

## The High-Level Metaphor in the Caused-motion Construction (extended abstract)

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### 1. Preliminaries

- In my talk I will analyse some instances of the caused-motion construction (Goldberg 1995, 2006) by applying the Lexical Constructional Model (<http://www.lexicom.es/drupal>) as has been developed by Ruiz de Mendoza Ibáñez and Mairal Usón (Ruiz de Mendoza 2005; Ruiz de Mendoza & Mairal 2006, 2007; Ruiz de Mendoza 2007; Mairal & Ruiz de Mendoza 2006, 2007).
- Constructions will be here conceived of not simply as “learned pairings of form with semantic or discourse function” (Goldberg 2005:5), but rather as the realization of “the concept of construction, understood as a free-standing theoretical entity” (González-García & Butler 2006: 83).
- The Lexical Constructional Model takes into account as many diverse areas as core grammar, pragmatics, and discourse. LCM arises from the necessity to investigate the relationship between grammar and the lexicon with a view to unifying features of three theoretical frameworks – functionalism, cognitivism, and constructionism – and to correlating instances of internal and external linguistics.
- My analysis will take into account some instances of the caused-motion construction as exemplified in (1) to (7):
  - (1) Will you please **show him into** the living room? (J.D.Salinger, *The inverted forest*)
  - (2) She **knocked him into** the thorny bed of roses (*Theatre News* 1978, vol. 6.1)
  - (3) I **blew the ant off** the plate (Talmy 1975:229)
  - (4) Fred **sneezed the tissue off** the table (Goldberg 1995:152)
- Even more interesting examples of the caused-motion construction are exemplified by expressions where an intransitive verb like *stare at*, *laugh at* undergo subcategorical conversion, that is the conversion of an intransitive verb to transitivity as in:
  - (5) He **stared me into** a half-confusion (S. Richardson, *Clarissa Harlow*)
  - (6) Hope was there, and **laughed me out** of sadness (Emily Brontë, *Death*)
  - (7) She was the charming woman who had **smiled me into** subjection (J.R.Scott, *The Colonel Red Huzzars*)
- I will discuss how meaning is constructed in the caused-motion construction and how it relates to Conceptual Metaphor (Lakoff & Johnson 1980, 1999).
- Further research will focus upon the correlation of such a construction with Force Dynamics (Talmy 1988), a topic that will be briefly discussed in the conclusive remarks.

### 1.2 The Caused-motion Construction

The caused-motion construction is said to point to the conflict that arises between lexical units and the grammatical construction in which they are embedded. It can be represented as follows:

$$X - \text{pred} - Y (= \text{NP}) - Z (= \text{PP})$$

where X is the causer, Y is the causee, the predicate is the causing event, and Z is the resulting event.

When applied to some verbs, the caused-motion construction is capable of adding further argumental structure to them. The construction and the verb in combination provide us with a richer representation than the one we can obtain from the parts, in a gestaltic fashion. With reference to the examples above:

- (1) to (4) point to the causative force needed to move something away from a place. The lexical item is subsumed into the construction, which thus ‘coerces’ the verb to shift its argument valency from one-place predicate (*I blew*) to a three-place predicate (*I blew the ant off the plate*) [Talmy 1975, 2000:37].
- (5) to (7) illustrate *subcategorical conversion* of intransitive verbs to transitivity. Here the verb does not make explicit the causative agent, the direction, and the type of force needed to carry out the motion action. The motion action can be concrete or metaphorical.

### 2. Lexical and constructional templates in the LCM

LCM aims to explain the multiple cases of argument realizations, assuming that constructions play a central role, and to identify the constraints that regulate the unification of the argument structure of a predicate and a construction, as illustrated below:

