

# Sound denoting verbs and their nominalizations

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# Overview

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1. Give a brief account of the verbs denoting a sound emission, focussing on their semantics.
  2. Address the issues raised by the nominalizations (NZNs) they are linked to, in particular the fact that the meaning of these NZNs does not always reflect the meaning of their base-verb.
- ➡ Shed some light on the possible discrepancies existing between verbs and their nominal counterparts.
  - ➡ Promote a finer-grained typology of NZNs than the one provided by Grimshaw (1990).

# Verbs of sound emission. Generalities

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- Verbs of emission (Levin 1993 §43)

- Light            eng *flicker, glimmer*;            fra *scintiller, luir*
- Sound           eng *clatter, clank*;            fra *cliqueter, gargouiller*
- Smell            eng *stink, reek*;            fra *puer, embaumer*
- Substance      eng *gush, ooze*;            fra *jaillir, suinter*

- Semantic feature common to all these verbs

- **emit**( $e_i, x, y$ )  $\wedge$  **N**( $y$ )...            or

- **produce**( $e_i, x, y$ )  $\wedge$  **N**( $y$ )...

where N: {light, sound, smell, substance}

*Produce* = 'X causes Y to come into existence'

*Emit* = 'X causes Y to flow out from where it has been confined'

# Verbs of sound emission. Generalities

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What is a sound?

— ‘an auditory sensation perceived by the brain’  
(subjective approach)

— ‘a vibration that propagates through a medium’  
(objective approach)

➡ these two types of information appear together in dictionaries.

Subtypes of sounds:

**bruit** / **noise**: ‘ensemble de sons dépourvus d’harmonie’ /  
‘any unpleasant sound’

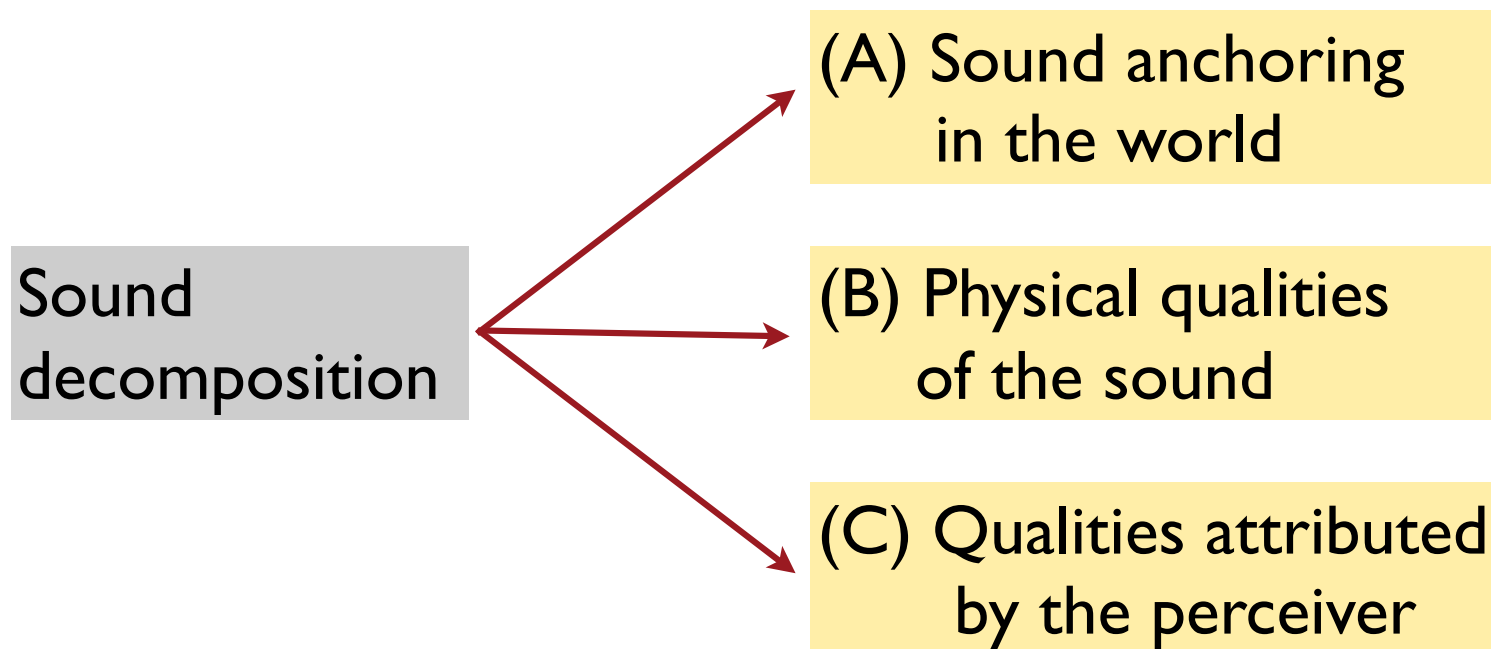
**cri** / **cry, call**: ‘son émis instinctivement par les cordes vocales’ /  
‘distinctive call of an animal’



# The description of sounds

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- The content of verbs of sound emission depends on the way sounds are analyzed in languages.
- Sound decomposition can be modeled on the model of Path decomposition proposed for verbs of motion (Weisgerber 2006).



# (A) Sound anchoring in the world

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- ▶ **Source of the sound:** entity emitting or producing the sound
  - animal fra *glapir* ‘yelp’, source = fox, jackal
    - + **Triggering / accompanying conditions:** external conditions involved in the production of the sound
    - e.g. *purr* ‘ $\text{purr}(e_i, x) \rightarrow \text{cat}(x) \wedge \text{happy}(x)$ ’
  - inanimate entity
  - eng *babble*, source = water in a stream
- ▶ **Mode of production:** the sound is caused by an event in which the emitting entity participates.
  - eng *sizzle* ‘ $\text{sizzle}(e_i, x) \rightarrow \text{is\_frying}(e_j, x)$ ’
  - komi-zyrjan *rusjyny* ‘emit sounds of big animals eating coarse food’ (Kashkin et al. 2012)

# The description of sounds

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## (B) Physical qualities of the sound (acoustic parameters)



### ► Physics

frequency  
amplitude  
duration  
timing  
tone quality  
intensity  
etc.

