Are path and manner appropriate analysis tools?: searching for the conceptual bases of motion eventualities in French

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- ✓ Since Talmy's (1985, 2000) seminal work on lexicalization patterns, dozens of linguistic and psycholinguistic studies on the semantics of motion processes or eventualities in languages (and across languages) within the path vs. manner paradigm
- ✓ Variety of views on path notion; few detailed analysis of manner (but see Moline & Stosic 2016, Slobin et al. 2014, Stosic 2009, 2019); important divergences about the typological consequences of the path vs. manner paradigm in terms of verb-framed vs. satellite-framed languages (see e.g. Berman & Slobin 1994, Slobin 2003, 2004)
- ✓ Levinson & Wilkins (eds) 2006, Grammars of space: exploration in the linguistic expression of static and dynamic space in a dozen languages around the world (different language families and areas): Arrernte, Dutch, Ewe, Jamijung, Japanese, Kilivila, Tamil, Tiriyó, Tzeltal, Warrwa, Yélî Dnye, Yukatek Maya

- ✓ Assessment of typological differences with respect to the expression of dynamic space (Levinson & Wilkins 2006: 527-531): "We need a better understanding of the underlying components of motion conceptualization, before we can get much further with a typology of how these are differencially conflated in different language types"
- ✓ "Returning to the need for a better understanding of the semantic components involved in motion events, one crucial notion here is the notion of motion itself"
- ✓ Levinson and Wilkins' remark goes beyond the habitual debate on the difficulties raised by a strict opposition between verb-framed vs. satellite-framed languages (in contrast to a typological continuum), the greater or lesser importance of path vs. manner saliency, etc. They question the validity of the notions of path and manner for analyzing the expression of dynamic space in

- ✓ Presentation of the theoretical framework developped from 2008 on, in order to capture the semantics of predicates of autonomous movement and motion in French; bases and different facets and applications of the framework set out in a series of papers (Aurnague 2008, 2011a, 2011b, 2012, 2015, 2019, to appear, Aurnague & Cappelli 2018)
- ✓ In this talk, I try to bring together the main properties of the framework proposed and to give an overview of the movement and motion domain in French as structured by this framework
- ✓ The conceptual tools brought out are likely to apply to other verb-framed or even satellite-framed languages

- ✓ Outline of the talk:
- 1. Change of placement, change of basic locative relation, and layout of the movement and motion domain
 - 1.1. Change of placement
 - 1.2. Change of basic locative relation
 - 1.3. Layout of the movement and motion domain
- 2. Focus on the macro-category of motion/displacement in the broad sense
 - 2.1. Weak motion: change of placement and the notion of "tendentiality"
 - 2.2. Strict motion: change of relation and placement
- 3. Movement and motion predicates and the continuum of dynamicity
- 4. Conclusions and perspectives (synthesis with a final discussion on path and manner)

1. Change of placement, change of relation and placement, and layout of the movement and motion domain 1.1. Change of placement

- ✓ Notion of change of placement (also called "translocation" in other approaches): a dynamic spatial process or eventuality is a change of placement if the position of the located entity or "target" (Vandeloise 1991; also called "trajector" (Langacker 1987) or "figure" (Talmy 1983)) within the terrestrial reference framework changes during the process
- ✓ Allows to put aside verbs and processes that only entail internal changes of a target entity, whithout this entity as a whole modifying its position within the terrestrial or earth's reference framework; verbs of change of posture (relative movements of the parts of an entity) and, more generally, "self-contained motion" (Talmy 1985, 2000)
- ✓ E.g., s'agenouiller 'to kneel down', s'asseoir 'to sit down', s'étirer 'to stretch', se lever 'to get up', se recroqueviller 'to huddle', se trémousser 'to wiggle' vs. avancer 'to advance, to move forward', foncer 'to tear along', glisser 'to slid (along')', grimper 'to climb', marcher 'to walk', patrouiller 'to patrol', zigzaguer 'to zigzag along'

Change of placement, change of relation and placement, and layout of the movement and motion domain Change of basic locative relation