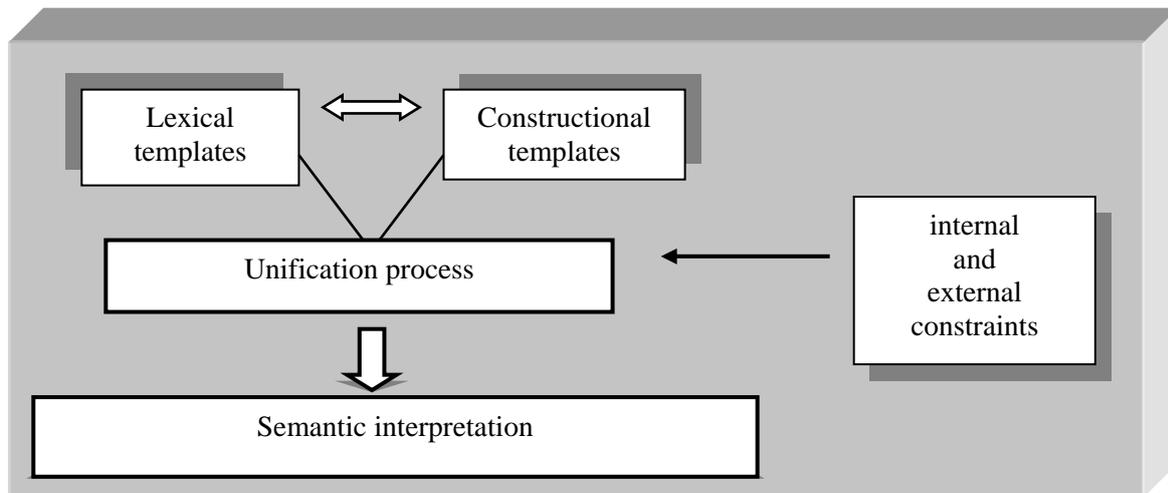


Figure 1. The core components of the Lexical Constructional Model

### 2.1 Lexical templates

A lexical template is a low-level semantic representation of the syntactically relevant content of a predicate.

(7) predicate: [SEMANTIC MODULE < lexical functions>] [AKTIONSPORT MODULE < semantic primes>]

This formalism assumes (a) the existence of small meaningful units encoding conceptual content, and (b) the necessity to identify an inventory of primes which must be epistemologically finite, systematic and internally consistent, and also capable of providing typologically valid lexical representations. For the identification of primes, the LCM draws on the lexicographic work carried out by Faber & Mairal 1999, and on the lexical domains they postulated (Table 2):

Lexical domain	Nuclear term
EXISTENCE	<i>be / happen</i>
CHANGE	<i>become</i>
POSSESSION	<i>have</i>
SPEECH	<i>say</i>
EMOTION	<i>feel</i>
ACTION	<i>do, make</i>
COGNITION	<i>know, think</i>
MOVEMENT	<i>move (go / come)</i>
PHYSICAL PERCEPTION	<i>see / hear / taste / smell / touch</i>
MANIPULATION	<i>use</i>

Table 2. *Lexical domains and nuclear terms*

The formalism in (7) encompasses (A) a semantic module and (B) an Aktionsart module:

A. paradigmatic lexical functions encode the semantic module that capture semantic and pragmatic parameters, which are idiosyncratic to the meaning of a lexeme and serve to distinguish one lexeme from the others within the lexical hierarchy in a stepwise fashion:

(8) PERCEPTION:

**See:** to see sb/sth at a distance/briefly

**Look (at):** to see sb/sth by intentionally directing one's eyes

**Stare (at):** to look at sb/sth for a long time with wide open eyes

**Google (at):** to stare at sb/sth in surprise

**Gape (at):** to google at sb/sth with an open mouth

Figure 2. *Fragment of the lexical domain of visual perception*

- B. the Aktionsart module provides a description of the Aktionsart properties which are typical of a given predicate, together with the set of variables that have a syntactic impact. To combine primes, LCM uses Mel'cuk's lexical function (1995:126-127):  $f(x) = y$ , where  $x$  is the argument, and  $y$  is the value of the function when applied to a given argument. Take, for example, the verb *to teach* as in *He taught the class Leonardo's painting technique*:

(9) **Teach**: [INSTR<sub>1,2,3</sub>(say)/CAUS(see)<sub>1,2,3</sub>] **do'** (x, Ø) CAUSE [BECOME **know'** (y, z)]<sup>1</sup>

where the verb *teach* is a speech verb since *teach* [which belongs to the lexical domain of cognition] necessarily entails mental activity and the incipient modification of cognitive structures in the receivers of the action. In this type of causative subdimension, the lexical domains of abstract activity, such as cognition, begin to shade into action because causation implies some sort of action on the part of the cognizer (Mairal & Faber 2006). Hence, if sb. teaches us sth → CAUS<sub>3</sub> [learn] = *teach*, we come to know sth INCEP<sub>1,2</sub>[know] = *learn*.

