Going to Surprise: the grammaticalization of itive as mirative

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Abstract

Morphemes indicating direction away from the deictic center can signal an unexpected event, without necessarily indicating motion in space: *Look what he went and did this time!* These surprise readings have puzzled researchers working on several European languages, especially English and Swedish (Stefanowitsch 1999; Josefsson 2014). In this paper it is proposed that mirative usage like this can be explained as metaphorical movement away from an expected outcome: the way an individual or the world is supposed to behave according to the speaker. Just as motion verbs can grammaticalize from the spatial domain to the temporal domain as aspect markers, they can also extend into the domain of eventualities. Specifically, *go* and related forms can grammaticalize as miratives, marking unexpected information (DeLancey 1997).

It is first important to recognize a category of deictic modification for verbs. Various forms are attested cross-linguistically, from verb-verb combinations (such as serial verb constructions) to inflectional morphology in some languages. These morphemes may either add a motion sub-event to the verbal predicate (Associated Motion: Guillaume 2016), or encode only the direction of an existing motion event (Directionals). In both cases, the two most common types are action directed toward the deictic center (usually the speaker) and action directed away from the deictic center. The former corresponds to *come* and is known variously as ventive, venitive, cislocative and centripetal. The latter, corresponding to *go*, is the focus of this paper, and is known variously as itive, andative, translocative and centrifugal. In a large sample of languages with verbal deixis of this type, although not as common as grammaticalization into tense and aspect markers, itives of various forms were found to express mirativity, from Abkhaz (Caucasian) to Kera (Chadic) to Mizo (Sino-Tibetan) to Turkish, supporting an analysis of these constructions as a unified category.

Semantically, several factors play into this grammaticalization pattern. One is that *go* is often associated with negative actions (*go crazy*), and *come* with positive ones (*come to your senses*). Another is that *go* often carries a sense of intentionality or inchoativity even in tense and aspect (Fleischman 1982). Sudden or surprising action is encoded by the speaker as deviation from an expected course of action. Interestingly, though less often, expected or desirable outcomes can be expressed by ventives as, for example, hortatives or solidarity imperatives (semantically like English *c'mon*; cf. Heine & Kuteva 2002).

Online proceedings of *Cognitive Linguistics in Wrocław Web Conference 2016* https://sites.google.com/site/coglingwroc2/ "Somewhere along the way I lost a step. I got sloppy, dulled my own edge. Maybe I went and did the worst crime of all: I got civilized. So now we zero the clock, just me and this no-name world. Gotta find that animal side again."

1. Introduction

In the opening scenes of the 2013 science fiction film *Riddick*, the anti-hero, who is the last person anyone would imagine as civilized, describes what went so wrong in his life that he would end up abandoned on an uninhabited planet. This use of the motion verb *go* in English can indicate what has been called a "surprise" reading:

(1) Look at what he went and did this time!

This construction thus joins the other better-known functions of *go*, including its use as the motion component of multi-verb constructions as in (2), its metaphorical extension to so-called fictive motion (Talmy 1996; Matlock & Bergmann 2015; *inter alia*) as in (3), and its grammaticalization in the temporal domain as in (4):

(2) We went to see a movie.	(physical motion)
(3) The road goes north.	(fictive motion)
(4) We're gonna see a movie.	(future)

Compared to these other constructions, research on the surprise function of *go* is relatively sparse and mostly limited to European languages, especially English and Swedish. Most of the relevant discussions have been limited to pseudocoordination constructions, which have been most extensively described and investigated in European languages (cf. Ross 2016a). It should be noted that while pragmatic effects can make one reading especially salient, as in (1), English *go and* can be interpreted either as literal motion or with the surprise reading, as in (5):

(5) He went and bought that book.

In many cases the surprise reading of a pseudocoordination construction and the construction itself are considered idiomatic, and previous accounts have rarely related this to other uses of GO cross-linguistically, and not at all to morphological itives (see Section 2). That is therefore the goal of this paper, both to establish a general cross-linguistic grammaticalization pattern and to shed more light on the properties of these European pseudocoordination constructions. The remainder of this section provides an overview of previous research before turning to cross-linguistic comparisons and a proposed explanation.

Ross (1967:170), in identifying uses of *and* that are not subject to certain structural properties of coordination (specifically the Coordinate Structure Constraint, which prohibits asymmetrical extraction from conjuncts), points out (6) as anomalous and beyond the scope of his research (because it is not to be derived from structural coordination). He does not discuss the surprise reading explicitly, but the example is rather transparent:

(6) Which dress has she gone and ruined now?

