovative Engineering and Management Research

A Peer Reviewed Open Access International Journal

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IJIEMR Transactions, online available on 30<sup>th</sup> November 2021.

Link: <https://ijiemr.org/downloads/Volume-10/Issue-11>

**DOI: 10.48047/IJIEMR/V10/I11/42**

Title: **FRAME REPRESENTATIONS AND BLENDS AS UNITS OF MODERN COGNITION.**

Volume 10, Issue 11, Pages: 267-269

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## FRAME REPRESENTATIONS AND BLENDS AS UNITS OF MODERN COGNITION.

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**Abstract:** The article describes the phenomenon of "frame representations" and "blends", their functioning in the language, and provides an explanation of the degree and frequency of use of these units in modern Russian and modern cognition. The semantic analysis of these concepts is carried out.

**Keywords:** frame, frame representations, blends, frame technologies, script, attribute, slot, slot name, slot value, semantic networks, sample frames, instance frames, prototype, communication, subframes, concept.

### Introduction

The frame model of knowledge representation was proposed in 1979 by the American scientist in the field of artificial intelligence M.Minsky as a knowledge structure for the perception of spatial scenes. Like the semantic network, this model of knowledge representation has a deep psychological justification.

In philosophy and psychology there is such a term as "abstract image". For example, if we take a word like apartment, then this concept evokes the following image for all listeners: a living room with windows, doors, floors, ceilings, walls and a certain area. We will not be able to remove anything from this description, since it will turn out to be a completely different concept, but it has "holes" or so-called "slots" – unfilled values of some attributes - the number of windows, the color of the walls, the height of the ceilings, the material from which the floors are made. In this theory, this abstract image is called a frame.

A formalized model for displaying an image is also called a frame.

The frame name is assigned as the frame identifier. In the entire frame system, the name should be the only one. Each frame has its own specific structure, which consists of many

elements called slots. Each lot is assigned its own names. Then the words are followed by variations, certain data of concepts representing the current values of slots are placed in them. Each slot, in turn, is represented by a specific data structure. In the value of a certain slot, specific information related to the object described by this frame is presented.

The frame structure can be represented as follows:

THE FRAME NAME is the NAME OF  
1 SLOT: THE VALUE OF THE 1-SLOT IS  
THE NAME OF THE 2-SLOT: THE VALUE  
OF THE 2-SLOT ... THE NAME OF THE NN  
SLOT: THE VALUE OF THIS SLOT

This theory can also be represented as a table that will display the following values:

Slot	name Slot value	Method of getting the value	Attached structure

If we are dealing with such a table, then two cells are added to it, which are intended to describe the way a slot receives its value and possible attachment to a particular slot of special procedures, which is allowed in frame theory. Also, in this case, the name of another

frame can act as a slot, in which case a frame network is formed.

There are two types of frames:

1. Sample frames. They are prototypes stored in a database
2. Frames are instances. These types of frames are created to display real events and situations based on incoming data.

Since the frame model allows us to display all the diversity of knowledge about the world, it is universal. We can display all this by means of:

- frame structures
- frame roles
- frame scripts
- frame situations

The most important property of frame theory is the inheritance of properties borrowed from the theory of semantic networks. Both in frames and in semantic networks, inheritance occurs by AKO-connections (A-Kind-Of = this). The AKO slot points to a frame of a higher level of the hierarchy, from which the values of similar layers are implicitly inherited, that is, transferred.

The slot value can be almost anything: numbers, shapes, natural language texts or programs, output rules or links to other slots of this frame or other frames. A set of lower-level slots can act as a slot value, which allows implementing the "mat-tails principle" in frame representations. Connections between frames are set by the values of a special slot named "Connection".

In general, the frame data structure may contain a broader set of information, which includes the following attributes:

- frame name
- slot name
- inheritance pointer
- data type pointer
- slot type value
- demons

- attached structure

Frame	Human
Slot name:	Slot value:
Class:	animal
Structural element:	head, neck, arms,...
Height:	30...220 cm
Weight:	1...200 kg
Tail:	no
Language:	Russian, English
Connection:	Monkey

Also in modern cognitive linguistics there is such a thing as blends.

Blend is one of the central concepts of the theory of conceptual integration of M. Turner and J. Fauconnier. A blend is a mental space resulting from the mixing or integration of two or more mental spaces. Although it inherits the structure and components from other mental spaces, it has its own characteristics that cannot be reduced to a simple sum of the properties of the "parent" spaces.

So, for example, if we take such a phrase as caffeine headache, two input spaces merge: the first space is structured by the CAFFEINE frame, the second by the HEADACHE frame. Blend inherits the structure of the second mental space: headache as a physical condition of a person, its symptoms and causes, and borrows from the first only the property "caffeine as an addictive stimulant. Moreover, it is the latter property that leads to significant changes in the structure and content of the blend: caffeine headache is a pain caused not by caffeine, but by its absence. In addition to the original mental spaces, a common mental space (generic space) is also involved in the process of creating a blend, which is more abstract in nature and serves as a base for combining the original mental spaces. In fact, he points to the generalized frame scenario that underlies the original mental spaces. In the above example, the general mental space will be structured by

an abstract frame: the effect of a certain substance on the human body.

If the theory of blends was originally used mainly to describe the processes of metaphorization, it is currently used to analyze a wide range of linguistic phenomena - from texts to word-formation models.

When certain brand models are formed, various kinds of relationships are built:

- causal
- identity relations
- relations of time, place, part-whole
- analogy-disanalogy relations
- copression-decompression relations

When it comes to modern cognitive linguistics and blends, currently blends can be divided into the following types:

- simple and mirrored blends that are the development of a single frame
- single-focus and two-focus, where the blend either borrows the frame structure from one source space, and individual elements from the second source space (single-focus), or inherits the structure and elements from both source spaces (two-focus).

It is also important that, although the configuration of the four mental spaces involved in the formation of the blends is compressed, access to each of them remains open. That is why speakers easily generate, interpret and modify blends.

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