## 2.2 Constructional templates

A constructional template is a high-level semantic representation of syntactically relevant meaning elements abstracted away from multiple lower-level representations. LCM represents transitivity as the potential of a verb to participate to the higher-level configuration called the transitive construction, which has the following constructional template:

(10) [do' (x, y)]

The caused-motion construction is thus represented as follows:

(11) **do'** (x, [pred' (x, y)] CAUSE [BECOME NOT **be-in'** (y,z)]  
**pred'** (x, y) CAUSE [BECOME NOT **be-in'** (y,z)]

## 3 How do lexical and constructional templates interact?

Lexical templates, i.e. lower-level (or lexical) constructions, can be conflated or subsumed into constructional templates, i.e. higher-level (or syntactic) constructions, e.g. the caused-motion construction. Constructional templates 'coerce' lexical templates (Ruiz de Mendoza & Mairal 2006; see also Michaelis 2005, González-García in press; Ziegeler 2007). When we combine a lexical template with a constructional template, we get more than what the lexical template and the constructional template give us by themselves.

### 3.1 The lexical-constructional subsumption in the caused-motion construction

The subsumption process is a meaning production mechanism which is definable as the constrained incorporation of a lower-level conceptual structure into higher-level configurations. The process is regulated by internal and external constraints.

### 3.2 Internal constraints

Internal constraints make reference to the internal semantic make-up of the lexical and constructional templates, and specify the conditions under which a lexical template may modify its internal configuration. As for the internal constraints, the 'predicate-argument conditioning' applies to the caused-motion construction:

- (12) He **pushed me into** the cabin  
 (13) I **blew the ant off** the plate  
 (14) He **convinced me into** the water and **onto** the beach  
 (15) The cool night air **caressed me into** a deep trance  
 (16) \*She **drove the stone into** depression

In principle, this basic structure can take either human or non-human verb participant role to instantiate the Y element; but once the verb and the PP have been filled in, only human verb role can occupy the Y slot.

<sup>1</sup> where numerical subscripts indicate the semantic parameters, which are internal variables, and Roman characters capture syntactically relevant meaning aspects.

### 3.3 Cognition verbs

The analysis of some cognition verbs will allow us to discuss the subsumption process in the caused-motion construction. Consider the following example:

(17) She **showed me her** room

**Show** : [do' (x, ∅)] CAUSE [BECOME [see' (y,z)]]

The verb *show* is subsumed into the ditransitive construction (the typical construction for the verb *give*) because it is possible to set up the following correspondences:

giver	↔	shower (instigator of perception)
givee	↔	showee (perceiver)
object given	↔	object shown (percept)

Let us now consider:

(18) She **showed me into** her room

Since *show* is a matter of making something visually evident, it is a (caused-) perception verb:

shower (instigator of perception)	↔	causer of motion
showee (perceiver)	↔	moving object
object shown (percept)	↔	destination of motion

*show* can also be a cognition verb similar in meaning to the verb *teach*:

(19) She **showed me out of** the problem

which is a reduced form of *She showed me the way to get out of/to solve the problem*:

giver	↔	shower (instigator of perception) => <i>she</i>
givee (receiver)	↔	showee (perceiver) => <i>me</i>
object given	↔	object shown (percept) => <i>the way (out of sth)</i>