In discussing pseudocoordination (especially the types *try and do*, and *go and get*; as well as *go get*), Carden & Pesetsky (1977:89) identify an "unexpected event" reading for *go and*. They are careful to distinguish unexpected event *go and* from motion *go and* because, although they claim both are not derived from structural coordination and thus involve a

"fake" *and*, the unexpected event usage usually has a negative connotation, and it does not require that the subject be in control of the event, as in (7):

(7) Did your best coon dog go and die on you?¹

Arnaiz & Camacho (1999) discuss a similar construction in Spanish. They claim that *ir* y 'go and' functions as a Topic Auxiliary, and the focus of their analysis is on its syntactic structure from a Minimalist perspective. As in English, the construction describes an action that "suddenly alters the expected course of events" (p.319):

(8) Ramón fue y se cayó.	
Ramon went and REFL fell ²	
'Ramon unexpectedly fell.'	(Spanish: Arnaiz & Camacho 1999:318)

Stefanowitsch (1999, 2000) provided the first cross-linguistic investigation of *go and*, with examples from English, Swedish, Danish (9), Spanish and even Hebrew (10):

- (9) Han var gået hen og have gifted sig. He had gone there and had married REFL'He went and got married.' (Danish: Stefanowitsch 1999:126)
- (10) Kulam paxadu liftoax et ha-kufsa aval Dan halax ve asa et ze.
 everyone was.afraid to.open OBJ DEF-box but Dan went and did OBJ it.
 'Everyone was afraid to open the box, but Dan just did it.' (Hebrew: p.127)

Stefanowitsch (1999) was also the first to attempt an explanation of the surprise reading from the semantics of the verb GO, extending ideas from Ekberg (1993) about ingressive use of TAKE. He observes that GO involves a motion schema which may take several variant forms including one involving divergence from an expected direction. This is extended through the metaphor CHANGE IS MOTION (see Radden 1996), and divergence from the expected flow of events is surprising. This analysis, to be revised and discussed in more detail, is the starting point of my analysis in this paper (Section 4).

Several studies have investigated the surprise reading of GO in Swedish. Wiklund (2008, 2009) describes the inceptive use of $ga \circ ch$ 'go and' (as well as *ta* och 'take and'):

(11) Peter gick och läste en bok.Peter went and read a book'Peter went and read a book.' (Swedish: Wiklund 2009:181)

She claims that surprise is built on top of the inceptive reading, arguing that punctuality is critical for deriving surprise. For GO, the second, non-motion verb contributes punctuality, while TAKE can contribute punctuality directly as the first verb. Her analysis is formal, decomposing event structure, and it adequately describes the distribution of surprise readings but does not explain why *motion* verbs are used as light verbs.

Josefsson (2014) also describes Swedish gå och but offers a very different explanation. She relies on the polysemy of GO and bases the surprise effect on the 'happen'

¹ Their particularly colloquial example suggests the authors recognize that this usage is typically informal.

² Glosses are presented for the most part in the same format as in the original source, but in some cases I have adjusted the glossing to clarify the relevant phenomenon or supplied the glosses myself when the author did not. A list of abbreviations used in the glosses is included at the end of the paper.

meaning. Specifically, she claims that GOHAPPEN has three thematic roles (12) but that the *light verb* in 'go and' has only two argument positions so that EXPERIENCER cannot be expressed structurally; the *speaker* assumes this role, experiencing the event as a surprise.

(12) It went well for him. (GOHAPPEN thematic roles) THEME GOAL EXPERIENCER

Although this explanation is interesting, it relies on the tentative and anomalous theoretical assumption that an interlocutor can take on a grammatical role in a sentence. I propose an alternative explanation in Section 4 that does not rely on such an assumption, and it also follows naturally from the primary motion sense of GO. As mentioned by Stefanowitsch, the motion need not be literal, but may be interpreted as a change of state. This is economical from a grammaticalization perspective too, in that both *go and* readings can share a common origin, which is compatible with their widespread co-occurrence. Furthermore, it seems that it is not only the speaker that can take on an experiencer-type role in these constructions (7), which would mean that Josefsson's theory would need to be extended to allow any contextually salient individual to fill an extra-syntactic thematic role, which would limit the proposed grammar's ability to exclude ungrammatical usage beyond this construction. In (13), the surprise reading is still available, but from the perspective of the doctor.

(13) The doctor's patient went and died on him.

