

SECTION II. CURRENT PROBLEMS OF MORPHOLOGY

Olga Klymenko

УДК 811.111'367.625

EXPLICIT AND IMPLICIT WAYS OF RESOURCE ENCODING IN ENGLISH
PHYSICAL ACTIVITY VERBS

The paper deals with the analysis of information concerning the action resource in English verbs of physical activity. The action resource is understood as things, substances, energy, etc. the doer employs to succeed in carrying out the action directed at the object. The paper provides the resource classification as well as the ways the information about this action participant is given in the verb definition: implicit and explicit encoding. The research provides some statistics concerning the ways different resource components are specified in the definition of physical activity verbs. Some conclusions are derived concerning the tendencies in resource encoding in English verbs of physical activity.

Keywords: verbs of physical activity, the subject of the action, the object of the action, resource, instrument, means, implication, explication.

1. Introduction

The ability to encode the event with the set of its participants secures for the verb its central position in the lexical paradigm [Апресян 1995; Уфимцева 2011; Падучева 2004]. The verb semantics reflects different facets of relations between the action and its actants as well as the action characteristics. However, the verb definition doesn't highlight information about the event homogeneously some components being represented explicitly or implicitly.

In this paper we **address** the issue of resource encoding in English verbs of physical activity (PhAVs) definitions. The analysis carried out in this paper is supposed to shed light on the variability in resource encoding in the verb class under study. To outline the question posed above we **focus on** resource types available in the PhAVs definitions and the ways this action participant can be specified. The statistics of sample processing illustrates the main features of resource encoding in the PhAVs lexical entries. **The novelty** of the analysis rests on the treatment of the implicit components as the other action participants entailments. The action resource is treated as a complex semantic valency realized by a number of semantic actants. The research contributes to the general semantic theory providing some information on different ways of event components encoding in language units. The paper provides the model for semantic description of correlation between the action components and their reflection in the lexical entries.

The PhAVs are understood in this paper as verbs denoting physical actions purposefully carried out by the agent and directed at the object (consider examples (1-15)). The members of this subclass are associated with such semantic properties as agentivity, purposefulness, causativity, physical contact of the agent with the object. The minimum semantic model of PhAVs includes the subject (the one who acts) and the object (something or someone acted upon). Among the optional participants we find the resource – some objects, substances or power the agent engages in the action to achieve the aspired effect, e.g.:

(1) *to mop – to wash a floor using a mop*¹.

In (1) the doer performs the action *to wash* directed at the object *floor*. To carry out the action the doer involves an object *a mop* mentioned in the definition and some substance *water* the

¹ Here and further the definitions are cited from Macmillan English Dictionary for Advanced Learners (consider the Sources and Abbreviations).

presence of which is inferred from the information about the basic operation in this situation *to wash*. Thus, the resource of the action in (1) includes a mop and some water.

The relationship between the verb meaning and the encoded event structure has received substantial attention. With the basics of relational grammar outlined by L. Tesnière in the first half of the XXth c. [Теньер 1988] this issue was highlighted in terms of semantic syntax foregrounding the predicate and its arguments bearing certain semantic roles. The assortment of roles and their interpretation varies depending on the focus of the research. Among the commonly cited concepts we find the Fillmore's case frame theory [Филлмор 1981], the semantic and syntactic verb governing models by Ju. Апресян [Апресян 1995], the diatheses theory by A. Holodovych [Холодович 1969], thematic roles by David R. Dowty [Dowty 1991], linking rules by B. Levin and M. Rappaport Hovav [Levin, Rappaport Hovav 1997].

Though being extensively covered the issues of correlation between lexical semantics and syntax continues to pose a challenge for linguistic theory. A lot of open questions are found in the sphere of implicit information in the verb semantics. In this respect the ways of the action resource encoding present a fertile exploration ground and justify the relevance of the present research.