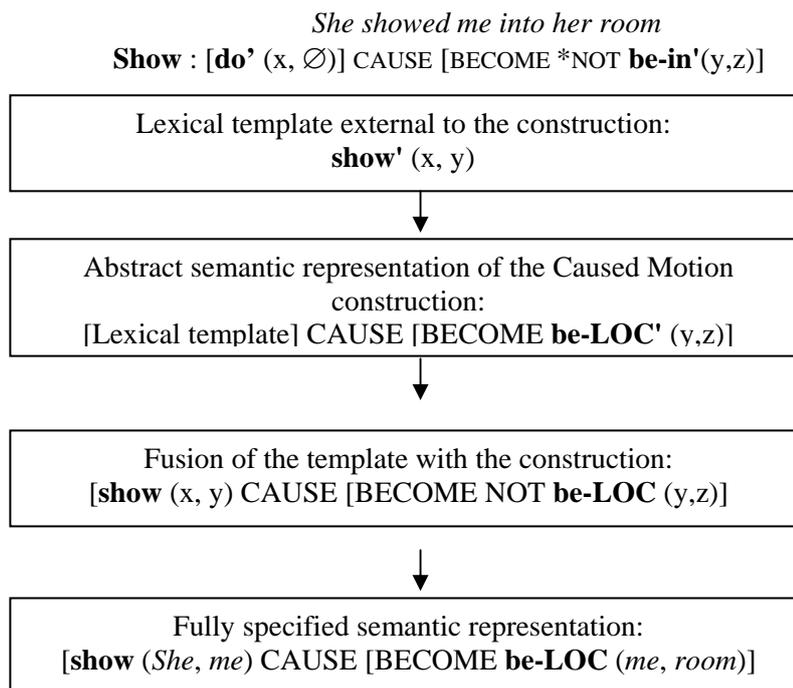


Figure 3: Simplified representation of lexical-constructional subsumption in *show into (out of)*

If we now turn to consider the high-level metaphors that license such expressions, we can identify the following correspondences:

example	HIGH-LEVEL METAPHOR
<b>showed me her room</b>	A PERCEPTUAL ACT IS A TRANSFER OF POSSESSION*
<b>showed me into</b> the room	A PERCEPTUAL ACT IS AN ACT OF CAUSED MOTION
<b>showed me out of</b> the problem	A PERCEPTUAL ACT IS A TRANSFER OF POSSESSION*

Table 3. *to show*

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Let us now consider some further cognition verbs and the high-level metaphors licensing their participation to the caused-motion construction:

- (20) Unfortunately, my school's methods **taught me into** confused silence
- (21) Spending my childhood in Medan **taught me into** all kinds of delicious food
- (22) He helped **mentor me into** the world of journalism
- (23) She **enlightened me out** of the blue
- (24) My soon ex-husband **duped me into** marriage solely for a green card
- (25) They **duped me out of** my other apartment

example	HIGH-LEVEL METAPHOR
<b>taught me into</b> confused silence	A COGNITIVE ACT IS AN EFFECTUAL ACCOMPLISHMENT
<b>mentor me into</b> the world of journalism	A COGNITIVE ACT IS AN EFFECTUAL ACTION
<b>duped me out of</b> my other apartment	A COGNITIVE ACT IS AN EFFECTUAL ACTION
<b>duped me into</b> marriage	A COGNITIVE ACT IS AN EFFECTUAL ACTION

Table 4. Analogic Thinking licensing the subsumption process

The use of cognition verbs is grounded in the high-level metaphor A COGNITIVE ACT IS AN EFFECTUAL ACTION; but when the PP denotes figurative caused-motion, the sentence expresses the outcome of a psychological reaction licensed by the high-level metaphor A COGNITIVE ACT IS AN EFFECTUAL ACCOMPLISHMENT.

### 3.3.1 The NP *into-gerund* construction

Another case in point in the present discussion is the co-occurrence of cognition verbs with a complex prepositional phrase formed by a gerund:

- (26) She somehow **convinced me into** going to New York
- (27) Chris was supposed to **teach me into** nursing

or by a gerund plus a *that*-clause:

- (28) He **convinced me into believing** that anything was possible if I put my mind to it
- (29) The media **fooled us into believing** that Karachi was dangerous

Examples (26) to (29) share the same features of the caused-motion construction if we hypothesize that the result predicate functions as an argument of the main verb. Let us do so by following Faber & Mairal 1999, who observed that the complementation pattern usually combine with intransitive verbs (*dupe*, *fool*) profiling an atelic state of affairs:

- (30) He **duped me into thinking** that he was a police officer (from Faber & Mairal 1999:124)

The high frequency of such a co-occurrence may allow us to consider the complementation pattern an argument of the main verb. This claim put forward by Faber & Mairal, which I endorse, allow us to include the *into-gerund* construction in the analysis in the caused-motion construction.

