

He Jumped to His Feet: Internal Motion and Internal Path*

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1. Introduction

In the lexical semantics literature, motion sentences have been extensively discussed, as motion is clearly one of the fundamental notions in natural language semantics (Gruber (1976), Jackendoff (1983, 90), Lakoff (1990), Talmy (2000), among many others). As research on motion phenomena has progressed, various types of motion have been noted. But probably the most fundamental distinction among the types of motion seems to be that drawn by Talmy between *translational motion* and *self-contained motion*. According to Talmy (2000:35), in translational motion, an object's basic location shifts from one point to another in space. In self-contained motion, on the other hand, an object keeps its same basic, or "average," location. The sentences in (1a) exemplify translational motion, and those in (1b) self-contained motion.

- (1) a. The ball bounced/rolled down the hall.
- b. The ball bounced up and down on the same floor tile./ The log rolled over and over in the water.

(Talmy 2000:36)

This dichotomy, based upon whether or not an entity ends up being in a different place, seems to be widely accepted (cf. Pinker (1989) and Jackendoff (1990)).

In what follows, however, I will demonstrate that there is a third type of motion, which does not result in the displacement of an object but which nevertheless is different from self-contained motion.

2. Internal Motion with an Internal Path Expression

The phenomenon which I will discuss in this paper is exemplified by the sentences in (2).

- (2) a. He *jumped to his feet*.
- b. He *leapt to his feet*.
- c. He *sprang to his feet* and ran outside.

(COBUILD)

To appreciate how the motion described in (2) differs from translational motion, compare (2a) with (3).

- (3) He jumped over the fence.

In (3), the subject clearly shifted to a point in space which is different from the point at which he was located prior to jumping. In contrast, in (2a) the subject remains in the same location after the act of jumping.

What differentiates between the two cases is that while in (3) the whole body undergoes the motion, in (2) the upper part of the body is focused upon, leaving the lower part outside one's attention. Therefore, it is possible to construe the whole body minus the feet as being on one's feet. Based upon this understanding of the phenomena, I argue that in (2) the verb describes an *internal motion*, as distinct from translational motion or self-contained motion.

Concomitantly, I also argue that *to one's feet* is not so much an idiom as an ordinary path PP that expresses a Goal of the internal motion of jumping, etc. This claim is not so far-fetched as it might appear at first sight. What makes *to one's feet* different from the *to*-PPs that express a Goal of translational motion is the kind of viewpoint being taken. In understanding the sentences in (2), one is taking a body-internal, vertical viewpoint. And this body-internal, vertical viewpoint is observable with other sentences, like (4).¹

- (4) a. She ... wore a long black lace dress *down to her feet*.
 b. a Kachemire shawl covered my head, hanging like a large scarf *down to my feet*.

If one takes a body-external, non-vertical viewpoint, *to one's feet* may express a Goal for a translational motion, as in (5).

- (5) Blanche flung herself across the floor and rolled on *to his feet*.

Also, *to one's feet* behaves like ordinary Goal PPs with respect to the inference pattern. It is well-known that *to*-PPs expressing a Goal for translational motion make it possible to infer about the resulting location of the entity undergoing the motion. Thus from (6a) one can infer (6b).

- (6) a. John went to the station. b. John was at the station.

Jackendoff (1987) formalizes this inference pattern in (7).

- (7) For an Event of the form
 [Event GO (X, [Path TO (Y)])],
 there is a point in time *t*, the termination of the Event. At *t*, the following holds:
 [State BE (X, [Place AT (Y)])];
 and for some interval of time leading up to but not including *t*,
 NOT [State BE (X, [Place AT (Y)])].

(Jackendoff 1987:379)

Now, the same inference pattern holds with *to one's feet*. Thus from (8a) one can infer (8b).

- (8) a. He rose *to his feet*. b. He was *on his feet*.

To the extent that the same inference pattern holds, then, it seems plausible to claim that *to one's feet* is a Goal PP.

3. The Distinctness from Translational Motion

To my claim that sentences like *He jumped to his feet* describe an internal motion, an objection might be raised along the following lines: It is not necessary to introduce the concept of internal motion, for the putative “internal motion” could be derived from the translational motion via metonymy.