The 'go and' construction has been described with similar semantic interpretations also for Czech (Škodová 2009), Portuguese (Rodrigues 2006; Colaço & Gonçalves 2016), Finnish (Hakulinen et al. 2004:1042), Armenian (go verb, without and: Khurshudian 2010), and French (aller 'go' followed by an infinitive: Celle & Lansari 2015). Maisak (2005:174), citing Stefanowitsch (1999, 2000) and based mostly on European language data, identifies a cross-linguistic trend of GO developing surprise readings, a development not mentioned by other sources such as Heine & Kuteva's (2002) World Lexicon of Grammaticalization.

Krivochen & Schmerling (2016) compare go and, up and and take and (for the dialects in which it occurs) in colloquial English, which have similar meanings. They identify slightly different connotations: go and for a lack of concern for undesirable consequences, up and for sudden and unexpected action at the time, and take and for the subject actively causing the event. Their usage can overlap contextually, and these distinctions are not absolute, but this study makes it clear that more research is needed to distinguish between sudden, surprising, undesirable, and disapproving nuances both within and across languages. Additionally, there is, at least to my ears, a difference in these constructions hold (14), up and seems to fundamentally shift the narrative, and its repeated use would be strange (15). Repeated take and is also strange but might emphasize extreme resolve from the subject (16).

- (14) First, the clown went and rode an elephant. Then he went and swung on the trapeze. Then he went and stole popcorn from the audience. And then he went and did a backflip! It was amazing!
- (15) The gangster up and ran for president, then he (??up and) destroyed the country.
- (16) The thief took and hit me, and then he (?took and) threatened to hurt my family.

In English, the surprise reading is most accessible for *go and V* and limited for other multi-verb constructions with GO. It is also sometimes found with *go V-ing* (especially with *around*), as in (17), and it is marginally available with *go V*, as in (18).

(17) Don't go breaking my heart!

(18) Don't you go tell him a thing!

(19) ??You just{went / had to go} to sing, didn't you?

The surprise reading seems unavailable for *go to V*, as in (19), possibly because this is a purposive form that does not entail complement of the action described by the second, non-motion verb, as in (20):

(20) I went to eat, but decided I wasn't hungry.

Turning to the semantics of the surprise reading cross-linguistically, *mirativity* is the grammatical marking of unexpected information (DeLancey 1997). Setting aside the open questions about different semantic nuances and allowing for different degrees of grammaticalization in different languages, it seems that at least sometimes *go and* has a mirative function. Morphological and other miratives are attested in many languages around the world, although they are not generally considered related to motion. Sometimes they are considered to be related to evidentiality.

We can consider two hypotheses: that surprise readings are related to the semantics of GO, or that surprise readings are idiomatic or specific to pseudocoordination. In the remainder of this paper I will give evidence to support the first hypothesis. In Section 2 I provide an overview of the distribution of itive and ventive directional morphemes cross-linguistically, and in Section 3 I look at cases where their use has been extended like the surprise readings for GO. Section 4 proposes an explanation for this development as a direct extension of the semantics of GO (and itives more generally). Section 5 concludes.

2. Itives and ventives cross-linguistically

To consider surprise readings for GO cross-linguistically, it is first important to establish the category of itives. Some languages have verbal inflection for direction. Others have similar particles or multi-verb constructions. The two most common types are itive (corresponding to GO) and ventive (corresponding to COME). These forms are what resemble most closely the motion reading of the English *go and* and *come and* pseudocoordination constructions. Consider the examples from Maasai in (21) and (22):

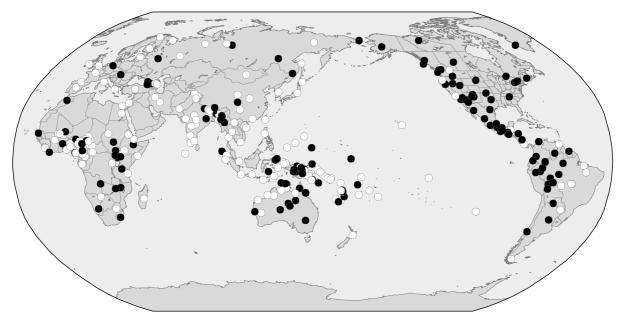
(21) A-rew- aa 1SG-drive-ITV 'I shall drive the	nkishu. cattle cattle away.'	(Maasai: Tucker & Mpaayei 1955:126)
(22) To ro u	ntrichy	

(22) Te-re-u	nkishu.	
IMP-drive-VENT	cattle	
'Drive the cattle	this way!'	(Maasai: Tucker & Mpaayei 1955:123)

Itives indicate motion away from deictic center (usually the speaker) and are frequently transparently related to GO etymologically. Ventives indicate motion toward the deictic center, and are frequently transparently related to COME etymologically. It is worth briefly mentioning the very often inconsistent terminology used by different researchers, which is part of why itives and ventives are not so well-known as cross-linguistic categories. Itives are alternatively called andative, translocative (or dislocative) or centrifugal, and ventives are alternatively called venitive, cislocatives or centripetal. These terms are most often used for bound morphemes (affixes) but are also sometimes applied to particles or components of serial verb (or other multi-verb) constructions. Collectively they belong to a class of what I will call directionals, but they are also sometimes referred to by terms such as orientationals, spatial morphemes, and so forth, or may not be grouped together at all.