The NP-*into-gerund* has been recently labelled by Stefanowitsch & Gries (2003, 2005) the “*into-causative construction*” (see also Hunston & Francis 2000) and described as being formed by two predicates: (1) the *cause predicate*, which codifies the causing event in the main verb, and (2) the *result predicate*, which codifies the result in the NP *into-gerund*. Let us analyse some examples:

- (31) COGNITION: to cause sb to believe that sth is true when it is not
  - deceive**: to cause sb to believe that sth is true when it is not in order to take advantage of them
  - delude**: to deceive sb by false promises
  - fool**: to deceive sb making them look foolish
  - trick**: to deceive sb to get sth from them as part of a plan
  - dupe**: to trick sb completely, usually to get them to do sth
  - hoodwink**: to trick sb
  - bamboozle**: to trick sb in order to gain an advantage
  - beguile**: to trick sb into doing sth by making it seem attractive
  - hoax**: to deceive sb by playing a joke on them
  - con**: to deceive sb by telling them things that are untrue

Figure 4. *Fragment of the lexical domain of cognition* (Faber & Mairal 1999:125)

- (32) They have **deceived us into** thinking they are good, beautiful, and true  
 (33) Diets have **deluded us into** believing that food is the problem  
 (34) The movie **fooled me into** believing this book would be different.  
 (35) We **tricked them into** attacking pearl harbour  
 (36) the government has **duped us into** believing we are part of the EU  
 (37) I **hoodwinked them into** coming to my place  
 (38) My first wife **bamboozled me into** marrying her  
 (40) She **beguiled me into** offering a birthday dinner  
 (41) You have **hoaxed him into** running all the way down to the basement  
 (42) He **conned us into** giving him all of our money

example	HIGH-LEVEL METAPHOR
<b>deceived us into</b> thinking	A MENTAL MANILUPATIVE ACT IS AN EFFECTUAL ACCOMPLISHMENT
<b>deluded me into</b> believing	A MENTAL MANILUPATIVE ACT IS AN EFFECTUAL ACCOMPLISHMENT
<b>fooled me into</b> believing	A MENTAL MANILUPATIVE ACT IS AN EFFECTUAL ACCOMPLISHMENT
<b>tricked them into</b> attacking	A MENTAL MANILUPATIVE ACT IS AN EFFECTUAL ACTION
<b>duped us into</b> believing	A MENTAL MANILUPATIVE ACT IS AN EFFECTUAL ACCOMPLISHMENT
<b>hoodwinked them into</b> coming	A MENTAL MANILUPATIVE ACT IS AN EFFECTUAL ACTION
<b>bamboozled me into</b> marrying	A MENTAL MANILUPATIVE ACT IS AN EFFECTUAL ACTION
<b>beguiled me into</b> offering	A MENTAL MANILUPATIVE ACT IS AN EFFECTUAL ACTION
<b>bamboozled me into</b> marrying	A MENTAL MANILUPATIVE ACT IS AN EFFECTUAL ACTION
<b>conned us into</b> giving	A MENTAL MANILUPATIVE ACT IS AN EFFECTUAL ACTION

Table 5. Analogic Thinking licensing the *into*-gerund.

In order to pin down the kind of high-level metaphors licensing the above examples, a distinction should be made with reference to the type of result verb: when the result verb describes a concrete action (*attacking, marrying, running, etc.*), the expression is grounded in the high-level metaphor A MENTAL MANIPULATIVE ACT IS AN EFFECTUAL ACTION; when the result verb describes a mental state of affairs (*thinking, believing, etc.*), the expression is grounded in the high-level metaphor A MENTAL MANIPULATIVE ACT IS AN EFFECTUAL ACCOMPLISHMENT.

In her typological studies, Wierzbicka (1991, 1992, 1998) affirms that English pays a high degree of attention to causal relation, especially to causation in human interaction. Specifically she observes (1998:125) that the set of main verbs occurring in the *into*-gerund construction is rather limited and this is mainly compatible with the idea of manipulation. We would add that cognition verbs that participate to this construction point to the psychological manipulation. Similarly, Gries & Stefanowitsch (2004:230) show that cognition verbs as result predicates prefer cognition verbs as cause predicates. This would reflect the preference of cognition verbs for a construal of causal chain representing what Stefanowitsch 2001 calls the TRIGGER type, that is when the causer influences the causee in such a way that the causee will undergo some process, mainly a change of a psychological/mental state of affairs.