For instance, the verb *rise* allows for both a translational motion as in (9a) and an internal motion as in (9b). In the former, an entity’s displacement from the horizontal (l_i for a location) increases with the passage of time (t_i for a time), as in Fig. 1 (a). In contrast, in the latter only the upper part of an entity undergoes a similar displacement from the horizontal, as in Fig. 1 (b).

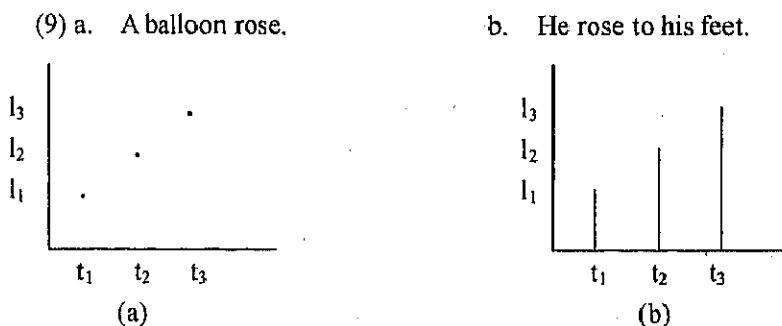


Fig. 1

Thus, so the argument goes, all that differentiates between the two versions of *rise* is whether a whole entity or part of it undergoes a motion, which can be handled by the PART FOR WHOLE metonymy.

In fact, it is not uncommon for only a subportion of an entity to occupy a path. Lindner (1983:115) calls the relevant sub-portion of an entity the ACTIVE ZONE, following Langacker (1984), and cites many examples of verb-particle constructions. Thus the tops of entities are active zones in (10) and (11).

(10) a. The broth boiled/bubbled up (and out of the pot).

b. The fire flared up.

(11) a. Draw yourself up to full height.

b. Lift up your head – straighten up.

(Lindner 1983:115)

Other portions besides tops may serve as the active zone; the edge in (12) and the bottom in (13).

(12) a. Flip up the lever.

b. Jack up the car.

(Lindner 1983:116)

(13) a. Roll up your sleeves.

b. Jack up/turn up the hem.

(Lindner 1983:117)

Clearly the active zone is a type of metonymy, and the abundance of active zone phenomena

apparently argues in favor of reducing the internal motion to the translational motion by means of metonymy.

However, this argument does not go through. A metonymy analysis might look plausible for cases like *rise* or *climb* in (14a), but not for cases like *surge* in (14b) or *stand* in (14c), which do not involve the sense of a whole entity undergoing a displacement.

- (14) a. Lord John slowly *climbed to his feet*.
- b. Patrick *surged to his feet*.
- c. Willie *stood sleepily to his feet*.

In other words, verbs like *surge* or *stand* do not possess the translational motion sense in the first place, from which the internal motion sense is putatively derived via metonymy.

This problem becomes more acute with the cases below. All the verbs listed below, accompanied by *to one's feet*, may express an internal motion, but all these verbs basically express a body-internal motion, rather than a translational motion.

- (15) a. He *lurched to his feet*.
- b. Jessica got to her knees, holding herself and snorting, then *staggered to her feet* and ran down to the water.
- c. He *tottered drunkenly to his feet* and reached inside his jacket.
- d. Parker *lumbered to his feet*.
- (16) a. He *struggled to his feet*.
- b. He *heaved to his feet*.
- c. Tyrion *reeled to his feet*, determined to sell his life dearly.
- d. Rosalba harrumphed, and pulling Caterina up with her, *swayed to her feet*, one hand on her stomach.
- e. Trotter *shuddered to her feet* like an old circus elephant.
- f. He remembered, but too late, and then *stumbled to his feet* too quickly, almost knocking over the tiny wine-table which stood by his side.

To recapitulate, then, while some cases of internal motion can be said to be metonymically related to the translational motion, this in no way indicates that the category of internal motion could be dispensed with by resorting to metonymy.

