DE GRUYTER MOUTON Linguistics Vanguard 2023; 9(s3): 287–295

Kajsa Törmä*

Subverting motion in science fiction? *Beam* in the *Star Trek* TV series

https://doi.org/10.1515/lingvan-2022-0160
Received December 21, 2022; accepted February 24, 2023; published online October 12, 2023

Abstract: Characters in science fiction TV have to move through the universe at the speed which the plot necessitates. In *Star Trek*, characters can *beam* from one location to another in an instant. In the visual modality, there is no continuous path of motion between the source and the goal, which would technically disqualify *beam* from most linguistic definitions of motion. This study aims to map out the usage patterns of *beam* and investigate whether or not it is linguistically construed as motion within the show. The study is based on a section of the TV Corpus (Davies, Mark. 2019. The TV Corpus. https://www.english-corpora.org/tv/ (accessed 28 May 2022)) consisting of all available episodes of all *Star Trek* TV series between 1966 and 2005 and uses a combination of quantitative and qualitative methods. The study found that *beam* is indeed used as a motion verb within the series. Its usage is also quite varied, denoting motion of many different figures in many different directions. The fact that we conceive of *beaming* as motion even though there is no continuous path might be partly explained by the etymology of *beam*, and partly by the embodied nature of language. Our current register makes it is hard to imagine transportation without movement.

Keywords: corpus linguistics; motion; construal; embodiment; *Star Trek*

1 Introduction

A central premise of modern science fiction is that its characters can traverse the immensity of space, jumping between stars and planets at the pace which the plot necessitates (Weitekamp 2019). In order to transport their characters across outer space, science fiction writers have had to imagine and invent modes of transportation that eliminate, or background, the physical reality of moving across vast distances. In *Star Trek*, one such mode of transportation is the transporter. It is a device which allows people and objects to *beam* from one location to another in an instant. On-screen this is represented by the characters fading out of frame at one location and then into frame at a second location. According to Zlatev and colleagues (2010: 393), this type of transportation is (1) not continuous and (2) in the realm of imagination and does not qualify as motion at all. However, these arguments are mainly philosophical, and based on the concept of beaming, rather on the linguistic representation of the verb. This study aims to investigate how *beam* is construed linguistically within the *Star Trek* franchise. The specific research questions addressed are:

- Is the action denoted by *beam* construed as a motion?
- How do the usage patterns of *beam* relate to linguistic theories of motion, particularly to the concepts of figure, path, direction, and ground?

The study is mainly descriptive in nature, relies on data from the TV Corpus (Davies 2019), and uses a combination of quantitative and qualitative methods.

***Corresponding author: Kajsa Törmä**, Department of Language Studies, Umeå Universitet, Humanisthuset, Biblioteksgränd 3, Umeå, 90187, Sweden, E-mail: kajsa.torma@umu.se. https://orcid.org/0000-0002-6323-2672

2 *Star Trek*, the dialogue of science fiction, and transporter technology

Star Trek is an American science fiction TV series first created by Gene Roddenberry in the 1960s. It consists of several iterations (in both TV and movie format) all situated within the same universe. This study adheres to Suvin's (2016: 20) definition of science fiction as a genre "whose necessary and sufficient conditions are the presence and interaction of estrangement and cognition, and whose main formal device is an imaginative framework to the author's empirical environment". In other words, cognitive estrangement is achieved by creating alternative or imaginary worlds that, in some sense, are unfamiliar to the audience. On television, this is largely achieved using visual means. However, Wozniak (2014: 3) makes a convincing argument for studying the dialogue of science fiction television as well, claiming that the technical language (often called technobabble) commonly used in science fiction "is a distinctive constituent of cognitive estrangement". She claims that even though television relies on visual representation, the dialogue in science fiction has a unique function, as it "has to explain those visual elements of the fictional world which may seem incomprehensible to the audience" (2014: 4). In other words, dialogue in science fiction can overtly provide context for some of the more foreign visual elements. Finally, she notes that even though the (imagined) setting of science fiction should allow, or even presuppose, an entirely different way of speaking (compared to present reality), it often does not. Rather, in order to make the dialogue comprehensible, the cognitive estrangement is "limited almost exclusively to neologisms and technobabble" (2014: 4). With exceptions such as these, the language in science fiction television largely follows conventional ways of speaking, with the exception of the aforementioned lexical elements. The transporter technology in *Star Trek* exists at this intersection between the visual and the linguistic, and the audience needs both parts to make sense of the plot.

A full account of the transporter's capabilities and the canon surrounding it can be found in Grech (2011: 53), but for the purposes of the present article, his shorthand definition is sufficient: "transporters allegedly convert a person or an object into an energy pattern (a process known as dematerialisation), and then 'beam' it to a target location, where it is reassembled into matter (rematerialisation)". Initially, this mode of transportation was invented as a cost management device, rather than a narrative one. Creating the visual effect of spaceships taking off and landing on alien planets was too costly compared to simply having characters fade in and out of frame (Whitfield and Roddenberry 1968). However, the transporter also came to be used as a narrative device. Weitekamp (2019: 1037) describes that "the premise that characters can travel from planet to planet, or star to star, in ways that defy current science and technology has become central to science fiction as a genre". In other words, the transporter (along with other invented technologies) facilitates a specific type of storytelling. This is made especially clear as the transporter sometimes functions as a plot point itself. Malfunctions that split, fuse, or in other ways reconstitute characters the wrong way occur across the series, as well as malfunctions that send characters to the wrong place (or time; Johnson-Smith 2005: 90–96).

