



Actional properties of verbs in learner's dictionaries' entries

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ELEX 2023: ELECTRONIC LEXICOGRAPHY IN THE 21ST CENTURY

1. Introduction: a few examples

run, walk

*As a child I liked to **run** / **walk** in the woods.*

*As soon as I received your call I **ran** / **walked** over to you.*

rennen, laufen

*Als Kind bin ich gerne durch den Wald **gerannt** / **gelaufen**.*

*Gleich nachdem ich deinen Anruf erhalten habe, bin ich zu dir **gerannt** / **gelaufen**.*

correre

*Da bambino mi piaceva **correre** nei boschi.*

*Appena ricevuta la tua telefonata sono **corso** subito da te.*

camminare

*Da bambino mi piaceva **camminare** nei boschi.*

*Appena ricevuta la tua telefonata ho **camminato** subito da te.*

Example one after Hoepli, *camminare*

Example two after Treccani, *correre*

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*Da bambino mi piaceva **camminare** nei boschi.*



~~*Appena ricevuta la tua telefonata ho **camminato** subito da te.*~~

Example one after Hoepli, *camminare*

Example two after Treccani, *correre*

2. What are actional properties of verbs?

Verbal aspect

- temporal structuring of situations regarding **boundaries (and phases)**
- disagreement about conceptual structure and role of certain linguistic devices

Sasse, 2002, p. 201;
Dessi Schmid, 2014, p. 48

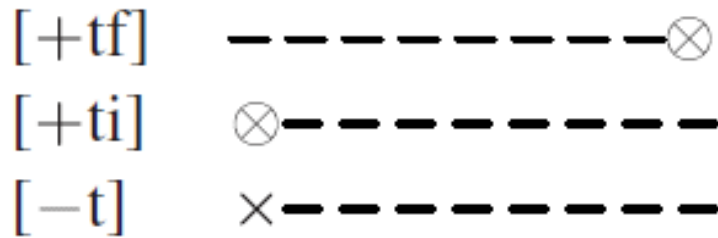
Situational characteristics/Actionality/Aktionsart

- here: one area of verbal aspect
- lexical semantic property of verbs and verb phrases

For an overview see:
Sasse, 2002; Filip, 2012

2. What are actional properties of verbs?

Johanson (1971, 1996, 2000, p. 59)



[+tf]: actional content has a crucial limit at the end
(cursus may be more or less relevant) (pp. 60f.)

[+ti]: crucial limit at the beginning, state follows (pp. 62f.)

[-t]: no crucial limit is expressed (p. 64)

Vendler (1957)

Accomplishment: *to draw a circle*,
an activity that leads to a „terminal point“ (p. 145)

Achievement: *to win a race*,
occurs in „single moments of time“ (p. 146)

Activity: *to run*, „processes going on in time“,
„successive phases following one another“ (p. 144)

State: *to love*,
„may be predicated of a subject for a given time“ (p. 146)