4. The Distinctness from Self-Contained Motion

Let us next consider how internal motion compares with self-contained motion. According to Talmy (2000:35-36), "Self-contained Motion generally consists of oscillation, rotation, dilation (expansion or contraction), wiggle, local wander, or rest." As already noted, internal motion is like self-contained motion in that an object keeps its original position. But internal motion is more like translational motion in another respect.

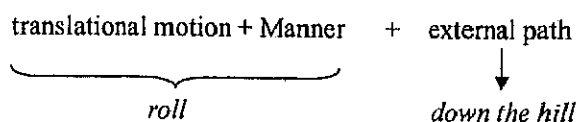
As Talmy (1985) observes, some motion verbs can be analyzed as incorporating a

Manner as in (17a), and some motion verbs as incorporating a Path as in (17b).

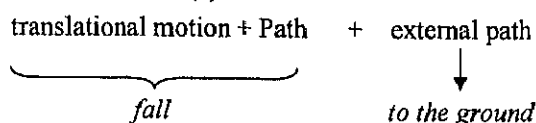
(17) a. *roll, bounce, slide, glide, float, etc.* (Manner-conflating motion verbs)

b. *rise, fall, drop, ascend, descend, etc.* (Path-conflating motion verbs)

Clearly, by "motion" is meant the translational motion, so that the two types of conflation exemplified by *roll down the hill* and *fall to the ground* are described as in Fig. 2 (a) and Fig. 2 (b), respectively.



(a) Manner conflation



(b) Path conflation

Fig. 2

Now notice that these Manner-conflating verbs and Path-conflating verbs express translational motions like (18a), rather than self-contained motion, *when they are accompanied by path PPs*.

(18) a. The ball bounced/rolled down the hall.

b. The ball bounced up and down on the same floor tile./ The log rolled over and over in the water.

When we turn our eyes to internal motion sentences, an entirely parallel pattern emerges. The various verbs in (19) (e.g. *jump, leap, spring, scramble, etc.*) can plausibly be analyzed as describing the manner of an internal motion. And some Path-conflating verbs like *rise* can be regarded as describing the path of an internal motion ('upward').

(19) a. He *jumped to his feet*.

b. He *leapt to his feet*.

c. He *sprang to his feet* and ran outside. (COBUILD)

d. I *scrambled to my feet* a little sheepishly as one of the Officers had turned round and was observing me as I approached.

e. Hoomey *scooted to his feet*.

f. Grimwood was half supporting Steve who had *clambered to his feet*, making their way further along Greenway Gardens.

And again, these verbs come to express an internal motion when they are accompanied by *to one's feet*. Consequently, it seems reasonable to suppose that we have internal motion counterparts for Manner-conflating and Path-conflating patterns, as in Fig. 3.

internal motion + Manner + internal path

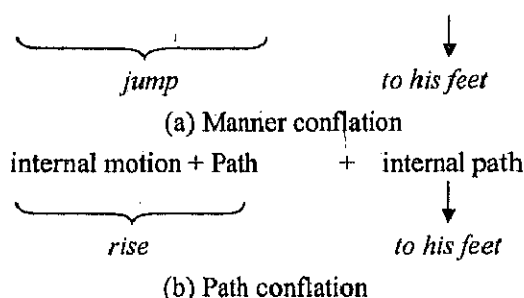


Fig. 3

Furthermore, notice that clear instances of self-contained motion verbs like *wriggle* or even *bounce* can express an internal motion when they are followed by *to one's feet*, just as self-contained motion verbs express a translational motion when followed by path PPs.

- (20) a. There was a knock on the door and I *wriggled to my feet*.
 b. He watches the guy *shuffle to his feet*.
 c. He *loafed to his feet*, and put his hands on Lucy's shoulders.
 d. The animal (=cow) *bounced back to its feet* only to be killed by a bus.

Thus internal motion is entirely parallel to translational motion with respect to conflation patterns.