Broadly speaking, itives and ventives come in two types. Associated Motion adds a motion sub-event to another predicate ('go and'). The term was introduced for Australian languages (Koch 1984; Wilkins 1991) and has since been used elsewhere (Guillaume 2016). Directionals, in contrast, encode only direction, modifying a motion event ('away'), or in similar usage such as 'look away' (orientation) or 'throw away' (caused motion). The distinction between Association Motion and (pure) directionals is important for other reasons, but will not be further distinguished in this paper. In context, itives and ventives always have motion components, either as Associated Motion markers or in combination with a motion predicate. Here I will just refer to itives and ventives, although we can refer to both as types of verbal motion morphology or verbal deixis more generally.

Based on Ross (2015, 2016b) and ongoing research, I will now present a survey of verbal deixis around the world. Among 325 languages, 149 (46%) have some type of verbal motion *morphology* (Associated Motion or directionals), as shown in the figure below:



Map of verbal motion morphology in 325 languages: found in 149 (black); none in 176 (white).

Other directional motion types exist, but itives and ventives are the most common and usually occur together. Because they are distinguished by direction (itives: away from deictic center; ventives: toward deictic center), we can expect to see some semantic differences in their grammaticalization patterns.

We might ask why previous research on surprise readings has not reached much beyond Europe. The answer may be due to typological differences in form. In Europe, verbal motion morphology is rare, but motion pseudocoordination is common (Ross 2016a), just as serial verb constructions are common among the languages of Southeast Asia (Bisang 1991; Clark 1992), which of course lack verbal motion morphology but make up for it functionally with directional serial verbs, while directional particles are prevalent in Polynesian and other Oceanic languages (e.g. Hooper 2002; Lynch, Ross & Crowley (eds.) 2002; *inter alia*). There is no theoretical reason to distinguish functionally equivalent forms cross-linguistically, and for that reason itives and ventives formed morphologically, via multi-verb constructions or otherwise will be grouped together here. The important components are the change of state due to motion, and the direction of that motion.

3. Surprise and other extended meanings

Having established itives as a cross-linguistic category and having related them to the usage of GO in multi-verb constructions in European languages, this section turns to the grammaticalization of itives with surprise-like readings in languages around the world. Such surprise readings are not limited to European pseudocoordination constructions, but they do appear to be especially common in Europe, possibly only due to the limited amount of comparable research available on other languages at this level of semantic detail. The following examples are mostly based on the few languages with relevant examples identified by the in depth survey of the 325 languages mentioned above, their sparsity indicating that surprise-like readings are rarely reported, but more research is needed to determine whether they are rare in usage, not just description. 16 (or about 5%) of the 325 languages in the sample have surprise-like readings, including European languages mentioned above and others discussed below. The results are supplemented by other relevant examples where available. These results are sufficient to establish this as a grammaticalization pattern in a number of unrelated languages or families around the world and not due to language contact, at least not in all cases. Furthermore, although surprise readings are widespread in Europe, there is no obvious reason to assume that they all share a common origin, even if some may be due to borrowing or genetic inheritance.

As a first example, Sorensen (1969:271–272; see also Bybee, Perkins & Pagliuca 1994:57) reports that a periphrastic GO construction in Tucano (Tucanoan, South America) can also be emphatic like English *went and did it*, as an extension of its function as a completive marker. This is one of the few instances where previous researchers have directly related the surprise reading of European pseudocoordination to a language elsewhere.

(23) nā "pérù-rē "síři-péò-kā-ā- "wåá-mà-nè they beer-OBL drink-COMPL-CHG-ANIM.PL-GO-3PL-EXCLAM 'They went and drank up all the beer!' (Tucano: Sorensen 1969:272)

Similar usage of Turkish *git-* 'go' in multi-verb constructions can express an undesirable outcome. Used in the converb form *gidip* and followed by another, finite verb, "it denotes that something undesired has been realised or will be realised, or that something desired has not been realised or will not be realised" (Püsküllüoğlu 1994:432, as translated by Csató 2003:108). This correspondence is not surprising because the converb (also called adverbial or conjunctive participle) form is often used to translate other coordination, auxiliary and similar constructions in Indo-European languages.