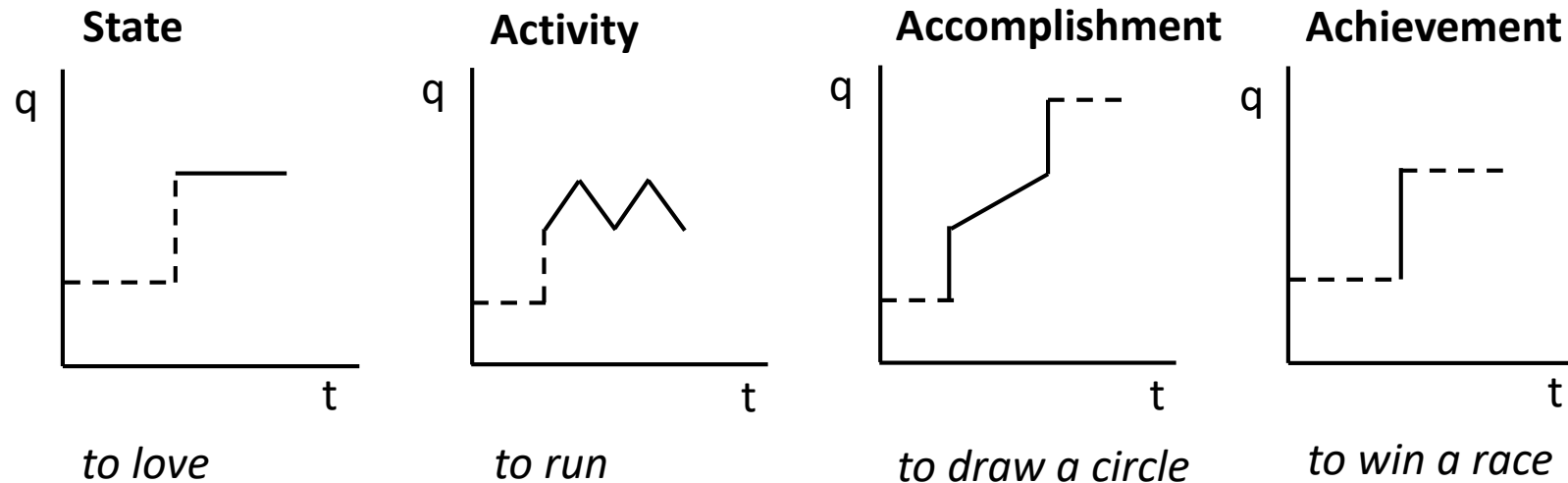
> commented/modified by Mourelatos (1978); Dowty (1979);
Verkuyl (1993); Kratzer (1995); Rothstein (2004); Croft (2012)...

2. What are actional properties of verbs?

- actional properties arise from the verb and its surrounding
- they are properties of expressions, not situations themselves
- every meaning of a verb may have unique actional properties
- actional classes describe typical instances of verb meanings

Croft's (2012) "two-dimensional geometric analysis of aspectual types"

q-axis: qualitative properties (change), t-axis: time, solid lines: in focus



Croft, 2012, pp. 57–63

3. Why are actional properties relevant for dictionaries?

definitions of *camminare*

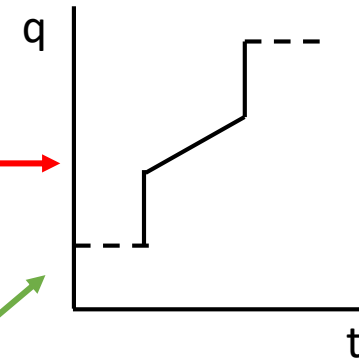
Treccani: “**1.** Spostarsi, andare a piedi da un punto a un altro”
[to move, to go on foot from one place {/point} to another]

Hoepli: “**1** Spostarsi a piedi da un luogo a un altro”
[to go on foot from one place to another]

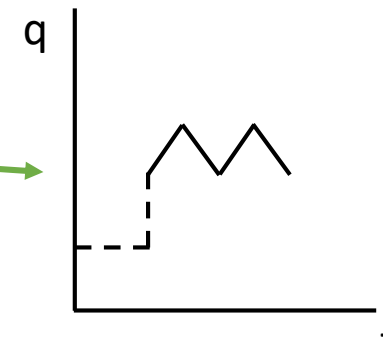
meaning 1 of *rennen* in LGDaF

★ **rennen** <rannte, hat/ist gerannt> ■ v/i **1** (irgendwohin) **rennen** (*ist*) sich schnell auf den Füßen fortbewegen (sodass beide Füße kurze Zeit in der Luft sind) <mit jemandem um die Wette rennen; um sein Leben rennen> ≈ *laufen* | *Er ist so schnell gerannt, dass er jetzt völlig außer Atem ist.* **2** irgendwohin rennen *gesprochen, abwertend (ist) im-*

Accomplishment



Activity



3. a. Actionality in existing dictionary entries – analysis

Areas of analysis: division into meanings, wording of definitions, choice of examples

Research questions:

- a) *Division into meanings:* Are there (distinctions between) meanings or groups of meanings that reflect actional properties?
- b) *Wording of definitions:* Are there semantic components in the definitions that refer to actional properties? Does the wording of the definitions match the actional properties of the respective examples?
- c) *Choice of examples:* Do the examples show a homogeneous actional content?