5. *To One's Feet* as a Path PP

I have so far argued that *to one's feet* is an ordinary path PP, rather than an idiom. Already, the inference pattern noted at the end of section 2 and the consideration in terms of conflation patterns in section 4 have served to justify my claim. But even apart from these considerations, there are several pieces of evidence that *to one's feet* is an ordinary path expression. First, *to one's feet* can appear as a directional phrase complement of a transitive verb as well.

- (21) a. Phoebe *lifted her to her feet* and they started towards the door.
 b. She was struggling to get Maire's breath back, and *raise her to her feet*.

Second, there are other similar expressions. Thus both *to one's knees* and *from one's knees* in (22) are understood with a body internal, vertical viewpoint.

- (22) a. She *dropped to her knees*.
 b. She stumbled and *fell to her knees*.
 c. She *sank to her knees* on the damp sand at his feet, wringing her hands.
 d. He *rose from his knees*.

As can be seen in (23) and (24), *to one's knees* is more likely to cooccur with a downward movement, contrasting with *to one's feet*, which tends to cooccur with an upward movement (But see below).

- (23) a. He *crumpled to his knees*.

- b. Edward *crouched to his knees* before the firebox and peered into the sickly blaze.
- (24) a. I *slipped limply to my knees* in extreme terror.
- b. The Suffolk Punch would get down or *stoop on to its knees* in its efforts to draw a full or heavy load.
 - c. The sweat-streaked bearers put down the skewed tower on which the Madonna stood, and *tumbled to their knees*.
 - d. In the cold light of day it seems incredible that I *toppled to my knees* in so abject a manner.
 - e. She whispered in his ear as he *collapsed to his knees* by the bed and clasped her in his arms; "I can't promise you a son every time you're away!"
 - f. He *sagged to his knees*.
 - g. She *slumped to her knees* in despair.
 - h. I *crumble to my knees* and vomit into the toilet, after which I fall headlong into bed and sleep for three or four

And *to one's knees* can appear as a directional phrase complement of a transitive verb as well.

- (25) a. Whitlock sprung to his feet and caught him on the side of the head with a stinging haymaker then followed up with two brutal body punches that *dropped him to his knees*.
- b. Urged on by their riders with short metal-tipped bamboo rods, the elephants *lowered themselves slowly to their knees*.

Third, these expressions with a body-internal viewpoint can be conjoined with each other. Thus in (26) and (27), *to one's hands*, *to one's knees*, and *to one's feet* respectively express different parts of one's body, and (the relevant part of) the subject sequentially moves to these parts.²

- (26) a. She *fell* — first *to her knees*, then forwards on *to her hands*.
- b. He *scrambled to his knees*, then *his feet* and stood up.
- (27) a. After a while he *got to his hands and knees*.
- b. She landed awkwardly, *falling to her hands and knees*.

It is even possible for these expressions to be conjoined with an ordinary *to*-PP, as in (28).

- (28) But the most dramatic event was the fire at Windsor Castle which *brought* the monarchy if not *to its knees*, at least *to its senses*.

Fourth, *to one's feet* (and *to one's knees*) can be modified by adjectives.

- (29) a. The same man, just two hours later, miraculously *leapt to his sore, aching feet*.
- b. The Victorians tried to spoil the pleasures of puddings with foolish economies and in so doing *brought* Britain's once fine reputation *to its culinary knees*.

And fifth, while the fact that *to one's feet* tends to occur with an upward movement

apparently suggests an idiomatic character, this is in fact not the case. *To one's feet* does occur with verbs describing a downward movement, as in (30a) and (30b). Similarly, *to one's knees* may occur with verbs describing an upward movement, as in (30c).

- (30) a. Sung *fell to his feet*, whimpering in pain.
- b. Forster *dropped lightly to his feet* and ducked down beside a bench.
- c. But they flinched when Garvey *rose clumsily to his knees*.

All this suggests that *to one's feet* (as well as *to one's knees*) is a path expression indicating that an entity undergoing a motion ends up being at a particular position.

To sum up this section, *to one's feet* is an ordinary path expression, not to be dismissed as an idiom.

6. Further Parallels with Translational Motion

The foregoing discussion has shown that apart from the fact that an object keeps its original place, internal motion behaves more like translational motion than self-contained motion. In this section two further parallels will be drawn between internal motion and translational motion.