Abkhaz (Northwest Caucasian) has an itive preverb that can indicate suddenness, and may indicate scorn on the part of the speaker (Hewitt 1979:213–214, 2010:122; Chirikba 2003:54), as in (24). The nuances of different preverbs are complex, and others may also express suddenness in some circumstances.

(24) À- bna d- nə- l- q'e- yt' the-wood he-ITV-from.in-emerge-(FIN)
'He suddenly emerged from the wood.' (Abkhaz: Hewitt 1979:214)

In Kera (Chadic), GO can indicate unexpected events. Ebert (1987) discusses several extended uses of motion verbs including $d \acute{e} \eta \acute{a}$ used to signal "unexpected event sequences ... suddenly, to his/her surprise" (p.56), as in (25):

(25) koý wélděn tá kim děn á gòl dùrú kònòna tən kíiríw weather lightened now crocodile went to see his.eyes now was leopard

'There was a lightning, and now the crocodile realized that it was a leopard (and not a goat, as he had thought in the dark).' (Kera: Ebert 1987:56)

There may also be an example among the derivational prefixes in Russian that are used to form perfective verbs. Although these prefixes are often opaque and lexicalized, some general semantic patterns can be determined. For *u*- with a general meaning of 'move away', Endresen et al. (2012:253) and Janda et al. (2013:37) describe its use in the perfective forms of two verbs as indicating a departure from the norm: *u-xitrit'sja* and *u-mudrit'sja*, both meaning 'to manage to do something by being very clever', often ironically as in 'she was so clever that she managed to break three of them.'

Other examples are less clear, such as a meaning of suddenness associated with itives (and ventives) in Oneida (Iroquoian) only when the verb has an instrumental derivational suffix (Abbott 2000:16–18), as in (26), while in San Miguel Chimalapa Zoque (Mixe–Zoque, Mexico) a prefix ka-, in the combination ka-nak-STEM-2ay, contributes to a completive or extensive usage which can be emphatic and mean 'suddenly' (Johnson 2000:168), as in (27):

- (26) ye-ha-atita?-hkwat-ha?ITV-3SG-get.out-INST-HAB'He jumps right out.' (Oneida: Abbott 2000:17)
- (27) ?əy kə-nək= nəm-?əy-wə 3SG AWAY-go= say-??-COMPL 'He spoke suddenly.' (Zoque: Johnson 2000:168)

In South Asia, so-called compound verbs, which consist of a lexical converb followed by a finite light verb and are a hallmark feature of the Indo-Aryan, Dravidian and other languages in the region (Hook 1974; Masica 1976; *inter alia*), sometimes indicate surprise, undesirability, completion and related meanings with GO as the light verb (Abbi & Gopalakrishnan 1991), for example in Tamil, Malayalam, Kannada, Kashmiri and Kurukh. However, other verbs such as 'sit', 'rise' and 'leave' are used similarly, and further research would be required to determine which effects, if any, are specific to motion verb semantics.

In Mizo (Sino-Tibetan), deictic motion particles, which resemble serial verbs, can indicate surprise or excess (Chhangte 1989:118–119; 2012). They precede the main verb and can indicate motion but also have metaphorical extensions. Both itive and ventive morphemes can express a meaning of 'to excess', like English *over-: va thaau* '[be] too fat'. However, the other morpheme *lou* (ventive, but alternating with another morpheme *ron*, which can express both 'toward speaker' and 'toward addressee') can also indicate surprise. Metaphorical extensions of ventives are discussed at the end of Section 4.

Limited cross-linguistic data has been presented here probably due to this phenomenon being obscure, and more research is needed. At the same time, it seems that surprise-like readings do not always develop even in languages with motion verb pseudocoordination similar to the examples discussed in Section 1, as seems to be reported for Manam (Oceanic: Lichtenberk 1983:544–547) and Italian (Cardinaletti & Giusti 2001, 2003). However, we might also consider related semantic trends beyond surprise readings *per se*. For example, Bybee, Perkins & Pagliuca (1994:57–58) find a cross-linguistic relationship between motion verbs, especially GO, and the development of completive or perfective forms, and Luke & Bodomo (2001) describe inceptive serialization with motion verbs in Cantonese (and with TAKE in Dagaare; see additional discussion of TAKE below). These meanings likely also contribute toward the development of surprise readings, and may be related to Wiklund's observation that surprise readings relate to punctuality.