Verbs of movement, hierarchical selection criteria:

entity changes its location

non-figurative motion

a person's self-propelled motion

focus on the speed of motion

ENG: *walk, run* – **ITA:** *camminare, correre* – **GER:** *gehen, laufen, rennen*

3. a. Actionality in existing dictionary entries – analysis

German	English	Italian
Langenscheidt Großwörterbuch Deutsch als Fremdsprache – LGDaF (<i>learner, print</i>)	Oxford Advanced Learner’s Dictionary – OALD (<i>learner, online</i>)	Treccani Vocabolario on line – Treccani (<i>general, online</i>)
PONS Online-Wörterbuch Deutsch als Fremdsprache – PONS (<i>learner, online</i>)	Collins COBUILD Advanced Learner’s Dictionary – CCALD (<i>learner, online</i>)	Il Nuovo De Mauro – De Mauro (<i>general, online</i>)
Duden Onlinewörterbuch – Duden (<i>general, online</i>)	Cambridge English Dictionary – CED (<i>general, online</i>)	Dizionario Italiano Sabatini Coletti – DISC (<i>general, online</i>)
Digitales Wörterbuch der Deutschen Sprache – DWDS (<i>general, online</i>)	Macmillan Dictionary – MD (<i>general, online</i>)	Grande Dizionario Hoepli Italiano – Hoepli (<i>general, online</i>)

3. a. Actionality in existing dictionary entries – analysis

Step 1: Systematisation of a verb's meanings among the four dictionaries = visualisation of (missing/partial) matches

Step 2: Assignment of actional properties according to definition and examples

Step 3: Comparison between the entries + analysis within entries (collection of phenomena for each verb)

Step 4: Categorisation of results

Dictionary 1		Dictionary 2		Dictionary 3		Dictionary 4	
Meaning 1		Meaning 1		Meaning 1 a)		Meaning 2	
Meaning 2		Meaning 3 a)		Meaning 1 b)		Meaning 1	
						Meaning 1a	
		Meaning 3 b)		Meaning 2		Meaning 4	
[...]							
				Meaning 6 b)			


3. b. Actionality in existing dictionary entries – results

Phenomena found in each area of analysis:

1) Division into meanings (variations of similar meanings)	2) Wording of definitions	3) Choice of examples
a) different actional properties are grouped together		
b) different actional properties are grouped together, but with sub-meanings		
c) different actional properties are conveyed by different meaning positions		

3. b. Actionality in existing dictionary entries – results

1) Division into meanings (variations of similar meanings)

a) grouped	b) grouped, sub-meanings	c) different meaning positions
<p>OALD, <i>run</i>, meaning 4:</p> <p>race</p> <hr/> <p>4 ★  [intransitive, transitive] to take part in a race</p> <ul style="list-style-type: none"> • run in something <i>He will be running in the 100 metres tonight.</i> • <i>There are only five horses running in the first race.</i> • run something <i>to run a marathon</i> • <i>Farah ran a fine race to take the gold medal.</i> 	<p>Duden, <i>laufen</i>, meaning 5:</p> <p>a) to take part in a race</p> <p>b) as a runner in a sporting competition / race, to complete it in a certain time</p> <p>c) in a sporting competition, to cover a certain distance</p>	<p>DISC, <i>correre</i>:</p> <p>Meaning 11, listed under A (intransitive verb uses):</p> <p>to participate in races</p> <p>Meaning 4, listed under B (transitive verb uses):</p> <p>to compete in and complete a race</p>
<p>= variation within the meaning, no explicit reference to actional properties</p>	<p>= sub-meanings, definitions refer to actional properties</p>	<p>= first distinction on gramm. grounds (actionally relevant, in definition)</p>