### ► Common experience

- pitch, timbre...
- loud / soft  
long / short, shrill / low  
strong / feeble  
rapid / slow  
continuous / discontinuous  
modulated / uniform  
etc.

- Properties distinguished by common experience can be given a precise characterization using concepts of physics.
- The content of Vs of sound emission is expressed using the vocabulary of common experience, not that of physics.

# Partial systematic classification

Restatement of a proposal made by Kashkin et al. (2012)

- Regular: which follows a pattern
- Continuous: without interruption
- Variation: change of patterning (applies only to regular sounds)

		Continuous			
		+	−		
Regular	+	(aa)	(ba)	+	Variation
	+	(ab)	(bb)	−	
	−	(c)	(d)		

(aa) regular, continuous, with variation: *to rattle, to clatter*

(ab) regular, continuous, without variation: *to drone, to hum*

(ba) regular, non-continuous, with variation: *to ululate, to coo*

(bb) regular, non-continuous, without variation: *to squawk, to beep*

(c) irregular, continuous: *to rustle, to babble, to warble*

(d) irregular, discontinuous: *to shriek, to crash*



# The description of sounds

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## (C) Qualities attributed by the perceiver

- Audible / inaudible
- Pleasant / unpleasant
- Harmonious / discordant
- Mellow / harsh
- Smooth / raucous
- Dull / resonant
- ...

- ▶ These properties too appear in the semantic description of verbs of sound emission.

# The description of sounds: example

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VROMBIR ‘to hum, to buzz’

**Semantic core**

$\lambda e_i. \exists y \exists x (\text{emit}(e_i, x, y) \wedge \text{sound}(y)$

(A) source

$(\text{insect} \mid \text{engine})(x)$

condition

$(\text{is\_flying}(e_j, x) \mid \text{is\_running}(e_j, x))$

(B) objective qualities

$\text{strident}(y), \text{vibrating}(y),$   
 $\text{continuous}(y), \text{low}(y))$

(C) subjective quality

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(I) a. *Les moteurs de l’avion vrombissaient.*

‘The plane’s engines were buzzing’

b. *Un frelon entra dans la pièce en vrombissant.*

‘A hornet buzzed into the room’

# Classifying verbs of sound emission

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- Two dimensions are involved in the classification of these verbs

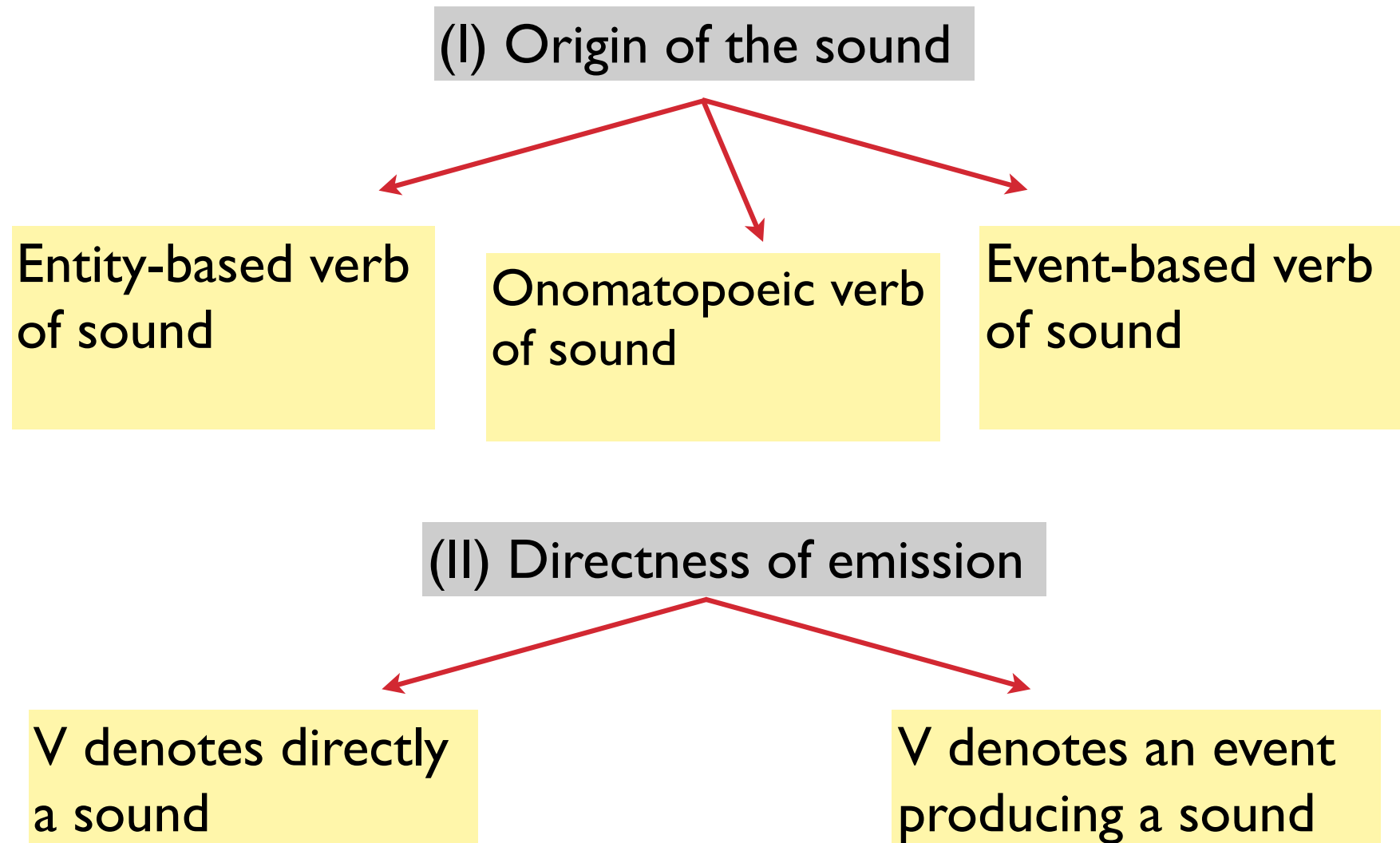
(I) Origin of the sound

(II) Directness of emission

# Analyzing verbs of sound emission

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- Two dimensions are involved in the classification of these verbs