2. Resource Types in the PhAVs

The analysis of 1600 PhAVs definitions revealed a variety of resource types the basic two being instrument and means. These semantic roles can be found in some semantic roles inventories [Апресян 1995; Alexiadou, Schäfer 2006; Kaliuščenko 1988]. Ju.D. Апресян draws a line between the two roles featuring the means as something which is exhausted or spent [Апресян 1995: 76]. V.D. Kaliushchenko mentions that a number of German verbs derived from nouns are characterized by some semantic elements specifying the instrument or the means of the action denoted by the verb [Kaliuščenko 1988: 54].

In the present paper the instrument and means are treated as the two main types of the action resource the former being something the doer operates in the course of action (a mop in (1)) and the latter being something the doer uses (water in (1)). Each resource type can be further divided into a number of subtypes.

2.1. Instrument Subtypes in the PhAVs Definitions. The sample analysis revealed the following instrument subtypes:

2.1.1. Instruments Which do not Take Energy. Within this subtype we find the two varieties:

Tools – objects which are usually held in hand in the course of action, e.g.:

(2) *to saw* – *to cut something with a saw*.

Devices – sets of objects or details working together, some mechanisms which may be fixed on the ground and set in action by the agent, e.g.:

(3) *to weave* – *to make cloth ... on a machine called a loom*.

2.1.2. Instruments Which Take Energy. Here belong appliances whose work involves energy transformation, e.g.:

(4) *to blow-dry* – *to dry your hair with a hairdryer*.

2.2. Means Subtypes in the PhAVs Definitions. The sample analysis revealed the following Means subtypes:

2.2.1 Energy – some power affecting the object directly or via the appliance e.g.:

(5) *to burn* – *to damage or destroy something with fire*.

2.2.2. Substance – liquid, gas, oil, etc. engaged in the action, e.g.:

(6) *to bottle-feed* – *to feed a baby with milk from a bottle ...*

2.2.3. Things – objects used to carry out the action, e.g.:

(7) *to bandage* – *to wrap a bandage around an injured part of your body*.

3. The Amount of Information about the Resource in the PhAVs Definitions

The information amount criterion made it possible to single out two ways of resource encoding in PhAVs lexical entries: explication and implication.

3.1. Resource Explication in the PhAV Definition. The resource explication may be taxonomic or descriptive. In case of taxonomic explication the resource component is named, its class being specified, e.g.:

(8) *to whip – to hit someone with a whip*

In descriptive explication some features of the resource component are specified, e.g.:

(9) *to prick – to make a very small hole in the surface of something with a sharp object*

Unlike example (8) with taxonomic explication in the PhAV entry (9) the class of the tool is not specified though it is described as being *sharp*. Thus example (9) illustrates descriptive resource explication.

3.2. Resource Implication in the PhAVs Definition. Resource implication is based on the associative logical inferences of action participants from the information about other participants given explicitly, e.g.:

(10) *to boil – to cook food in water that is boiling*

In example (10) the means of the action *water that is boiling* is explicated. Logical processing of the situation brings in the focus of attention two more resource components: energy with which the water is heated and the container in which this water is placed. The action denoted by the verb is impossible to carry out without the two resource components mentioned above. Thus we may say that energy and container are the implicitly encoded resource components.

4. The Ways of Resource Implication in the PhAVs Definition

The analysis carried out revealed four ways of resource implication in the PhAVs definitions. Resource components can be associated with an object of the action, operations performed during the action and they can also specify each other.

4.1. Resource Implication through the Object of the Action. The instrument or the means of the action can be inferred from certain features of the object of the action e.g.:

(11) *to skim – to remove a substance that is floating on the surface of a liquid.*

Example (11) does not explicate the instrument involved in the action. Anyway the physical properties of the object of the action – *liquid* – suggest that the action can not be carried out without a special instrument such as a spoon or a skimmer. So we may say that the instrument is determined by the object of the action.

4.2. Resource Implication through the Operations Carried out in the Action. The instrument or the means of the action can be inferred from the operations performed in the course of the action, e.g.:

(12) *to tunnel – to dig a tunnel;*

(13) *to tack – to stitch pieces of cloth together with long loose stitches.*

Though being not specified in examples (12), (13) the resource can be inferred from the operations defining the action: *to dig* (12), *to stitch* (13). The operation *to dig* (12) implies a spade, a shovel, an excavator, etc.. The action *to stitch* implies a needle as an instrument and some thread as a means. Thus we may say that the resource can be implied by the operations carried out in the action.