3. b. Actionality in existing dictionary entries – results

Phenomena found in each area of analysis:

1) Division into meanings (variations of similar meanings)	2) Wording of definitions	3) Choice of examples
	a) choice of verbal paraphrase to convey actional properties	
	b) presence/absence of additional material to indicate actional properties	
	c) reference to different actional properties within the meaning	
	d) general wording encompasses different actional properties	

3. b. Actionality in existing dictionary entries – results

2) Wording of definitions:

a) choice of verbal paraphrase to convey actional properties

Definition shows interpretation of the structure of the situation

correre ai ripari/ai rimedi

Hoeppli: „cercare immediata soluzione“ vs. **DISC:** „trovare in fretta una soluzione“
[to look for an immediate solution] [to quickly find a solution]

to run at > OALD: *Inflation was running at 26 percent.*

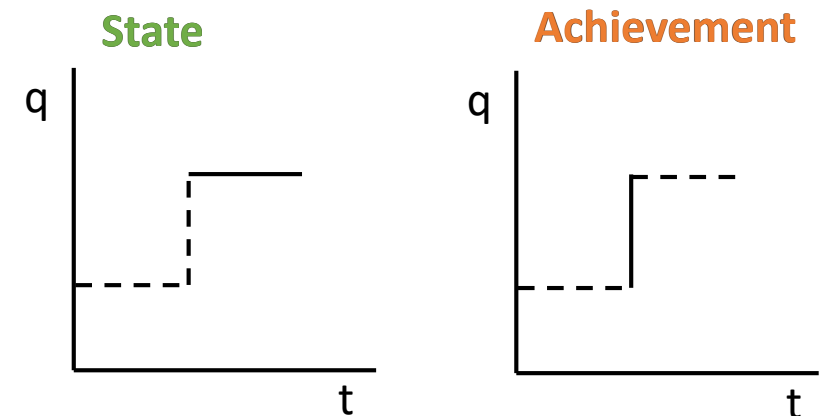
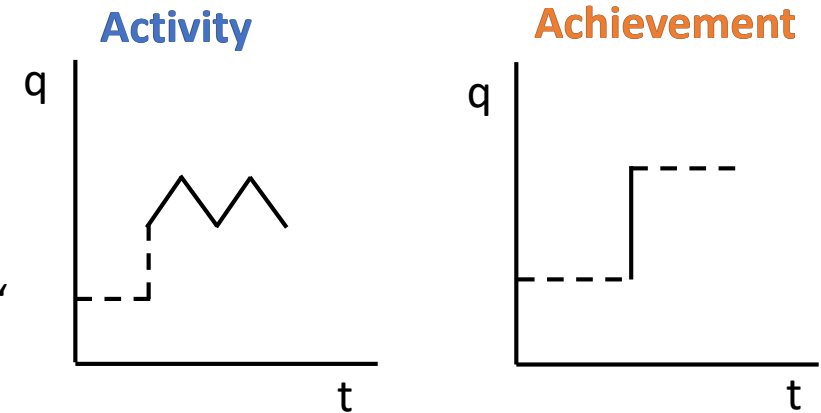
OALD: „to be near or at a particular level“

CCALD: „If an amount is running at a particular level, it is at that level.“

= paraphrase with **to be** as a state

CD: „to reach a particular amount or rate“

= paraphrase with **to reach** as an achievement (= change)



3. b. Actionality in existing dictionary entries – results

2) Wording of definitions:

b) presence/absence of additional material to indicate actional properties

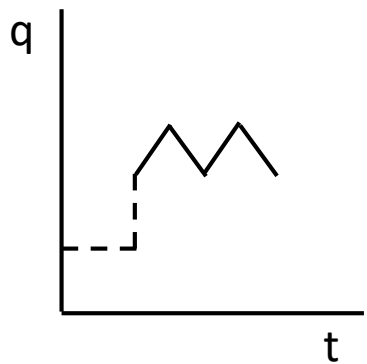
Er rennt mit jedem Kummer gleich zu seiner Mutter. [He runs to his mother for every little problem.] (PONS)