# Origin of the sound: entity-based verbs

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- Entity-based verbs

The sound is emitted by a typical and well identified source (animal, object)

**GLAPIR** 'to yelp'

$\lambda e_i. \exists y \exists x (\text{emit}(e_i, x, y) \wedge \text{cry}(y) \wedge \text{typical\_of}(x, y) \wedge \text{fox}(x) \dots)$

**CLATTER**

$\lambda e_i. \exists y \exists x (\text{emit}(e_i, x, y) \wedge \text{sound}(y) \wedge (\text{hooves} \mid \text{glass})(x) \dots)$

Verb	Animal	Verb	Animal
<i>barrir</i>	elephant	<i>glousser</i>	hen
<i>braire</i>	donkey	<i>grisoller</i>	lark
<i>chevroter</i>	goat	<i>hennir</i>	horse
<i>glapir</i>	fox	<i>japper</i>	dog

# Origin of the sound: onomatopoeic verbs

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- **Onomatopoeic verbs**

The sound produced is identical to a conventional prosodic melody and pattern

**GLOUGLOUTER** ‘to gurgle’

$\lambda e_i. \exists y \exists x (\text{produce}(e_i, x, y) \wedge \text{sound}(y) \wedge \text{identical\_to}(y, [\text{gluglu}]) \wedge \text{liquid}(x) \dots)$

Verb	Onomatopoeia	Typical participant
<i>froufrouter</i>	frufu	dress
<i>tictaquer</i>	tiktak	clock
<i>claquer</i>	klak	(shot of a) gun, door



# Origin of the sound: event-based verbs

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- **Event-based verbs**

The sound is produced in the course of an event involving typical participants and sub-events.

**GRESILLER** ‘to sizzle’

$\lambda e_i. \exists y \exists x \exists e_k (\text{produce}(e_i, x, y) \wedge \text{typical\_sound}(y) \wedge \text{fry}(e_k, x) \wedge \text{food}(x) \wedge \text{CAUSE}(e_k, e_i) \dots)$

Verb	Gloss	Typical participant
<i>crépiter</i>	to crackle	burning wood
<i>craquer</i>	to creak	floor that is stepped on
<i>gargouiller</i>	to gurgle	water moving in a pipe

# The directness of emission parameter

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- **Directly denoting verbs**

The V denotes a sound emission event e.g. *glapir, glouglouter...*

- **Indirectly denoting verbs**

Verbs denoting an (action | event) which causes a sound emission event to occur.

**HALETER** ‘to pant’

Action = ‘X breathes with short, quick breaths’

Sound = ‘X produces typical sound Z because X pants<sub>A</sub>’

**HALETER**<sub>Action</sub>  $\equiv$

$\lambda e_k. \exists y \exists x (\text{breathe}(e_k, x) \wedge \text{rhythm}(e_k, y) \wedge \text{short}(y) \wedge \text{quick}(y) \dots)$

**HALETER**<sub>Sound</sub>  $\equiv$

$\lambda e_j. \exists z \exists y \exists x \exists e_k (\text{breathe}(e_k, x) \wedge \text{rhythm}(e_j, y) \wedge \text{short}(y) \wedge \text{quick}(y) \wedge \text{CAUSE}(e_k, e_j) \wedge \text{emit}(e_j, x, z) \wedge \text{sound}(z) \wedge \text{typical}(z) \dots)$