6.1. Subjective Motion

In the literature, sentences like *This road goes from Denver to Indianapolis* are claimed to involve *subjective motion* (Langacker (1986, 87), Iwata (1996), Matsumoto (1996a, b), Talmy (2000)). Clearly subjective motion sentences are possible with translational motion, but not with self-contained motion. And subjective motion sentences may take the same range of path types as objective motion ones: bounded paths in (31a), directions in (31b), and routes in (31c), all of which are path types for translational motion.

- (31) a. The highway extends from Denver to Indianapolis.
- b. The flagpole reaches (up) toward the sky.
- c. The sidewalk goes around the tree.

(Jackendoff 1983:168)

Now subjective motion is also possible with a vertical orientation as in (32), and *to one's feet* can appear in subjective motion sentences, as in (33).

- (32) a. The hills rise steeply.
- b. St Paul's rose majestically from the trees.

(COBUILD)

- (33) a. Without warning she *towered to her feet* and he found himself facing into her breasts before stepping back to give her room to pick up gloves and handbag.
- b. a coarse sacking apron which *fell from her neck to her feet* like a monstrous bib.

(cf. Her tawny hair *falls to her shoulders* in an even crop.)

This is thus still another respect in which internal motion parallels translational motion.

6.2. *Caused Motion*

Goldberg (1995) observes that caused-motion sentences are possible even when motion is not strictly entailed by the verb. Thus besides the central case in (34a) that can be characterized by the semantics “X causes Y to move Z”, motion is entailed by the “conditions of satisfaction” in (34b), motion is enabled in (34c), potential motion is prevented in (34d), and motion is assisted in (34e).

- (34) a. Pat pushed the piano into the room.
- b. Sam urged him into the room.
- c. Sam allowed Bob out of the room.
- d. Harry locked Joe into the bathroom.
- e. Pat assisted Chris into the room.

(Goldberg 1995:161-62)

Now recall that *to one's feet* can appear as a path complement to a caused-motion sentence.

- (35) a. Phoebe *lifted her to her feet* and they started towards the door.
- b. She was struggling to get Maire's breath back, and *raise her to her feet*.

Interestingly enough, a range of possibilities similar to that in (34) are attested. Of course, *to one's feet* can occur with verbs that entail motion, as in (36) – (38).

- (36) a. The girl was *pushed to her feet*.
- b. Riven *pulled her to her feet*.
- (37) a. Taking her arm, he *drew her to her feet*, his body shielding her from the rest of the room.
- b. Grabbing her by the arm, he *yanked her to her feet*.
- c. Cheryl ran into the airlock chamber and grabbed Piper by the throat, *jerking the woman harshly to her feet*.
- (38) a. Colleague Evelyn Cookson and a stranger *hoisted Tammy to her feet* and helped her into a waiting ambulance.
- b. Every time anyone made a threatening move, the Hare-woman *hauled Jinny to her feet* and pointed the gun at her head until the person gave way and retreated.
- c. She *tugged me to my feet*.
- d. Herve kicked him onto the floor, walked over, *dragged him to his feet* and broke his jaw with a side kick.
- e. “Come to find me?” she repeated, reaching down to grip his arm and *heaving him to his feet*.

But *to one's feet* is also found with verbs which are generally known to be causatives (*force*,

get, urge) in (39), verbs of helping (*help, assist*) in (40), and miscellaneous others (*summon, bully, startle*) in (41).

- (39) a. The man had been *forced to his feet* and was being held between two Security men, his head bowed in shame, his hands trembling with fear.
- b. Limeking went down as if shot, and his rider Pat Buckley desperately tried to *get him to his feet*.
- c. She finished eating, hoping she could elude Roman and get to Dana's hotel without him, but as soon as she put her cup down he was *urging her to her feet*.
- (40) a. I *helped her to her feet* and hugged her.
- b. Janet had come in and was *assisting aunt Emily to her feet*.
- (41) a. Almost at once the National Anthem *summoned them both to their feet*, but Mark responded sluggishly.
- b. It was Blackberry who *bullied the stupefied Pipkin to his feet* and forced him to limp the few yards to the gravel spit.
- c. The shout *startled me to my feet*.