### 3.4 External constraints

External constraints involve Aktionsart changes and result from the (im)possibility to perform high-level metaphoric and metonymic operations on the lexical items involved in the subsumption process. A case in point is the subcategorial conversion of intransitive verbs to transitivity, as in *She gaped me into a very agreeable and richly spacious hall*, where the conversion is to be interpreted in terms of cross-domain mapping, i.e. correspondences between source and target domains. The high-level metaphor imposes constraints on the lexical-constructional subsumption: such constraints may be positive or negative:

- positive: i.e. the metaphor enables subcategorial conversion of predicates: e.g. ‘experiential actions’ as in *He listened me into a cave*;
- negative: i.e. they block impossible expressions, e.g. it is impossible to make the instrumental role explicit in an expression like *\*He shouted her out of the room with a big shout*, in compliance with Ruiz de Mendoza’s *Extended Invariance Principle* (1998).

### 3.4.1 Verbs of Perception

I will now take into account some verbs of perception in order to discuss subcategorical conversion from intransitivity to transitivity, and to pin down the high-level metaphors licensing their participation to the caused-motion construction.

(43) He **gazed me out of** the club

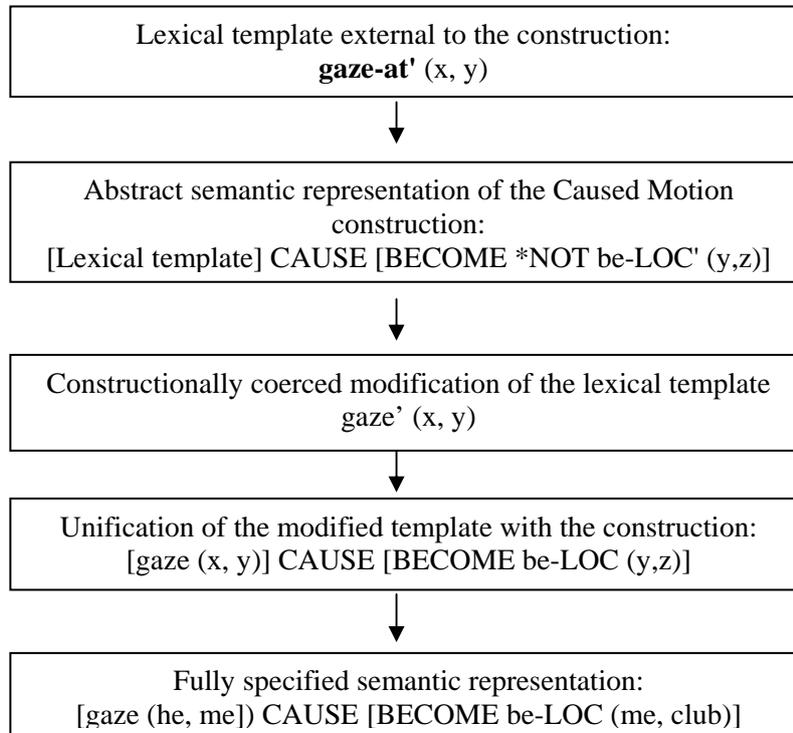


Figure 4: Simplified representation of a case of lexical-constructional subsumption

The specific pseudo-transitive use of the predicate *gaze* in *He gazed me out of the club* is grounded in the high-level metaphor EXPERIENTIAL ACTION IS EFFECTUAL ACTION. Consider the following correspondences:

SOURCE		TARGET
effector	↔	actor [both are doers]
effectee	↔	goal/experiencer [both are objects]
effecting	↔	acting [both are kinds of doing]
instrument	↔	∅
purpose	↔	purpose

Verbs of perception codify an intentional form of acting on the object of perception. Verbs of visual, auditory and olfactory perception undergo subcategorical conversion from a transitive configuration where the verb governs an oblique complement (realized by a PP) to the prototypical transitive-direct object form where the verb governs a NP directly:

- (44) Some guy **stared me out of** it (it = a parking space)
- (45) She then **gaped me into** a very agreeable and richly spacious hall.
- (46) Some very blinding lasers **dazzled me into** a state of confusion
- (47) All of my classmates laughed at me and **stared me into** silence
- (48) She had **gazed me into** cowardice
- (49) The devil smiled as he **gazed me out of** the club
- (50) Her beauty must have **dazzled him out of** his wits
- (51) He **listened me into** a cave
- (52) Margot **listened me into** greater clarity
- (53) Grass was poison-sprayed which **whiffed me into** headache