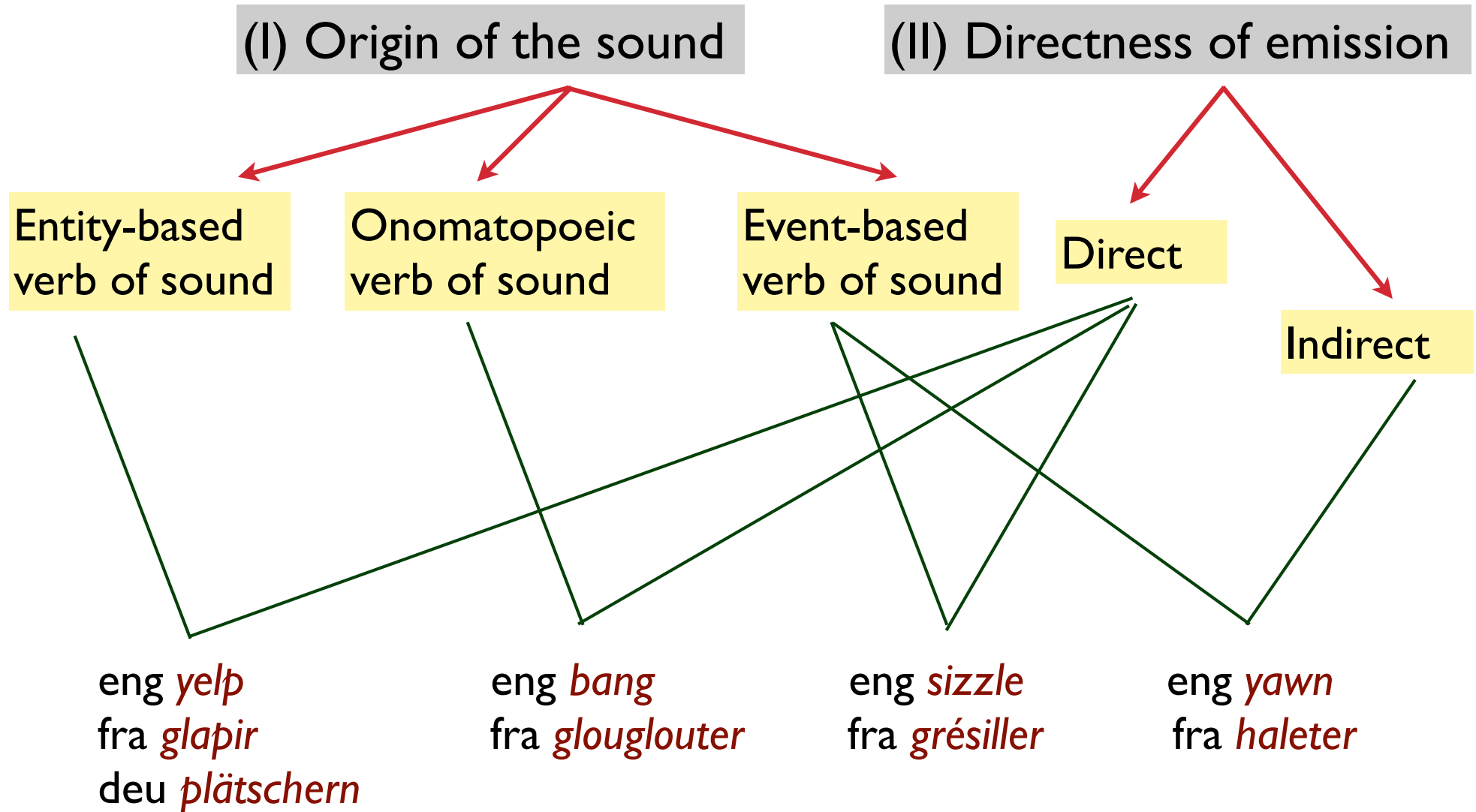
# Indirectly sound denoting verbs

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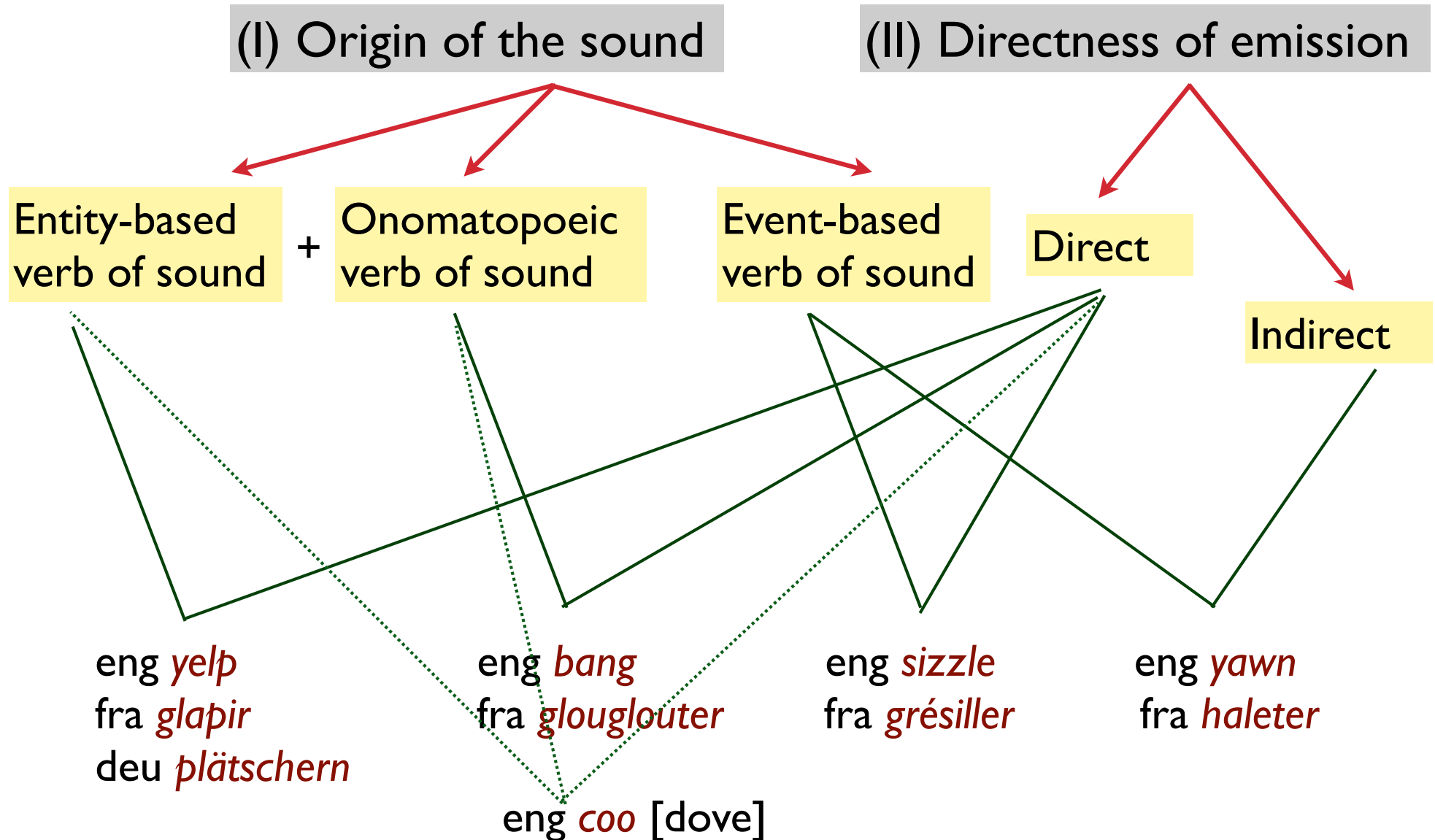
These verbs are activity verbs (Levin 1993, Ma & McKevitt 2005) denoting

- ▶ An action involving an impact or a contact:  
*cogner* 'to bump', *marteler* 'to hammer', *gratter* 'to scratch', *frotter* 'to rub', *mâchonner* 'to chew', *piétiner* 'to stamp', *racler* 'to scrape', *trotter* 'to scamper', *s'entrechoquer* 'to rattle', *fracasser* 'to smash'
- ▶ A body action involving (vocal) organs:  
*bâiller* 'to yawn', *tousser* 'to cough', *haleter* 'to pant, to gasp', *hoqueter* 'to hiccup', *péter* 'to fart'...
- ▶ An action involving (a body moving in) a liquid or gaseous medium:  
*barboter* 'to dabble', *clapoter* 'to lap [water]', *laper* 'to lap up [dog]', *voleter* 'to flutter about'...
- ▶ An holistic internally caused event:  
*éclater* 'to blast', *exploser* 'to explode'...

# The way the two dimensions combine



# The way the two dimensions combine



# Criteria supporting the distinction

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- How can we decide for sure whether a verb is a direct vs. indirect verb of sound emission?