- ✓ Notion fully defined by Boons (1987) but already present in previous research (e.g., Leech 1969, Lyons 1977); Boons aims at differenciating **movement** processes from true **motions/displacements** and, in particular, **strict motion processes** (e.g., aller + Prep 'to go + Prep', arriver 'to arrive', atteindre 'to reach', entrer 'to go in, to enter', partir 'to leave', se rendre 'to go to', sortir 'to go out', traverser 'to cross')
- ✓ A change of basic locative relation is expressed by means of a (static) spatial adposition or case of the language under examination
- ✓ The semantic content of *s'asseoir* 'to sit down' is not reducible to the negation and further assertion of a relation of support/contact such as *être sur* 'to be on'; underlying relation: complex predicate *être assis sur* 'to be set/sitting on'
- ✓ In contrast, the semantics of *entrer* 'to enter' can be captured through the negation and following assertion of the basic locative relation être dans 'to be in'

Change of placement, change of relation and placement, and layout of the movement and motion domain Change of basic locative relation

- ✓ The criterion of change of basic locative relation is likely to put apart verbs of change of posture (e.g., s'asseoir 'to sit down', se coucher 'to lie down') and verbs of change of placement (e.g., marcher 'to walk', se promener 'to stroll') from the category of strict motion: Max a marché/s'est promené dans le parc 'Max walked/strolled in the park' does not entail any change of basic locative relation (être dans 'to be in') of the target with respect to the locating entity or "landmark"/ "ground"
- ✓ However, not fully operative (Aurnague 2011a)
- ✓ The functional content (orientation, forces, naive physics...; Vandeloise 1986) of a spatial adposition can be negated or asserted without any change of position of the target occurring in the terrestrial frame of reference: Max s'est placé face à la fenêtre 'Max positioned himself facing the window'

1. Change of placement, change of relation and placement, and layout of the movement and motion domain 1.2. Change of basic locative relation

- ✓ The association of a dynamic spatial verb with a PP headed by par 'by' (Aurnague & Stosic 2002), as a diagnosis of strict motion, indicates that verbs underlain by the basic locative relation of support/contact (être sur 'to be on') are not handled by French as true eventualities of strict motion (in contrast to verbs underlain by the relation of inclusion/containment être dans 'to be in'): ??L'oiseau s'est posé/perché sur la maison par le jardin 'The bird landed/perched on the house by the garden' vs. L'oiseau est entré dans la maison par le jardin 'The bird went into the the house by the garden'
- ✓ Although being an interesting tool, the notion of change of basic locative relation is not enough to characterize verbs and processes of strict motion: it has to be combined with the notion of change of placement
- ✓ Some changes of basic locative relation (e.g., dans 'in', locating use of à 'at') entail a concomitant change of placement while others not (e.g., sur 'on', routine-based à)

Change of placement, change of relation and placement, and layout of the movement and motion domain Layout of the movement and motion domain

- ✓ The two notions are evaluated with respect to distinct referents: terrestrial/earth's reference framework (change of placement) vs. spatial landmark of the description (change of basic locative relation)
- ✓ Their interaction gives rise to a rich combinatory that structures the whole conceptual and semantic domain of movement and motion in French (in a way similar to internal or lexical aspect and the properties of bounding, punctuality/atomicity and the opposition change vs. permanency; Vendler 1957, Vet 1994, Vetters 1994)
- ✓ Four basic categories of verbs and processes:
 - change of (basic locative) relation and (change of) placement
 - simple change of placement
 - simple change of (basic locative) relation
 - neither change of relation nor change of placement

- Change of placement, change of relation and placement, and layout of the movement and motion domain
 Layout of the movement and motion domain
- ✓ Change of relation and placement or strict motion
- e.g., aller + Prep 'to go + Prep', arriver 'to arrive', atteindre 'to reach', entrer 'to go in, to enter', partir 'to leave', se rendre 'to go to', sortir 'to go out', traverser 'to cross'
- ✓ Simple change of placement or motion in the weak sense
- e.g., avancer 'to advance, to move forward', foncer 'to tear along', glisser 'to slid (along')', grimper 'to climb', marcher 'to walk', patrouiller 'to patrol', zigzaguer 'to zigzag along'
- ✓ Simple change of relation (includes "non boundary crossing")
- e.g., se poser 'to land, to settle' [toucher 'to touch, to hit', frôler 'to brush against']; s'immerger 'to immerse o.s., to submerge o.s.'; sauter, bondir 'to jump, to leap'
- ✓ Lack of change of relation and placement or change of disposition
- e.g., s'accroupir 'to crouch down', s'asseoir 'to sit down', se recroqueviller 'to huddle up'; se blottir 'to snuggle up', se cacher 'to hide', s'embourber 'to get bogged in the mud', se ficher 'to stick in'