In none of these cases is motion strictly entailed by the verb. Thus *to one's feet* is like ordinary path PPs in this respect as well.

7. Conclusion

Sentences like *He jumped to his feet* should be analyzed as involving an internal motion, with *to one's feet* being a path PP. Internal motion is like self-contained motion, in that an object is not displaced as a result of the motion. But internal motion parallels translational motion in several other respects. Thus it is a distinct type of motion.³

The lexical semantics literature so far has been mostly concerned with translational motion (and its abstract applications in analyses of a change of state; see Gruber (1976), Jackendoff (1983), Lakoff (1987, 90), Goldberg (1995), among many others), and this area has been relatively little explored in the literature. But it may well turn out to be a fertile ground for insights into lexical semantics.

NOTES

* I'd like to thank Ian Richards for suggesting stylistic improvements.

¹ All the relevant examples in the following are from the British National Corpus.

² Ian Richards (personal communication) has pointed out to me that *one's toes* also participates in this paradigm, as in *He raised himself onto his toes*.

³ Internal motion thus defined is not limited to sentences like *He jumped to his feet*. See Iwata (2003) for another type of internal motion.

REFERENCES

- Goldberg, A. (1995) *Constructions: A Construction Grammar Approach to Argument Structure*, University of Chicago Press, Chicago.
- Gruber, J. (1976) *Lexical Structures in Syntax and Semantics*, North-Holland, Amsterdam.
- Iwata, S. (1996) "Motion and Extent: Two Sides of the Same Coin," *Studia Linguistica* 50, 256-282.
- Iwata, S. (1998) *A Lexical Network Approach to Verbal Semantics*, Kaitakusha, Tokyo.
- Iwata, S. (2003) "A Door that Swings Noiselessly Open May Creak Shut," ms., Osaka City University.
- Jackendoff, R. (1983) *Semantics and Cognition*, MIT Press, Cambridge, MA.
- Jackendoff, R. (1987) "The Status of Thematic Relations in Linguistic Theory," *Linguistic Inquiry* 18, 369-411.
- Jackendoff, R. (1990) *Semantic Structures*, MIT Press, Cambridge, MA.
- Lakoff, G. (1987) *Women, Fire and Dangerous Things: What Categories Reveal about the Mind*, University of Chicago Press, Chicago.
- Lakoff, G. (1990) "Invariance Hypothesis: Is Abstract Reason Based on Image-Schemas?" *Cognitive Linguistics* 1, 39-74.
- Langacker, R. (1984) "Active Zones," *BLS* 10, 172-188.
- Langacker, R. (1986) "Abstract Motion," *BLS* 12, 455-471.
- Langacker, R. (1987) *Foundations of Cognitive Grammar*, Vol. 1: *Theoretical Prerequisites*, Stanford University Press, Stanford.
- Lindner, S. (1983) *A Lexico-Semantic Analysis of Verb-Particle Constructions with Up and Out*, Doctoral dissertation, University of California, San Diego.
- Matsumoto, Y. (1996a) "Subjective Motion and English and Japanese Verbs," *Cognitive Linguistics* 7, 183-226.
- Matsumoto, Y. (1996b) "How Abstract is Subjective Motion? A Comparison of Coverage Path Expressions and Access Path Expressions," *Conceptual Structure, Discourse and Language*, A. Goldberg (ed.), 359-374. CSLI Publications, Stanford.
- Pinker, S. (1989) *Learnability and Cognition: The Acquisition of Argument Structure*, MIT Press, Cambridge, MA.
- Talmy, L. (1985) "Lexicalization Patterns: Semantic Structure in Lexical Forms," *Language Typology and Syntactic Description*, Vol. 3: *Grammatical Categories and the Lexicon*, T. Shopen (ed.), 57-149, Cambridge University Press, Cambridge.
- Talmy, L. (2000) *Toward a Cognitive Semantics*, Vol. 1: *Concept Structuring Systems*, MIT Press, Cambridge, MA.

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