- Test I

**NP0 hear NP1 (V-ing | Rel-Clause)**

ok  $\Rightarrow$  the V is a (direct or indirect) sound emission V

no  $\Rightarrow$  the V is not a sound emission V

- (2) a. *Elle entend le malade (bailler | qui baille).*  
She hears the sick person (yawning | who yawns)
- b. *Elle entend le renard (glapir | qui glapit).*  
She hears the fox (yelping | which yelps)
- (3) a. *#Elle entend son voisin (cligner | qui cligne) de l'œil.*  
#She hears her neighbor (blinking | who blinks)
- b. *#Elle entend le soleil (briller | qui brille).*  
#She hears the sun (shining | which shines)



# Criteria supporting the distinction

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- Test 2

$NP_i$  verb but  $PRO_i$  does not produce any sound

ok  $\Rightarrow$  the V is not a direct sound emission V

no  $\Rightarrow$  the V is a V of direct sound emission

! Applies only to sound emission Vs (otherwise a presupposition violation occurs)

- (4) a. *Marie baille mais elle ne produit aucun (bruit | son).*  
Mary is yawning but she does not produce any sound  
b. *#Le renard glapit mais il ne produit aucun (bruit | son).*  
#The fox is yelping but it does not produce any sound
- (5) a. *#Le voisin cligne de l'œil mais il ne produit aucun (bruit | son).*  
#The neighbor is blinking but it does not produce...  
b. *#Le soleil brille mais il ne produit aucun (bruit | son).*  
#The sun is shining but it does not produce any sound

# Summing up the classification

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	(a)	(b)	(c)	(d)
Test 1	+	+	–	–
Test 2	–	+	+	–

- (a) V of direct sound emission      *glapir / to yelp*  
(b) V of indirect sound emission      *bailler / to yawn*  
(c) non-existing       $\emptyset$   
(d) not a V of sound emission      *briller / to shine*

- ▶ In what follows I will address the issue of the nominalizations (NZNs) derived from verbs of type (a) or (b).
- ▶ Before that, we need to clarify the semantic behavior of the three types of Vs distinguished above in order to elucidate to what extent the NZNs' meaning reflects that of the verbs.

# Verbal interpretation and coercion

- Tests I and II are based on linguistic contexts that constraint the interpretation of the verb.
- ▶ This phenomenon is akin but not equivalent to coercion.
- Coercion occurs when a word in a discourse forces a co-occurring word to have a meaning different from its usual one.  
(Asher 2011: 14; also Pustejovsky 1995)

- (6) a. Winston enjoys a cigar after lunch.  
b.  $\Rightarrow$  Winston enjoys **smoking** a cigar after lunch.

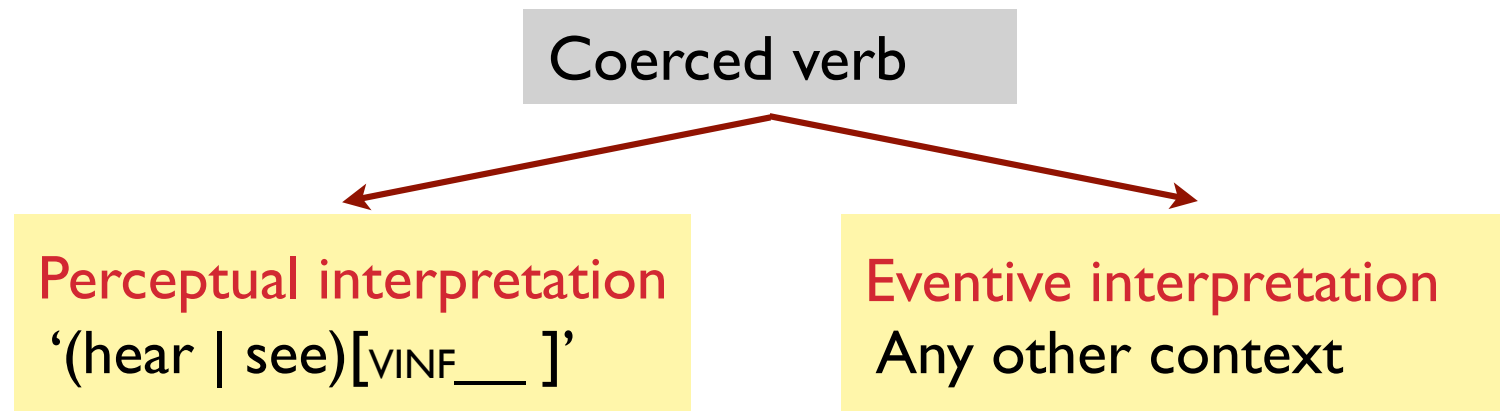
- It is triggered by a type mismatch: type o (object) instead of ev (event).
  - Coercion is strictly local
  - It is defined relatively to a default interpretation.

In the case of the verbs and NZNs investigated here

- the triggering context is not strictly local,
- the eventive meaning is not necessarily the default interpretation.

# Verbal interpretation and coercion

**Coercing context:** a discursive context forcing a given interpretation, here a perceptual (sound) vs. eventive interpretation



(7) *Le renard glapit.*  
The fox is yelping.

'emit a sound y such and such'

- (8) a. \**Elle entend les jours allonger.*  
'She hears the days lengthening'  
b. *Elle entend le renard glapir.*  
'She hears the fox yelping'  
c. \**Elle entend le soleil briller.*  
'She hears the sun shine'

'hear [ev days become longer]'	*ev
'hear a sound y & fox emit y'	sd
*'hear [ev fox emit y]'	*ev
'hear a <u>light</u> y & sun emit y'	≠sd

# Verbal interpretation. Sound interpretation

- The distinctions I have just drawn imply that verbs of perception require that predicates (9) be included in the semantics of their infinitival complement.
- When they combine with this complement, the  $y$  variable is selected as their second argument (cf. (11)).

(9) a.	$\text{emit}(e_i, x, y) \wedge \text{sound}(y) \dots$	<i>hear</i>
b.	$\text{emit}(e_i, x, y) \wedge \text{light}(y) \dots$	<i>see</i>

- If we assume that (10) is a correct partial representation of *GLAPIR*, it follows that this  $V$  can be a well-suited complement of *HEAR*.