4.3. The Instrument Implication through the means. Mentioned in the definition the means of the action can imply the instrument, e.g.:

(14) *to riddle – to make a lot of holes in someone or something, especially with bullets.*

In example (14) the specified means of the action *bullets* implies the instrument *a gun*.

4.4. The Means Implication through the Instrument. The means of the action can be inferred from the instrument specified in the definition, e.g.:

(15) *to write – to use a pen to make words, numbers or symbols.*

In example (15) the instrument *a pen* is explicated in the definition. Knowing the structure of this instrument we can say that a sort of ink is used together with it.

It has become clear in course of the sample analysis that the instrument of the action is encoded in 1218 PhAVs entries:

SECTION II. Current Problems of Morphology

Table 1. Instrument Encoding in the English Physical Activity Verbs

	Instrument Type	Explication in the Verb Entry	Implication in the Verb Entry
	A Tool	<i>to crochet, to mop, to brush, to chisel, to fork, etc.</i>	<i>to bury, to whittle, to carve, to darn, to flay, to reap, to manicure, to scale, etc.</i>
Quantity of examples found		430 (35,3%)	406 (33,3%)
	An Appliance Taking Energy	<i>to blow-dry, to print, to spotlight, to whizz, to microwave, etc.</i>	<i>to rewind, to x-ray, to quick-freeze, to weld, etc.</i>
Quantity of examples found		198 (16,3%)	83 (6,8%)
	A Device	<i>to shoot, to winch, to snare, to weave, etc.</i>	<i>to blast, to riddle, to shell, to torpedo, etc.</i>
Quantity of examples found		54 (4,4%)	47 (3,9%)
Total number of the PhAVs with the instrument component		1218 (100%)	

The research has shown that 989 sample examples contain information about different types of means engaged in the action:

Table 2. Means Encoding in the English Physical Activity Verbs

	Means Type	Explication in the Verb Entry	Implication in the Verb Entry
	Substance	<i>to cast, to douse, to anoint, to baste, to dilute, to fumigate, to flour, to French polish, etc.</i>	<i>to brew, to moisten, to baste, to bath, etc.</i>
Quantity of examples found		338 (34,2%)	124 (12,5%)
	Thing	<i>to staple, to bandage, to brace, to clamp, to cork, to wedge, to floss, to tack, etc.</i>	<i>to bind, to bale, to bundle, to suspend, etc.</i>
Quantity of examples found		198 (16,3%)	255 (25,8%)
	Energy	<i>to shock, to steam, etc.</i>	<i>to brand, to reheat, to temper, etc.</i>
Quantity of examples found		54 (4,4%)	132 (13,3%)
Total number of the PhAVs with the means component		989 (100%)	

5. Conclusion

The analysis of 1600 English verbs of physical activity made it possible to outline some tendencies concerning the ways they encode information about the resource of the action. The conclusions derived from the research carried out are as follows:

5.1. The resource valency in PhAVs is realized by the instrument and means semantic actants. Within the instrument the following subtypes can be singled out: a tool, a device, an appliance. The means resource type embraces energy, substance, a thing.

5.2. Resource components can be encoded in the PhAVs explicitly and implicitly. Being explicated the resource components are specified in the taxonomic or descriptive ways. Implicit encoding rests on the logical associative connection with the other action participants.

5.3. Explicit resource encoding prevails in the PhAVs entries (Tables 1, 2).

5.4. The most frequently specified instrument subtype in the PhAVs is the tool (Table 1). The most frequently specified means subtype is substance (Table 2).

5.5. Instruments and means commonly used in the real action are not explicated in the verb definition but find the implicit encoding. This ventures an assumption that the less common the resource in the real situation of action the higher the precision of its description in the lexical entry. In this reference the data obtained in the course of analysis position the tool and the means as the most variable classes of material objects engaged in physical activity.