- Change of placement, change of relation and placement, and layout of the movement and motion domain
 Layout of the movement and motion domain
- Basic categories of verbs/processes of movement and motion

	No change of placement	Change of placement
No change of basic locative relation	Change of disposition (1) e.g., s'accroupir, s'asseoir, se recroqueviller; se blottir, se cacher, s'embourber, se ficher	Motion in the weak sense (3) e.g., avancer, foncer, grimper, marcher, nager, patrouiller, zigzaguer
Change of basic locative relation	Simple change of relation (2) e.g., se poser [toucher, frôler]; s'immerger; sauter, bondir	Strict motion (4) e.g., aller + Prep, arriver, partir, sortir, se rendre

Change of placement, change of relation and placement, and layout of the movement and motion domain Layout of the movement and motion domain

- ✓ Linguistic research on the expression of dynamic space in French very early concerned by the distinction between movement and displacement (e.g., Tesnière 1959, Boons 1985, 1987, Boons, Guillet & Leclère 1976, Guillet & Leclère 1992)
- ✓ The notion of change of placement is a fundamental tool for such a purpose: two macrocategories of verbs and processes can be distinguished according to the absence vs. presence of a change of placement
- ✓ Spatial dynamicity without motion/displacement (lack of change of placement): includes basic categories of change of disposition (1) and simple change of relation (2)
- ✓ Motion in the broad sense (presence of a change of placement): includes basic categories of motion in the weak sense (3) and motion in the strict sense or strict motion (4)
- ✓ The term "movement" can apply to the whole domain of dynamic space or to the macrocategory of spatial dynamicity without motion/displacement

- Change of placement, change of relation and placement, and layout of the movement and motion domain
 Layout of the movement and motion domain
- Basic categories of verbs/processes of movement and motion

	No change of placement Dynamicity without motion/ displacement (macrocategory)	Change of placement Motion in the broad sense (macrocategory)
No change of basic locative relation	Change of disposition (1) e.g., s'accroupir, s'asseoir, se recroqueviller; se blottir, se cacher, s'embourber, se ficher	Motion in the weak sense (3) e.g., avancer, foncer, grimper, marcher, nager, patrouiller, zigzaguer
Change of basic locative relation	Simple change of relation (2) e.g., se poser [toucher, frôler]; s'immerger; sauter, bondir	Strict motion (4) e.g., aller + Prep, arriver, partir, sortir, se rendre

- Change of placement, change of relation and placement, and layout of the movement and motion domain
 Layout of the movement and motion domain
- Two macrocategories of verbs/processes of movement and motion, and four basic categories; each basic category can, in turn, be divided into subcategories; following section will focus on the subcategories of motion in the weak sense and those of strict motion
- ✓ Some subcategories of the basic category of change of disposition (not exhaustive, not exclusive)
 - change of posture: s'accroupir 'to crouch down', s'asseoir 'to sit down', se recroqueviller 'to huddle up'
 - change of structure: se déployer 'to spread, to unfurl', s'entortiller 'to twist', s'étaler 'to stretch, to sprawl'
 - control of the target (by the landmark): se cacher 'to hide', s'embourber 'to get bogged in the mud', se ficher 'to stick in'
 - control of the landmark (by the target): cerner 'to surround, to encircle', envahir 'to invade, to overrun'
- ✓ Some subcategories of the basic category of simple change of relation
 - sur 'on', support/contact: se poser 'to land, to settle', se percher 'to perch' [toucher 'to touch, to hit', frôler 'to brush against'], décoller 'to take off'
 - routine-based à 'at': s'attabler 'to sit/settle down at (the) table'
 - à l'intérieur de 'inside', sous 'under': s'immerger 'to immerse o.s., to submerge o.s.', émerger 'to emerge'