LGDaF: „immer wieder irgendwohin gehen“
[to go somewhere **again and again**]

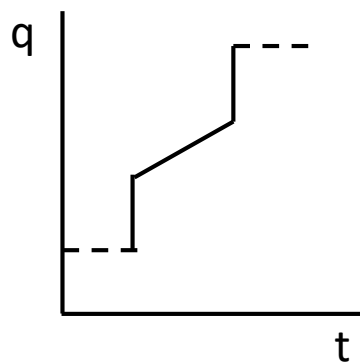
vs.

Duden: „sich zum Missfallen, Ärger o. Ä. anderer zu einem bestimmten Zweck irgendwohin begeben, jemanden aufsuchen“
[to go somewhere or to visit someone for a **certain reason**, to the **displeasure** of others]

Activity



Accomplishment



3. b. Actionality in existing dictionary entries – results

Phenomena found in each area of analysis:

1) Division into meanings (variations of similar meanings)	2) Wording of definitions	3) Choice of examples
		a) examples differ in actional properties from definition and/or other examples
		b) examples show the range of possibilities in actional properties

3. b. Actionality in existing dictionary entries – results

3) Choice of examples

a) examples differ in actional properties from definition and/or other examples

laufen in DWDS: „4. sich gleichmäßig bewegen“ [to move smoothly]:

ihre Finger liefen über die Tasten [her fingers ran over the keys]

der Faden läuft von der Spule [the thread runs off the bobbin]

die Erde läuft um die Sonne [the earth revolves around the sun]

! *der Dampfer ist auf Grund gelaufen* [the steamship has run aground]

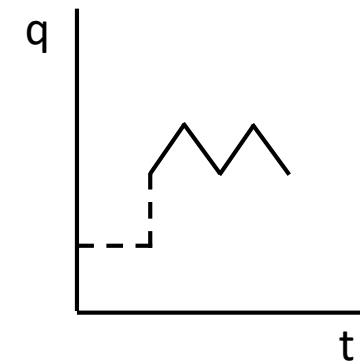
run in CCALD: „If a liquid runs in a particular direction, it flows in that direction.“

Tears were running down her cheeks.

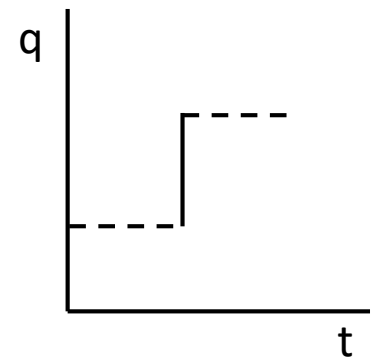
There were cisterns to catch the rainwater as it ran off the castle walls.

! *Wash the rice in cold water until the water runs clear.*

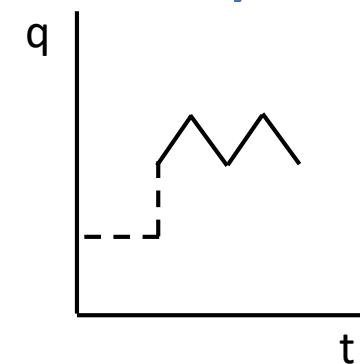
Activity



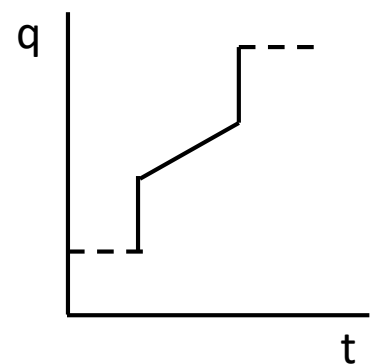
Achievement



Activity



Accomplishment



3. b. Actionality in existing dictionary entries – results

Summary and evaluation of the results

- actional properties necessary for correct representation of situations and for identification of necessary meaning components + different possibilities of situation configurations
- references to actional properties present > not systematic, **problematic cases**
- **dependent on dictionary design**, tendencies:
GER: explicit indication of sub-meanings / ENG: variation in examples / ITA: first distinction according to argument structure