The research of the correlation between the way the resource components are encoded in the verb meaning and their syntactic realization.

References

Апресян 1995: Апресян, Ю.Д. Лексическая семантика (синонимические средства языка). – 2-е издание, исправленное и дополненное [Текст] / Ю. Д. Апресян. – М.: Наука, 1995. – 367 с. – Библиогр.: с. 346-442.

Падучева 2004: Падучева, Е.В. Динамические модели в семантике лексики [Текст] / Е. В. Падучева. – М.: Языки славянской культуры, 2004. – 608 с. – Библиогр.: с. 539-570.

Теньер 1988: Теньер, Л. Основы структурного синтаксиса [Текст] / Л. Теньер. – [Пер. с франц.]. – М.: Прогресс, 1988. – 656 с. – Библиогр.: с. 623-627.

Уфимцева 2011: Уфимцева, А.А. Типы словесных знаков. – Изд. третье [Текст] / А. А. Уфимцева – М.: Едиториал УРСС, 2011. – 208 с.

Филлмор 1981: Филлмор, Ч. Дело о падеже / Ч. Филлмор [Пер. с англ.] // Новое в зарубежной лингвистике [общая редакция В. А. Звегинцева]. – М.: Прогресс, 1981. – С. 369-496.

Холодович 1969: Холодович, А.А. Типология каузативных конструкций. Морфологический каузатив [Текст] / А. А. Холодович. – Л.: Наука, 1969. – 311 с.

Alexiadou, Schäfer 2006: Alexiadou, A., Schäfer, F. Instrument Subjects are Agents or Causers [Text] / Artemius Alexiadou, Florian Schäfer // Proceedings of the 25th West Coast Conference on Formal Linguistics. – Somerville, MA: Cascadia Proceedings Project, 2006. – Pp. 40-48.

Dowty 1991: Dowty, D.R. Thematic proto-roles and argument selection [Text] / David R. Dowty // Language. – 1991. – Vol. 67. – No 3. – Pp. 547-619.

Kaliuščenko 1988: Kaliuščenko, V.D. Deutsche denominales Verben [Text] / Vladimir D. Kaliuščenko. – Tübingen: Narr, 1988. – 180 S.

Levin, Rappaport Hovav 1997: Levin, B., Rappaport Hovav, M. Lexical Semantics and Syntactic Structure [Text] / Beth Levin, Malka Rappaport Hovav // The Handbook of Contemporary Semantic Theory. – Blackwell Publishers, 1997. – Pp. 487-507.

Van Valin 2001: Van Valin, R.D. An Introduction to Syntax [Text] / Robert D. Van Valin. – Cambridge University Press, 2001. – 236 pp.

Vendler 1957: Vendler, Z. Verbs and times [Text] / Zeno Vendler // The Philosophical Review – 1957. – Vol. 66. – No 2. – Pp. 143-160.

Sources and Abbreviations

Macmillan English Dictionary for Advanced Learners (MEDAL) CD-ROM 2nd Edition [Text]. – CD-ROM © Macmillan Publishers Limited 2007. Text © A&C Black Publishers Ltd 2007.

У статті досліджується один з аспектів семантики дієслів фізичної діяльності, а саме – віддзеркалення в їх тлумаченні інформації про ресурс дії. Під ресурсом дії

SECTION II. Current Problems of Morphology

розуміються предмети, речовини, енергія тощо, які виконавець залучає для досягнення необхідного ефекту по відношенню до об'єкта дії. У дослідженні подана класифікація аналізованого учасника дії, розглядаються різні типи представлення ресурсних компонентів в дефініції дієслів фізичної діяльності: імплікація та експліцитна конкретизація. Наводяться дані про частотність представлення різновидів ресурсу за допомогою різних типів конкретизації у словниковій статті. На підставі отриманих результатів зроблені висновки про основні тенденції конкретизації ресурсу дії в англійських дієсловах фізичної діяльності.

Ключові слова: дієслова фізичної діяльності, суб'єкт дії, об'єкт дії, ресурс, інструмент, засіб, імплікація, експлікація.

Available 20 September 2013.