2.1. Motion in the weak sense and the notion of "tendenciality"

- ✓ Motion in the weak sense or simple changes of placement include directional predicates (Sarda 1999) and many verbs of manner of motion (Stosic 2009, 2019; but see Conclusions)
- ✓ Further semantic properties of simple changes of placement: continuous motion or displacement, cumulative processes/eventualities (under specific conditions), activities (Rothstein 2004, Vendler 1957, Vetters 1996): Max a marché/s'est promené sur la terrasse (pendant dix minutes) 'Max walked/strolled on the terrace (for ten minutes)'
- ✓ Other properties: the terrestrial frame of reference used to evaluate the target's position is implied (not represented in the argument structure of the verb); most verbs of change of placement are inergative predicates (*avoir* diagnosis) (Levin & Rappaport Hovav 1992, 1995)
- ✓ A change of basic locative relation can be added to the process denoted by some verbs of change of placement, in presence of an appropriate spatial PP: Max a couru sur la terrasse pendant/en deux minutes 'Max ran on(to) the terrace for/in two minutes'

- 2. Focus on the macrocategory of motion/displacement in the broad sense
- 2.1. Motion in the weak sense and the notion of "tendenciality"
- Speed (fast): e.g., courir 'to run', filer 'to dash (by)', foncer 'to tear along', galoper 'to gallop, to hare', trotter 'to trot along'
- ✓ Intentional opposition to a force: e.g., ramper 'to crawl', se traîner 'to drag o.s.'
- ✓ **Direction** (linear oriented motion): e.g., avancer 'to advance, to move forward', dégringoler 'to tumble', descendre 'to go down', grimper 'to climb', monter 'to go up', reculer 'to (move) back
- Carrying along by a force: e.g., couler 'to flow', glisser 'to slide', rouler 'to roll'
- ✓ These four properties (some of which can combine) make up a family resemblance underlying the notion of "tendentiality"
- ✓ Max a couru/rampé/reculé/glissé dans le jardin 'Max ran/crawled/backed/slid in(to) the garden'

2.2. Strict motion

- Polarity of the change of basic locative relation:
 - initial polarity (assertion first): r ···⊳ ¬r; e.g., sortir 'to go out', être dans ···⊳ ¬être dans
 - final polarity (subsequent assertion): ¬r ···⊳ r; e.g., entrer 'to go in', ¬être dans ···⊳ être dans
 - medial polarity (medial assertion): $\neg r \cdots \triangleright r r$; few verbs of medial polarity in French (couper par 'to cut across', passer par 'to go through', transiter 'to pass in transit')
- ✓ Parameters for distinguishing subcategories of verbs of strict motion:
 - number and polarity of changes of relation
 - way of combining with change(s) of placement (concomitant, subsequent)
 - status of each meaning element in the semantic content (fully included, presupposed...)
 - nature of the basic locative relation (e.g., locating use of à 'at', dans 'in', routine-based à 'at', sur 'on')

2.2. Strict motion

✓ Independent initial change of relation

e.g., partir, s'en aller 'to go (away), to leave'

1 chge of relation, initial, concomitant with the chge of placement

✓ Double change of relation with initial saliency

e.g., déménager 'to move house', émigrer 'to emigrate', s'exiler 'to go into exile', s'expatrier 'to expatriate o.s.'

2 chges of relation and placement, initial and final, initial saliency

√ Final change of relation with integrated prior motion

e.g., aller à, se rendre 'to go to', venir 'to come' 1 chge of relation, final, previous (integrated) chge of placement

✓ Final change of relation with presupposed prior motion

e.g., arriver 'to arrive', parvenir 'to reach, to get to', aboutir 'to end up', accéder 'to reach, to get to'

1 chge of relation, final, previous (presupposed) chge of placement

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Partir

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e

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r(t,l) \cdots \triangleright \neg r(t,l)

+ ch-plmt

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      Déménager, émigrer

      [·················]

      e
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      + ch-plmt
      + ch-plmt
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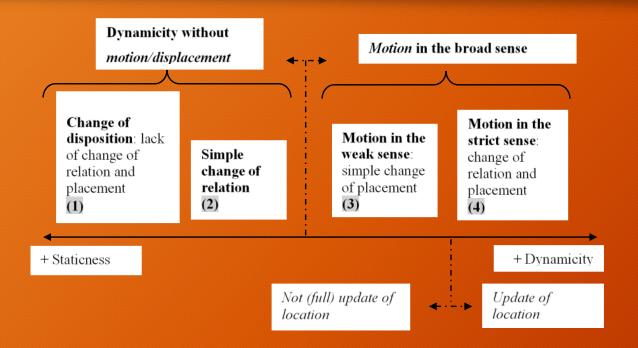
2.2. Strict motion