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When the prepositional phrase denotes a physical space (*hall, club, cave*), the expression is grounded in the high-level metaphor A PERCEPTUAL ACT IS AN EFFECTUAL ACTION; when it denotes figurative motion (*silence, cowardice, clarity*), the sentence expresses the outcome of a psychological reaction and the high-level metaphor licensing the expression is A PERCEPTUAL ACT IS AN EFFECTUAL ACCOMPLISHMENT. Here the location is the source that maps onto a state (the target), a psychological state. In fact what we have is A CHANGE OF STATE IS A CHANGE OF LOCATION. Thus the resultant state of figurative caused-motion is seen as a change of location and the high-level metaphor is A PERCEPTUAL ACT IS AN EFFECTUAL ACCOMPLISHMENT.

example	HIGH-LEVEL METAPHOR
<b>stared me out of</b> a parking space	A PERCEPTUAL ACT IS AN EFFECTUAL ACTION
<b>gaped me into</b> a hall	A PERCEPTUAL ACT IS AN EFFECTUAL ACTION
<b>dazzled me into</b> confusion	A PERCEPTUAL ACT IS AN EFFECTUAL ACCOMPLISHMENT
<b>listened me into</b> greater clarity	A PERCEPTUAL ACT IS AN EFFECTUAL ACCOMPLISHMENT
<b>stared me into</b> silence	A PERCEPTUAL ACT IS AN EFFECTUAL ACCOMPLISHMENT
<b>gazed me into</b> cowardice	A PERCEPTUAL ACT IS AN EFFECTUAL ACCOMPLISHMENT
<b>gazed me out of the club</b>	A PERCEPTUAL ACT IS AN EFFECTUAL ACTION
<b>dazzled him out of</b> his wits	A PERCEPTUAL ACT IS AN EFFECTUAL ACCOMPLISHMENT
<b>whiffed me into</b> headache	A PERCEPTUAL ACT IS AN EFFECTUAL ACCOMPLISHMENT

Table 6. Analogic Thinking for verbs of visual, auditory and olfactory perception.

The subcategorical conversion of verbs codifying visual, auditory and olfactory perception are licensed by the high-level metaphor AN OBJECT-DIRECTED INTENTIONAL PERCEPTUAL ACT IS AN EFFECTUAL ACTION/ACCOMPLISHMENT, or A PERCEPTUAL ACT IS AN EFFECTUAL ACTION/ACCOMPLISHMENT for short.

Verbs of tactile perception and participate to the caused-motion construction and they mainly undergo the subsumption process. Consider the following expressions:

- (54) He **touched me out of** the blue
- (55) The master hand **touched me into** life and beauty
- (56) He **palmed me out of** the chamber
- (57) Ill-health **palmed him away from** politics
- (58) She **knocked him into** the thorny bed of roses
- (59) The disease **knocked him into** a coma for four days
- (60) They **manhandled me out of** the cell **and down** the dark corridor
- (61) The policemen woke me and **manhandled me into** a car
- (62) The rhythmic sound of rushing water **caressed me into** an inevitable Zen moment
- (63) He lightly **caressed her out of** the van
- (64) A PR **pawed me into** the first press conference

example	HIGH-LEVEL METAPHOR
<b>touched me out of</b> the blue	AN ACTIVITY IS AN EFFECTUAL ACCOMPLISHMENT
<b>palmed me out of</b> the chamber	AN ACTIVITY IS AN EFFECTUAL ACTION
<b>palmed him away from</b> politics	AN ACTIVITY IS AN EFFECTUAL ACTION
<b>knocked him into</b> the bed of roses	AN ACTIVITY IS AN EFFECTUAL ACTION
<b>knocked him into</b> a coma	AN ACTIVITY IS AN EFFECTUAL ACCOMPLISHMENT
<b>manhandled me out of</b> the cell	AN ACTIVITY IS AN EFFECTUAL ACTION
<b>caressed me into</b> a Zen moment	AN ACTIVITY IS AN EFFECTUAL ACCOMPLISHMENT
<b>caressed her out of</b> the van	AN ACTIVITY IS AN EFFECTUAL ACTION
<b>pawed me into</b> the press conference	AN ACTIVITY IS AN EFFECTUAL ACTION

Table 7. Analogic Thinking for verbs of tactile perception.