1) Division into meanings	2) Wording of definitions	3) Choice of examples
a) different actional properties are grouped together	a) choice of verbal paraphrase to convey actional properties	a) examples differ in actional properties from definition and/or other examples
b) different actional properties are grouped together, with sub-meanings	b) presence/absence of additional material to indicate actional properties	b) examples show the range of possibilities in actional properties
c) different actional properties are conveyed by different meaning positions	c) reference to different actional properties within the meaning	
	d) general wording encompasses different actional properties	

4. Including actional properties in the PADs

Dictionary model: Phrase-based active dictionary (PAD)

Sinclair (i.a. 2003): each meaning of a word is associated with a pattern, observable in corpora (also postulated by Hanks (i. a. 2004))

Consideration only of „normal“ uses according to Hanks' (2013) *Theory of Norms and Exploitations*, exploitations may lead to new senses

Senses linked by cognitive relations (DiMuccio-Failla & Giacomini 2017)

Levels in the dictionary (DiMuccio-Failla & Giacomini 2022):

- 1. Lexeme level:**
base form of one or more lexemes + grammatical information
- 2. Phraseme level:** argument structure
with most general information on subject and object(s)
- 3. Sense Field level:** cluster of lexical units with similar senses,
on basis of shared collocates (often adverbials)
- 4. Lexical Unit level:** lexical unit + definition, collocations
and other information, may contain minor lexical units

agree \ə' gri:\n
VERB, REGULAR

▽ **to agree <with> <that / about/on>** (OPINION)
HAVE THE SAME OPINION (*)
1 to agree <with a gv. person> <on a gv. subject/topic/issue OR about a ct. ENTITY>...
1' to agree <with a gv. person> <that things are in a ct. way>:
2 to agree <with (/a ct. expression of) a ct. opinion (view/stance)/evaluation /idea>:

▽ **to agree <to (/do) sth.> / (on/upon) sth.** (EXPR. OF DECISION)
SAY YES TO A POSSIBILITY (*)
1 to agree <to do/'let happen' a requested/proposed/suggested thing>:
2 to agree <to a gv. request/proposal/suggestion>:
DECIDE TOGETHER (*)
3 Two/more people agree <to do a ct. thing> OR <to let a ct. thing happen> / <that a ct. thing (should)^[UK] happen>:
4 Two/more (/groups of) people agree (on/upon)^[US] a POSS. CHOICE (S.A. a price/date/time/plan):

▽ **sth. agrees with sth.** (CORRESPONDENCE)
MATCHES - IT: COMBACIA (*)
1 A gv. description agrees with another gv. description of the same thing:
2 A gv. word agrees with another gv. word:

▽ **sth. does not agree with sb.** (INFLUENCE)
HAS A BAD EFFECT (*)
1 A gv. thing does not agree with a gv. person:

Fig. 2: PAD entry of agree in DiMuccio-Failla & Giacomini (2022)

4. Including actional properties in the PADs

Future work

Actional properties are inherent in verbs, more precisely in their usage patterns

→ observable in corpora

In the dictionary:

- expressed within lexical units
- may distinguish lexical (sub) units



definitions need to reflect actionality

+ information representation must be adapted to the intended user: possibly use of images as in Croft

Actionality is language-specific

→ but valuable information from comparison between languages

Combination with aspectual features (verb conjugation → grammar)

▽ **to agree** <with> <that / about/on> (OPINION)
HAVE THE SAME OPINION (+)

1	to agree <with a gv. person> <on a gv. subject/topic/issue OR about a ct. ENTITY>...
1'	to agree <with a gv. person> <that things are in a ct. way>:
2	to agree <with (a ct. expression of) a ct. opinion (=view=stance)/evaluation /idea>:

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