- Fourteen subcategories of verbs of strict motion were distinguished in a series of studies (Aurnague 2008, 2011a, 2011b, 2012, Aurnague & Cappelli 2018, Cappelli 2013, 2019), including medial changes of relation and changes of relation based on distance (e.g., s'éloigner 'to go away', s'approcher 'to go/come near, to approach) or direction/trajectory (e.g., bifurquer 'to turn off', se déporter 'to swerve to', virer 'to turn')
- ✓ Further semantic properties of strict motions: discontinuous motion or displacement, noncumulative processes/eventualities, accomplishments or achievements (Rothstein 2004, Vendler 1957, Vetters 1996)
- ✓ Other properties: the landmark entity used to evaluate the change of relation is represented in the argument structure of the verb; most verbs of change of relation and placement are unaccusative predicates (être diagnosis) (Levin & Rappaport Hovav 1992, 1995)
- ✓ Change of basic locative relation, change of placement: **aspectual** distinctions can be retrieved (Aurnague 2012); applicable to **spatial adpositions** (Aurnague 2015, 2019)

3. Movement and motion predicates and the continuum of dynamicity

- ✓ Main function of many static and dynamic spatial markers (and descriptions) is to make possible to locate one or several targets (or trajectors, figures) with respect to a landmark (or ground)
- ✓ Notions of "search for the target" and "search domain of the target" (Vandeloise 1987, 1988, Langacker 1987); related pragmatic principal of "(preference for the) positive/current localization of the target" (Aurnague 2015, 2019) partly responsible for asymmetric descriptions of motion eventualities
- ✓ For dynamic space, a crucial role of spatial markers and descriptions is to be able to **update** a moving target's location with respect to a landmark
- ✓ The notions of change of placement and update of location lead to arrange the whole domain of movement and motion along a continuum of dynamicity vs. staticness

3. Movement and motion predicates and the continuum of dynamicity



✓ The most dynamic verbs and the only ones that update the location of the target (with respect to a landmark) are strict motion verbs

motion in the broad sense

4. Conclusions and perspectives

4.1. Summing up

- ✓ Approach based on the two notions of change of placement and change of basic locative relation
- ✓ The interactions of these two concepts allow to arrange the whole domain of movement and motion
- ✓ Two macrocategories of verbs and processes:
- spatial dynamicity without motion/displacement
- ✓ Four basic categories:
- change of disposition simple change of relation motion in the weak sense strict motion
- ✓ Each basic category of verbs can be in turn divided into subcategories
- ✓ Non boundary crossing eventualities included in simple changes of relation

4.1. Summing up

- ✓ Possibility to add a change of basic locative relation to a change of placement and notion of tendentiality
- ✓ Configuration or arrangement of change(s) of relation and change(s) of placement in the semantic content of verbs of strict motion leads to a fine-grained subcategorization
- ✓ Importance of update of location
- ✓ Change of placement and update of location define a continuum of dynamicity of verbs/processes
- ✓ Internal or lexical aspect can be deduced from the presence and arrangement of change(s) of placement and change(s) of relation
- ✓ This theoretical framework is likely to apply to spatial adpositions and cases (in particular in satellite-framed languages)

4. Conclusions and perspectives 4.2. What to do with path?: some problems

- ✓ Variety of conceptions and definitions (when it is defined); often, the notion is used loosely
- ✓ Is a path an eventuality?; the material or physical track of an eventuality?; or, even, a material or physical entity independent from the moving target?
- ✓ Reduction to a pictorial/schematic/imagistic representation
- ✓ Reduction of path and motion eventualities to **geometry** (functional aspects are left aside)
- ✓ In many cases, an absolute space is implied, while space in language is relative (not absolute; Aurnague & Vieu 1993, Aurnague, Vieu & Borillo 1997) and our abilities to process absolute distances, angles, frontiers, etc. are quite limited (Denis 2016)
- ✓ Tendency to conceive path and motion as extended elements (with initial, medial and final subparts)

4. Conclusions and perspectives4.2. What to do with path?: a proposition

- ✓ Do we have to give up with the notion of path?: not necessarily
- ✓ In my framework, a movement or motion eventuality is a path if it includes at least a change of basic locative relation and a change of placement (strict motion)
- ✓ Variety of paths according to several parameters: number and polarity of changes of relation, spatio-temporal arrangement of changes of relation and changes of placement, status of each element in the semantic content, nature of changes of relation...
- ✓ Besides the problematic views on path previously highlighted, the path **vs.** manner opposition led to blur or ignore the central notion of **update of location** in the semantics of dynamic spatial markers (verbs, adpositions, cases...)