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The above examples are grounded in the high-level metaphors AN ACTIVITY IS AN EFFECTUAL ACTION or AN ACTIVITY IS AN EFFECTUAL ACCOMPLISHMENT, depending on the result predicate: when the result predicate refers to a place (*van, conference*), the tactile activity is mapped onto an EFFECTUAL ACTION, while when it refers to a figurative motion (*coma, Zen moment*), the tactile activity is mapped onto an EFFECTUAL ACCOMPLISHMENT.

**5. Conclusive remarks**

It is well known that the notion of causation, i.e. the ability to detect whether one event causes another, occupied the mind of philosophers from Aristotle to Galileo, and Hume and Kant considered causation a function of human perception rather than a property of the universe. To put it with Kant's *Transcendental Philosophy*, we can add that we do not perceive the world as it is, but we impose cause and effect relationships on it and therefore our perceptions are influenced by our experiences. Kant's standpoint emerged in Max Wertheimer's gestaltic explanation of a phenomenon known as *apparent motion* (e.g. bulbs, flashing alternately with the appropriate timing, give the impression of motion although they are stationary). Apparent motion is thought to occur because we perceive experiences in a way that calls for the simplest explanation, even though it may differ from reality. Similarly, we effortlessly interpret an expression like

(65) **He laughed me out of my patience**

in the terms of causation and motion and we do not find it difficult to reinterpret the subcategorical conversion of the intransitive verb *to laugh*: we simply rely upon the gestaltic "Law of Minimum Principle", according to which we tend to organize our experience so that it is as simple as possible (Benjafeld 1996:173).

The neo-Kantian approach to the question of language and perception has revealed fundamental for semanticists. To make a step forward, a step along the path of Cognitive Semantics, we rely on our analogic thinking and map more complex experiences/expressions onto simpler ones. Example (65) is easily interpretable as an instance of metaphorical motion caused by someone's laughter: the gestaltic "Law of Prägnanz", more specifically the "Law of Similarity", enables our mind to group similar elements into collective entities, in the case of our examples, depending on the relationship of structural form. Similarity in the syntactic structure is what allows us to establish a set of causal correspondences between the pseudo-transitivity of *laugh* and prototypical transitivity and to interpret the correspondences in the terms of the high-level metaphor A PERCEPTUAL ACT IS AN EFFECTUAL ACCOMPLISHMENT.

We have analyzed some linguistic expressions where motion is expressed through verbs that do not codify motion. The main prepositions in the examples discussed so far have been *into* and *out of* which, to put it with Langacker 1990, are complex prepositions since they profile a chain of states that changes through time but that are viewed atemporally as a gestalt. *Into* and *out of* evoke at least two image schemas: CONTAINER (exterior, interior, and boundary) and PATH (source, path, and goal). As a matter of facts, as the notion of space goes hand in hand with that of motion, motion goes hand in glove with the notion of force.

The FORCE schema is a further schema that I see at work in the caused-motion construction and that represents a further development of the present research. I will here just briefly hint at it. Force has been a neglected semantic category although it seems to permeate any type of interaction. Talmy has clearly demonstrated that "the conceptual models within linguistic organization have a striking similarity to those evident in our naïve world conceptions" (Talmy 1988:91). Force Dynamics is a way of construing the world in terms of entities interacting with respect to force, and force concepts can be applied to the organization of meaning in language. The onset causing of action is one of the prototypical Force Dynamics categories and it seems to be particularly apt to represent the complexity of the caused-motion construction, which can thus be viewed as a change-of-state force-dynamics pattern. Within this pattern, different types and degrees of force can be envisaged: exertion of force can be physical (*He lightly caressed her out of the van, The policemen woke me and manhandled me into a car*), psychological (*He stared me into a half-confusion*), and even intrapsychological (*I duped myself into thinking I could be part of the crew team*). The metaphor of Force Dynamics 'physicalizes' the psychological and social dimensions.

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