Additionally, GO (more often than COME) is associated with volition or intentionality in multi-verb constructions, as Fleischman (1982) finds for GO futures in Romance. Independent of multi-verb constructions, GO and COME are known to indicate attitudes (Clark 1974; Gandour 1978; Radden 1996; *inter alia*), including departure from a normal state for GO. Typically, GO has negative connotations, as is often the case for surprise readings of itives, while COME has positive connotations, as shown below:

GO (negative)	COME (positive)
go away	come home
temperature going down	temperature coming down
go insane	come to X's senses
Attitudes typically assoc	ated with GO and COME.

In Guíqióng (Tibeto-Burman), the directional *wu* 'outward' (from the deictic center) "often implies the speaker's view that a circumstance, a transition or an action is progressing towards some helpless, uncontrollable even unwanted end" (Lì 2015:131), as in (28):

(28) meŋ wu-dzen	wu-dzen	dzi	
rain ITV-strong	g ITV-strong	COP	
'It is raining he	avier and he	avier.'	(Guíqióng: Lì 2015:131)

Directionals in Polynesian and other Oceanic languages often have interpersonal or emotional readings available (Hooper 2002; *inter alia*). As Hamel (1993:116) describes for Loniu (Oceanic), "the use of *la* appears to indicate psychological or physical distance, while the use of *me* seems to indicate closeness" in a narrative, as in (29):

(29) sih	ime	cahów	ime	ñetukan	sih	ime	cahów	ile	mwat
one	e comes	appear	comes	bird	one	comes	appear	goes	snake
'O	ne had b	ecome	a bird,	the other a snal	ke.'	(Lo	oniu: Ha	imel	1993:116)

Looking beyond GO, another type of pseudocoordination with TAKE has a surprise reading. This 'take and' construction is found widely in Indo-European (Germanic, Romance, Slavic, and more) and also in Finno-Ugric and other languages in Europe (Coseriu 1966; Ekberg 1993; Weiss 2007, 2008; Ross 2016a). Some languages, such as certain dialects of English as discussed above, may have surprise readings for both GO and TAKE, while others have only one. Among the Slavic languages for example, Russian has surprise readings for GO and TAKE (Weiss 2007, 2008; Tania Ionin, p.c.), while Czech may only have GO (Škodová 2009), and Polish seems to only use TAKE (Śledź 2001; Pulaczewska 2005; Góralczyk 2010; Dziwirek 2012; Kaleta 2012; Zinken 2013; Jacek Woźny, p.c.), as in (30). Whether the semantic nuances of GO and TAKE differ in or between languages is an open question for future research, but see Coseriu (1966) for a detailed discussion of some of the various meanings ascribed to 'take and' by different researchers for different languages.

(30) Niegrzecznie wobec członków rady nadzorczej,

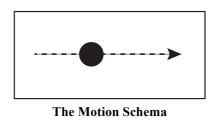
'Very rudely towards the members of the supervisory board, ...'

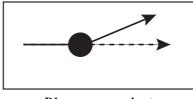
- ... wzięł i wyszedł.
- ... took and left
- '... he up and left.' (Polish: Dziwirek 2012:57)

The intransitive usage of TAKE is anomalous, but otherwise TAKE is semantically like GO and can be similarly explained as a metaphorical extension of directional motion. Regarding the semantics of 'take and', Weiss (2007; 2008) derives the surprise meaning by first establishing the two verbs in the construction as expressing a single event, and then focusing on the fact that TAKE is agentive even after detransitivization, leaving the rest to pragmatic interpretation in context. Specifically, he finds that the construction in Russian is associated with the subject controlling the event, allowing for ironic use, even indicating that someone died intentionally to spite the speaker. These semantic nuances are important and may apply to surprise readings of GO in other languages as well, but like previous theories for GO reported above, Weiss does not explain why a motion verb (or TAKE) in particular is used in the construction.

4. Metaphorical extension of motion to surprise

In this section, I explain the surprise readings of GO as a general metaphorical extension of itives. My starting point is Stefanowitsch's (1999) explanation, but extended to all itives, from a broad cross-linguistic perspective, beyond Europe, as informed by the data from Section 3. I also explain why itives may be more likely to grammaticalize in this way as opposed to ventives. My explanation of the extension from itive is also principled, in contrast to Stefanowitsch's reliance on the an optional variant of the motion schema as shown below:





Divergence variant

Starting with the basic motion schema as the core of the meaning of GO, Stefanowitsch (1999) proposes that the surprise reading for events is like divergence along a path for physical motion, within the normal range of variation that is permitted by GO. This achieves descriptive but not explanatory accuracy. Why does GO grammaticalize this way?