4.2. What to do with path?: a proposition

- ✓ Yet, if update of location is taken into account (as a major function of dynamic spatial markers and utterances), languages can be distinguished according to the means or locus of expression of this notion; verb-framed languages: update of location expressed by the (main) verb; satellite-framed languages: update of location expressed by a satellite
- ✓ The "complementary" of path as update of location is not manner but lack of update (of location). In this approach, path as change of relation and placement is thus opposed to simple change of placement (dynamicity without motion being left aside)
- ✓ In line with Levinson & Wilkins (2006) cross-linguistic criticism of the path vs. manner opposition, this alternative proposal is likely to renew the conceptual bases through which the expression of dynamic space in language(s) and across languages can be tackled (Aurnague & Stosic 2019)

4.3. What about manner?

- ✓ Although, following Talmy (1985, 2000), the manner component in the expression of movement and motion has attracted considerable attention, few research tried to really explore and define this semantic and conceptual category; often intuitive assessment
- ✓ Detailed studies on manner are quite recent: e.g., Moline & Stosic 2016, Slobin et al. 2014, Stosic 2009, 2019
- ✓ (Moline & Stosic 2016) and (Stosic 2009, 2019) explore the different linguistic means and levels (syntax, lexicon, morphology, grammar, prosody) available when expressing manner (in general), with specific applications to the domain of movement and motion
- ✓ According to this approach, the manner value is "incidental by nature to some substrate element" and its processing "results in diversifying the substrate by specific qualitative features, and thereby in characterizing/modulating it" (Stosic 2019: 152)

4.3. What about manner?

- ✓ Among the 13 features highlighted in (Stosic 2009, 2019): shape of movement/motion or shape of trajectory
- Perfectly fits the definition of manner viewed as a diversification of a <u>substrate element</u> (here a motion eventuality); e.g., zigzaguer 'to zigzag': <u>marcher, avancer</u> en faisant des zigzag 'to walk, to move doing zigzags', slalomer 'to slalom': <u>se déplacer</u> en slalom 'to move in a slalom-like manner'
- ✓ In support of D. Stosic's (2009, 2019) analysis of manner in movement and motion, French verbs such as zigzaguer 'to zigzag', louvoyer 'to weave', slalomer 'to slalom', spiraler 'to spiral', etc. do not specify the location of the moving target with respect to a landmark and, thus, do not denote a path in terms of update of location
- ✓ Like many other predicates (e.g., avancer 'to advance, to move forward', se déplacer 'to move', marcher 'to walk', ramper 'to crawl'), the verbs referring to the shape of motion/trajectory are atelic verbs that introduce activities: motion in the weak sense

4.3. What about manner?

- ✓ Manner is an important but additional/complementary component of expression of movement and motion in language
- ✓ It cross-cuts the categories of movement/motion eventualities defined on the basis of the notions of change of placement and change of basic locative relations
- ✓ Regarding the macrocategory of motion in the broad sense, manner is very common in the basic category of motion in the weak sense (simple change of placement) but it is also present in strict motion verbs such as s'échapper 'to escape', s'extraire 'to extricate o.s. from', accourir 'to rush up, to run up' or s'engouffrer 'to rush, to dive in'
- ✓ Again, and beyond data from French, I suggest that the opposition between update of location (with respect to a landmark) [path] vs. lack of update [no path] is more appropriate to tackle the expression of movement and motion in language than the path vs. manner paradigm

The End



Defdép(L)

Description, expérimentation et formalisation du déplacement (dans la langue)

Thank you

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Appendix: motion in the broad sense, path and manner

Manner No path as update of location in the (main) verb Path (or trajet 'route') as update of location VS. in the (main) verb [or in a satellite] Change of placement or motion in the weak sense Change of relation and placement or strict motion No update of location **Update of location Unbounded motion (atelic) Bounded motion (telic)** e.g., se déplacer 'to move', marcher 'to e.g., partir 'to leave', s'échapper 'to walk' (manner), avancer 'to advance, to move escape' (manner), entrer 'to go into', s'engouffrer forward' (direction) 'to rush, to dive in' (manner)

Usual vpolog Path (loose) in the (main) verb [or in a satellite]

Manner in the (main) verb