(10) **GLAPIR**  $\equiv$   
 $\lambda e_i. \exists x \exists y (\text{emit}(e_i, x, y) \wedge \text{cry}(y) \wedge \text{typical\_of}(x, y) \wedge \text{fox}(x) \dots)$

(11) *entendre glapir* =  
 $\lambda x \lambda e_i. \exists y \exists z \exists e_k (\text{hear}(e_i, x, y) \wedge \text{emit}(e_k, z, y) \wedge \text{cry}(y) \wedge \text{typical\_of}(z, y) \wedge \text{fox}(z) \dots)$

# Verbal interpretation. Eventive interpretation

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- In ordinary contexts such as (12) and (13), directly vs. indirectly sound emitting verbs simply denote an event, as expected.

(12) *Pas de chouette, mais des renards qui glapissaient comme jamais.* (Web)  
'No owl, but foxes that were yelping as they never did'

Emit event

'emit a cry typical of fox'

(13) *Les enfants de quatre ans qui trottaient devant les parents.* (Web)  
'four-year old children that were toddling ahead of their parents'

(toddling | scampering) event

'move with short unsteady steps while learning to walk'

'run with quick light and hurried steps'

- We are now in position to address the nominalization issue.



# Generalities about nominalization

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- A nominalization (NZN) is a noun
  - ▶ that is morphologically constructed from a verbal predicate,
  - ▶ that allows one to refer in discourse to what this predicates denotes,
  - ▶ that shares typical distributional and semantic properties of nouns in the language in question.

(14) *Dans nos huit centres, les bouteilles **sont remplies** de propane ou de butane liquéfié... Au cours de chaque **remplissage**, nos bouteilles sont systématiquement examinées.* (Web)

‘In our eight centers, gas cylinders are filled up with liquefied propane or butane gas... During the filling operation, our gas cylinders are systematically checked up’

➡ In (14) **remplissage** is a nominalization.

# NZNs derived from a V of sound emission

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- NZNs normally inherit their event-type from their base V (with exceptions though cf. Haas et al. 2008, Huyghe 2011).
- Their meaning is straightforwardly built on that of the base-V
- However this is not necessarily the case of NZNs derived from a sound emission V.
- These NZNs behave distinctly in function of the type of their base-V.

## (I) The base is a directly denoting verb

⇒ the NZN denotes a sound in most contexts:

Verb      ‘event  $e_i$  = emit sound  $z$ ’

NZN      ‘#event  $e_i$  of emitting sound  $z$ ’  
          ‘sound  $z$  emitted through event  $e_i$ ’

(15) a. le *glapissement* d’un renard

          ‘the yelp of a fox’

sd / #ev

b. le *crépitement* des machines à écrire

          ‘the rattle of typing-machines’

sd / #ev

# NZNs derived from a V of sound emission

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## (II) The base is an indirectly denoting verb

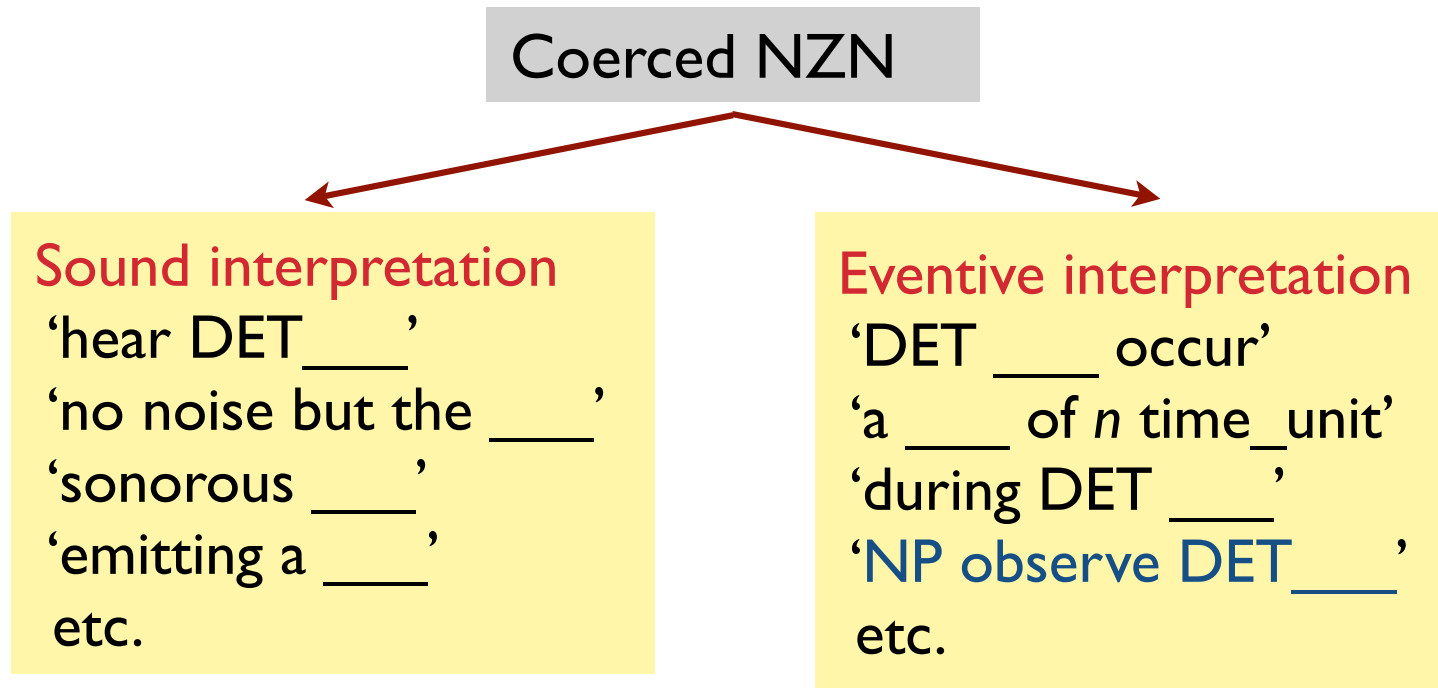
⇒ the NZN can denote either an event or a sound:

Verb	(a) 'event $e_i$ ', (b) 'event $e_k$ = emit sound $z$ '
NZN	(a') 'event $e_i$ ', (b') 'sound $z$ emitted through event $e_k$ '

- (16) a. *Le **frottement** a usé la corde.* ev  
          'The rubbing wore the rope away'  
      b. *Le **frottement** de la chaîne l'a réveillé.* sd  
          'The rubbing noise of the chain made him awaken'

- In this case too, the interpretation changes based on the linguistic context.