Itives (and the itive component of GO) indicate motion away from the deictic center. For normal usage, this deictic center is a point in space, and the motion is physical movement in space, usually based on the location of the subject, or the speaker or hearer. Alternatively, as is well known, GO may grammaticalize in the temporal domain as a future marker. This metaphorical extension is transparent: the deictic center is *now* (rather than *here*) and the "movement" is thus away from *now*, in time. This extension may also apply to different dimensions of deixis, beyond spatial and temporal interpretations.

We can explain the surprise readings as the application of this type of grammaticalization of itives to outcomes. The deictic center can also be a point in the distribution of potential outcomes and events. This deictic center is the most natural outcome among the possibilities, what the speaker expects. If the trajectory from *here to there* or *now to then* leads away from the most natural outcome, there is *motion away from expectation*.

This interpretation can also be explained with reference to how theoretical physics treats dimensions. One dimension connects two points (a line). The second dimension connects lines to each other (a plane). The third dimension connects planes to each other in three-dimensional space (like a cube of unbounded size). The fourth dimension connects three-dimensional spaces in time (a timeline). This is represented visually as follows:

Dimension	Diagram	Description
first		a line
second		a plane
third		3D space
fourth	$\cancel{k} \rightarrow \cancel{k} \rightarrow \cancel{k}$	a timeline

The first four dimensions represented visually.

We can imagine a fifth dimension connecting the timelines of the fourth dimension to each other. This fifth dimension consists of states of affairs including their complete timelines with pasts and futures. But from our perspective in time, it is about *possibilities*, what may happen next, because only those possible timelines that overlap at this point in time with our own are relevant to what may happen in our futures. We can call these possible futures *eventualities* or outcomes. There are many different possible timelines extending from our current context. We can imagine a set of alternative outcomes connected in the fifth dimension, for example answering the question *What will I eat next*?



Some possible foods to eat next (fifth dimension).

If we define itives as representing movement away from the deictic center in an arbitrary dimension, we can in fact explain all of their uses introduced in this paper in the same way. Fictive motion involves change within the position of an object, via space: *That tunnel goes to the ocean.*³ Spatial motion involves change within space, via time. Temporal 'motion' involves change within time, via eventualities. Outcome 'motion' (including surprise) involves change within eventualities, via possibility or expectation.

Outcomes are related to possibility and probability. The deictic center is located at the outcomes that the speaker finds to be normal, expected or desirable. What exactly determines these optimal outcomes may vary, including cultural norms, speaker knowledge, and other factors. In this way, these outcomes are also related to modality. For example, compare possible world semantics, where *must* indicates that something is true in all possible worlds, *may* that something is true in some possible worlds, and so forth. In such a model, we might even compare relationships between outcomes to "motion" between possible worlds. In the case of surprise in the sense of miratives, where the speaker is surprised by unexpected knowledge, this also overlaps with epistemic modality, related to the set of possible worlds that the speaker considers to be possible based on his or her current knowledge about the world. A surprising outcome necessitates divergence away from these expected possible worlds to whichever possible worlds are compatible with the new information. Surprise itives are therefore modal, expressing (un-)likelihood.

³ This explanation is consistent with previous discussions of the phenomenon such as Talmy (1996) and Matlock & Bergmann (2015), because they propose that fictive motion involves the speaker imagining their route in tracing a path through physical movement in the real world. In the same sense, the speaker could imagine traversing the deictic space of any dimension as part of the grammaticalization of itives or ventives.

When a speaker uses an itive form for surprise, the subject deviated from an expected course of events and moved away from an expected outcome. The motion may or may not have a physical component (*went and saw a movie* vs. *went and died*). But it does necessarily involve a change in state and deviation from the outcome closest to the deictic center. In a sentence like (31), a surprise reading is unavailable:

(31) #He went and arrived to class on time as planned. (no surprise reading)

The parallels between multi-verb constructions with GO and verbal motion morphology are not limited to surprise readings and spatial motion, either. In some languages itives or ventives can develop temporal readings, as in the Zulu (Bantu) examples in (32). And while fictive motion usage of directionals and Associated Motion morphology has not been extensively studied, Wilkins (2006:51–52) identifies such usage for Associated Motion markers in Arrente (Pama–Nyungan, Australia), as in (33).⁴

(32) U-ya-funda	U-zo-funda	U-yo-funda
3SG-PRES-study	3SG-VENT-study	3SG-ITV-study
'S/he is learning.'	'S/he will study nearby/soon.'	'S/he will study far away/later.'
(Zulu: cf. Taljaaro	d & Bosch 1988:61; Poulos & E	Bosch 1997:20–22)