# Coercing context and noun interpretation



Two types of context force the eventive interpretation

- Aspecto-temporal contexts e.g. *during* DET \_\_, etc (Godard & Jayez 1994, Haas et al. 2008)
- Phenomenal contexts e.g. *NP observe* DET \_\_, etc. (Martin 2010)

## Prediction I

The sound interpretation is ok for NZNs derived from sound emitting verb of any kind and \* for others.

# Coercing context and noun interpretation

The first prediction is borne out for NZNs derived from

- directly sound emitting verbs cf. (17)
- indirectly sound emitting verbs cf. (18).

(17) *La cafetière émet un léger **chuintement**.* sd

‘The coffe-maker makes a slight hissing noise’ (frWaC)

(18) *Maître Jacques entendit l’**ébranlement** d’une charrette.* sd

‘Master Jacques heard the setting off of a cart’ (Web)

- Note that with onomatopoeic verbs of sound the onomatopoeia is possible in addition to the NZN.

(19) *Ce propulseur délivre un son grave et puissant, très différent du **glouglou** habituel des V8 américains.* (frWaC) sd

‘This propulser produces a loud and powerful sound, very different from the usual gurgle of American V8’

(20) *Le barboteur doit faire son bruit caractéristique de **glougloutement**.* sd

‘The bubbler has to produce its typical gurgle’ (frWaC)

# Coercing context and noun interpretation

## Prediction 2

The eventive interpretation is ok for indirectly sound emitting verbs but \* for NZNs derived from directly sound emitting verbs.

- This second prediction is borne out for indirectly sound emitting verbs.
- By definition, all NZNs derived from these verbs denote an event and pass the classical aspecto-temporal testing criteria recalled below (cf. Huyghe 2014).

Tests	Pass	Fail	Nb
DET N occur	event	non-event	(a)
at the moment of N	datable	undatable	(b)
a N of <i>n</i> time_unit	count N	mass N	(c)
<i>n</i> time_unit of N	duration	mass N	(d)
during DET N	bound interval	unbound	(e)



# Coercing context and noun interpretation

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- As for NZNs based on **directly sound emitting verbs** the prediction is not verified for what regards the aspecto-temporal criteria.
- The criteria show that they denote events (21) which are datable (22).

(21) *Le **glapissement** se produit toutes les dix minutes.*

*‘Yelping occurs every ten minutes’*

*Le **vrombissement** se produit aussitôt qu’on met en marche.*

*‘The droning occurs as soon as the switch is on’*

(22) *La date du dernier **glapissement** nest pas connue.*

*‘The date of the last yelping is not known’*

- All these NZNs have a temporal extension (tests c, d), but their behavior vary with the nature of the temporal duration:
  - semelfactive events are easier to count than the continuous ones (23).

(23) a. *Elle a entendu trois (**glapissements** | **claquements**).*

*‘She heard three (yelpings | slams)’*

b. *??Elle a entendu trois (**vrombissements** | **ronronnements**).*

*‘She heard three (dronings | purrings)’*

# Coercing context and interpretation

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- the temporal extension of continuous NZNs can be specified more easily than that of semelfactive NZNs (tests c, d) cf. (24), (25).

(24) a. Un (*vombissement* | *ronronnement*) de 10 mn

‘A 10 mn long (humming | purring)’

b. ??Un (*glapissement* | *claquement*) de 30 secondes

‘A 30 second long (yelping | slam)’

(25) a. Une heure de (*vombissement* | *ronronnement*) continu

‘One hour of (humming | purring)’

b. ??Trente secondes de (*glapissement* | *claquement*)

‘Thirty seconds of (yelping | slam)’

- In keeping with these results, continuous NZNs can more readily be used for temporal anchoring with *durant* / *during*.

(26) a. Durant le (*vombissement* | *ronronnement*)

‘During the (humming | purring)’

b. ??Durant le (*glapissement* | *claquement*)

‘During the (yelping | slam)’

# Coercing context and noun interpretation

- If we apply the phenomenal criteria mentioned in (27), we observe that the second prediction is borne out for both types of NZNs
  - those derived from directly sound emitting verbs are out (28),
  - whereas those derived from indirect emitting verbs are ok (29).

(27) NP *observer* DET \_\_\_\_...  
NP *assister\_à* DET \_\_\_\_...

- (28) a. \**Il observe le glapissement des renards.* ev  
          ‘He observes the yelping of the foxes’  
      b. \**Il assiste au meuglement du troupeau.* ev  
          ‘He attends the mooing of cattle’  
      c. \**Il observe le (glouglou | glougloutement) du moteur.* ev  
          ‘He observes the gurgle of the motor’
- (29) a. *Il observe le frottement de la corde.* ev  
          ‘He observes the rubbing of the rope’  
      b. *Il assiste à l’ébranlement de la charette.* ev  
          ‘He attends the setting off of the cart’

# Coercing context and interpretation

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- Phenomenal criteria pay attention to the visible properties of the event denoted by the NZN and to the capacity to share the space in which it takes place (shared presence).

## Hypothesis

Sentences (28) are ungrammatical because the unique perceptible property of the entity denoted by the NZN is sound and sound cannot be observed or shared.

*Observe a sound = (hear | listen to) a sound*

- ➡ When *entendre / hear* is substituted for *observer / observe*, sentences (28) become grammatical.

- (29) a. *Il entend le **glapissement** des renards.* sd  
          ‘He hears the yelping of the foxes’  
      b. *Il écoute le (**glouglou** | **glougloutement**) du moteur.* sd  
          ‘He listens to the gurgle of the motor’

# Sketch of an account

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## Dual nature of direct sound emission verbs

- By construction the semantics of directly sound emitting verbs includes both an event and a sound variable (cf. (30a)).
- The common way to formulate the semantics of NZNs is to abstract away from the event variable (30b)(cf. Chierchia 1998 for the cup “<sup>n</sup>”)
- I contend that for direct sound emission verbs, the semantics of the NZN can also be formed by abstracting away the sound variable (30c).