(33) Apere artekerre-le, arlpentye akngerre ahentye tne-ty.akerle-me, ... red.gum root-LOC long big tube stand-DO.DOWN-PROG
'In a river red gum root, a tube leads a very long way down (from the surface)...' (lit. 'stands as it moves downwards') (Arrente: Wilkins 2006:52)

We would also predict from this analysis, given that itives indicate denial of expectation, that ventives would indicate fulfillment of expectation. Such usage is also attested, but not necessarily in the same domains as surprise itives. For example, COME can grammaticalize in hortatives or "solidarity imperatives" (Heine & Kuteva 2002:69–70), as in (34). This is semantically similar to English *c'mon* and usage of German *komm* in imperatives, like a grammaticalized invitation to the speaker's deictic center. See also Joseph (1990) on similar usage of Modern Greek 'come' in imperatives.

(34) dò-	hā	náā!						
come	e-take	e wood						
(Co	me oi	n) take the wood!'	(N	√gbaka Ma	a'Bo: 7	Гhomas	1970:599))

On the other hand, rarely COME can also grammaticalize to indicate surprise, as shown above for Mizo. Consider (35), from colloquial Palestinian Arabic:

(35) ?ağā wa-?āl-li țīr min hūn came and-told-1SG fly from here
'He dared telling me to piss off!' (Palestinian Arabic: Gamliel & Mar'i 2015:57)

In these cases, as with GO pasts or COME futures, there must be some different model of expectedness or probability involved. There are also some interesting interpretations of up and *down* directionals cross-linguistically,⁵ which are outside the scope of this paper.

⁴ See also relevant discussion in Belkadi (2014) on Berber and Payne & Otero (2016) on Koman and Nilotic.

⁵ I have observed in at least some languages up patterning like itives, and *down* patterning like ventives, which makes sense given the perspective of humans with gravity holding them on the ground so that up is 'away'.

5. Conclusions

In multi-verb constructions, GO and COME grammaticalize as itives and ventives. Itive and ventive morphology (either purely directional or Associated Motion) is common cross-linguistically. GO, especially in pseudocoordination in European language, often has a "surprise" reading because GO is itive, and itives cross-linguistically have a tendency to grammaticalize this way. Surprise readings are an extension of itive motion: physical movement away from the spatial deictic center is metaphorically extended to deviation from an expected outcome. Future and "fictive motion" uses of motion verbs can also be explained similarly, by applying the motion to different deictic centers in different dimensions. For surprise readings, other factors may also play a part, such as *punctuality* as identified by Wiklund, or the often volitional sense of GO clashing with the interpretation of the second verb (*die*, or just the expectation of that action not occurring), leading to an exaggerated sense of surprise, as suggested by Agnieszka Kaleta (p.c.). A volitional sense is also found in the frequent purposive reading of motion pseudocoordination in many languages and might be naturally extended to other domains like future tense or surprise.

Another question is whether "surprise" is the best characterization of the readings associated with this use of itives. Certainly in some cases undesirability or suddenness may be more precise than unexpectedness. The difference is partly contextual but also due to how distance from the deictic center is defined in terms of eventualities, whether it is based on cultural norms, current knowledge about the world and expected events, what is most desirable for the speaker, or even careless, uncontrolled or uncontrollable events. In this sense, surprise is only one of the possible descriptions of the construction, which more generally just describes departure from normal events. The main distinction seems to be between epistemic unexpectedness and deontic nonconformity, with variance due to who — the speaker, the subject, someone else, or society in general — sets the deictic center. Further research could investigate whether similar variance is found in the use of miratives cross-linguistically or whether only the surprise subtype for itives in this domain overlaps with miratives. Regardless, the principled analysis in Section 4 allows for all of these readings.

As for other verbs used similarly, COME (and ventives) can conversely indicate desirable outcomes, while bleached TAKE in 'take and' pseudocoordination patterns like GO (and itives). Overall, pseudocoordination and other multi-verb constructions with motion verbs behave like morphological itives and ventives, including for surprise readings, and therefore a joint classification is supported, regardless of differences in form. Future research should address general implications for the analysis of mirativity, as well as evidentiality.

Abbreviations

1/2/3 - first/second/third-person; ANIM - animate; CHG - change; COMPL - completive; COP - copula; DEF - definite; DO.DOWN - simultaneous downwards Associated Motion; EXCLAM - exclamative; FIN - finite; HAB - habitual; IMP - imperative; INST - instrumental; ITV - itive; LOC - locative; OBJ - direct object marker; OBL - oblique; PL - plural; PRES - present; PROG - progressive; REFL - reflexive; SG - singular; VENT - ventive; ?? - morpheme of unknown meaning in original source

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