- (30) a. Verb       $\lambda x \lambda e_i. \exists y (\text{emit}(e_i, x, y) \wedge \text{sound}(y) \dots)$   
b. NZN<sub>E</sub>     $^n \lambda e_i. \exists x \exists y (\text{emit}(e_i, x, y) \wedge \text{sound}(y) \dots)$   
c. NZN<sub>S</sub>     $\lambda y \lambda x. \exists e_i (\text{emit}(e_i, x, y) \wedge \text{sound}(y) \dots)$

Similarity of patterning: the variable  $y$  is selected

- by verbs of perception: hear + emitting verb
- by the nominalization of sound emitting verbs

# Sketch of an account

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(31) GLAPIR  $\equiv$

$\lambda e_i. \exists x \exists y (\text{emit}(e_i, x, y) \wedge \text{cry}(y) \wedge \text{typical\_of}(x, y) \wedge \text{fox}(x) \dots)$

(32) a. GLAPISSEMENT<sub>SOUND</sub>  $\equiv$

$\lambda y. \exists x \exists e_i (\text{emit}(e_i, x, y) \wedge \text{cry}(y) \wedge \text{typical\_of}(x, y) \wedge \text{fox}(x) \dots)$

b. GLAPISSEMENT<sub>EVENT</sub>  $\equiv$

$\lambda e_i. \exists x \exists y (\text{emit}(e_i, x, y) \wedge \text{cry}(y) \wedge \text{typical\_of}(x, y) \wedge \text{fox}(x) \dots)$

(33) *Dormir avec le chant de la hulotte ou le **glapissement** des renards* (Web)  
'Sleep with the song of the tawny owl or the yelp of foxes'

(34) *Les **glapissements** se produisent routes les trois minutes.*  
'The yelps occur every three minutes'

(34') *Les **glapissements** des coyotes recommencèrent aussi subitement qu'ils avaient cessé.* (Web) [can also denote a sound]  
'The yelps of jackals began anew as suddenly as they stopped'

# Sketch of an account

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## Indirect sound emission verbs

The fact that the event they denote may cause a sound to be produced ought to be inferable from their semantics.

- This inference can be stated in the lexicon at the level of the semantic class they belong to: verbs of contact, of bodily action, etc.
- Their capacity to denote a sound would hence be inherited.
- This information could be activated in coercing contexts.

## Schema of the meaning extension

Meaning 1.  $\lambda e_i. V_C(e_j, x \dots) \dots$

Meaning 2.  $\lambda e_k. \exists e_i (V_C(e_j, x \dots) \wedge \text{CAUSER}(e_j, e_k) \wedge \text{emit}(e_k, x, z) \wedge \text{sound}(z) \dots)$

- Argument  $z$  will then be available for any coercing predicate which needs to select a sound, as we saw with direct emitting Vs.
- No such argument would exist for non-emitting Vs e.g. *blink*

# Sketch of an account

TROTTINER<sup>2</sup><sub>action</sub> ‘to scamper, to scurry’

‘X marcher à petits pas rapides, pressés et sautillants’

‘X move hurriedly with quick light steps’

TROTTINER<sup>2</sup><sub>ACTION</sub>  $\equiv$

$\lambda e_i. \exists w \exists x (\text{walk}(e_j, x) \wedge \text{step\_of}(x, w) \wedge \text{hopping}(w) \wedge \text{quick}(w) \wedge \text{hurried}(x) \dots)$

TROTTINER<sup>2</sup><sub>BRUIT</sub>  $\equiv$

$\lambda e_k. \exists z \exists w \exists x \exists e_j (\text{walk}(e_j, x) \wedge \text{step\_of}(x, w) \wedge \text{hopping}(w) \dots \wedge \text{CAUSER}(e_j, e_k) \wedge \text{emit}(e_k, x, z) \wedge \text{noise}(z) \dots)$

(35) *Elle adore regarder les rats trotter.* (frWaC)  
‘she delights in looking at rats scampering’

(36) *Elle entend trotter les souris.*  
‘she hears mice scampering’



# Sketch of an account

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TROTTINER<sup>2</sup> ‘to scamper, to scurry’

‘X marcher à petits pas rapides, pressés et sautillants’

‘X move hurriedly with quick light steps’

TROTTINEMENT<sup>2</sup><sub>ACTION</sub>  $\equiv$

$\lambda e_j. \exists w \exists x (\text{walk}(e_j, x) \wedge \text{step\_of}(x, w) \wedge \text{hopping}(w) \wedge \text{quick}(w) \wedge \text{hurried}(x) \dots)$

TROTTINEMENT<sup>2</sup><sub>BRUIT</sub>  $\equiv$

$\lambda z. \exists w \exists x \exists e_j \exists e_k (\text{walk}(e_j, x) \wedge \text{step\_of}(x, w) \wedge \text{hopping}(w) \dots \wedge \text{CAUSER}(e_j, e_k) \wedge \text{emit}(e_k, x, z) \wedge \text{noise}(z) \dots)$

(37) (...) *silence troublé par le **trottement** d’une souris* (VWeb)

‘(...) silence disturbed by the scampering of a mouse’

# Conclusion

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- Two types of verbs of sound emission have to be distinguished: verbs of direct vs. indirect sound emission.
- In the overwhelming majority of their occurrences, NZNs derived from directly sound emitting Vs denote a sound and not an (emitting) event.
- To that extent these NZNs depart from what is commonly observed for NZNs.
- On the other hand, this behavior is in keeping with the fact that verbs of sound perception obligatorily select the sound variable of their verbal complement, the same that is abstracted away in NZN.
- Indirectly sound emitting verbs basically denote an event.
- They may denote a sound by semantic extension and this possibility is contextually actualized at discourse level.



A photograph of a forest path in autumn. The path is covered in fallen brown leaves and leads into a dense forest of trees with yellow and green foliage. The text "THANK YOU" is overlaid in the center in a bold, red, sans-serif font.

THANK YOU



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