This article investigates how travelling with the transporter is construed linguistically, an action which is described using the verb *beam* in the TV series. According to the *Oxford English Dictionary* (OED 2022), the verb *beam* most commonly refers to emitting rays of light, waves, or particles. However, the dictionary also lists transporting humans as a science fiction-specific sense of *beam*:

> S*cience Fiction*. [Originally from the U.S. television series *Star Trek*] *(a) transitive*. To transport (someone or something) through space as if along a beam of light or energy (esp. *up* to a spacecraft); frequently in extended use, esp. in catch-phrase *beam me up (Scotty)*, i.e. out of an undesirable or dangerous situation; *(b) intransitive*, to travel through space in this way.

This definition makes the connection between the more common senses of *beam* and the science fiction sense explicit, by saying this transportation happens "as if along a beam". It also shows that the verb can be used both transitively and intransitively, and that *up* is the most common preposition used with *beam*.

3 Motion

According to Radden's (1996: 423) basic definition of motion, "we perceive an entity as being in motion when it undergoes a perceptible change in its location", which would qualify *beam* as a motion verb. However, most other descriptions of motion in literature place an explicit emphasis on continuity, rather than just on a change in location. For example, Lakoff (1987: 25) defines a path as involving a source, a goal, a direction, and "a sequence of contiguous locations" connecting the two points. Zlatev and colleagues (2010: 393) even engage with the type of motion denoted by *beam*, saying that the use of the word continuous "is here meant to exclude from the definition of motion such events as disappearing at one place, and reappearing at another, as in a *Star Trek* case of 'teleportation', which may be in the sphere of the imaginable, but not in the ordinary human lifeworld". However, they also claim that "motion is 'in the eye of the beholder'", and that we can perceive things as moving even if they are not. They give the example of two lights blinking, one in position A and one in position B, and say that "if the time fragment between these two discrete events is small enough then an observer will actually see the light as *moving* from A to B". There are two somewhat contradictory arguments about what qualifies as motion being made here, one based on perception and another one based on physical reality or possibility. However, both arguments are philosophical rather than linguistic. The present article does not engage with questions regarding the possibility of such motion in the real world, but rather with how it is linguistically represented in the *Star Trek* franchise. The assumption made is that if *beam* is in fact used as a motion verb, it is reasonable to assume that *beam* is meant to be conceived as a type of motion by the viewer.

Most studies of motion (including this one) use Talmy's (2000: 25) terminology, in which a motion event is made up of a moving entity, the *figure*, which is in *motion* along a *path* with respect to another entity, the *ground*. The motion is expressed via the verb, called a motion verb, and (in English) the path is expressed via directional satellite constructions (for example a preposition stating the direction of motion). The motion can also happen in a specific *manner* or due to a specific *cause*. Zlatev and colleagues (2010: 394–396) present some more parameters for analysing motion, distinguishing between (1) translocative and non-translocative motion, (2) bounded and unbounded motion, and (3) self-motion and caused motion. Pourcel (2010: 424) also considers these parameters but takes into account the animacy and agency of the figure as well, claiming that the nature of the figure "constrain[s] and determine[s] to a large extent the types of motion [it] can undergo". Furthermore, Slobin (2004: 195) singles out the path as "the essential component of a motion event", and indicates that in English, paths are often construed by either a preposition or by "a series of satellites and prepositional phrases: *out of the little high valley*, *over its edge*, *down the slopes beyond*" (2004: 197).

In summary, previous research into motion, while relying largely on the terminology developed by Talmy (2000), introduces more granularity and emphasizes different aspects of the motion event at hand. This study takes a verb (*beam*) as its main object of study and investigates how this relates to the concepts introduced above. Particular emphasis is placed on the figure, path, direction, and ground in order to answer the question of whether *beam* is used as a motion verb.

4 Methods

This study is based on a section of the TV Corpus (Davies 2019) consisting of all available episodes of all *Star Trek* TV series between 1966 and 2005. This selection excludes movies made within the franchise, as well as currently running iterations which have not yet been added to the corpus (*Discovery*, *Picard*, *Lower Deck*, and *Prodigy*). Table 1 lists the included *Star Trek* series and shows the number of episodes and words in each of them. The corpus amounts to a total of 3,147,202 words divided across 706 episodes.[1] The material consists of subtitles of the

1 The corpus is not exhaustive. Nineteen episodes are not available in the TV Corpus, probably due to the method through which the corpus is assembled. Subtitles are automatically extracted from openly available sources and it is possible that these 19 episodes did not have available subtitles at the time of collection.

Table 1: Composition of the *Star Trek* corpus used for the present study, listing the number of episodes and number of words for each series.

Series	Years	Number of episodes	Number of words
Star Trek: The Original Series	1966–1969	79	355,747
Star Trek: The Animated Series	1973–1974	21	53,863
Star Trek: The Next Generation	1987–1994	170	730,741
Star Trek: Deep Space Nine	1993–1999	173	792,975
Star Trek: Voyager	1995–2001	166	820,958
Star Trek: Enterprise	2001–2005	97	392,918
Total		706	3,147,202

Table 2: Number of tokens and distribution of verb forms.

Verb form	Number of tokens
beam	507
to beam	388
beamed	199
beaming	105
beams	2
Total	1,201

dialogue and represents the spoken register of *Star Trek*. The corpus is automatically tagged for part of speech, making it possible to search for only the verb form of *beam*.

Cognitive linguistics is a usage-based perspective on language and hence especially apt for corpus linguistic methods. As Glynn (2010: 2) puts it, "rather than simplifying the object of study … it lands the linguist in the midst of a chaotic phenomenon". Corpus linguistic methods can range from qualitative to quantitative, but "most studies are somewhere in the middle" (Gries 2010: 5), as is the present one. Following, for example, Lemmens (2007) and Newman and Rice (2007), this study extracts all occurrences of the search term, and all concordance lines are then manually coded for relevant information. This allows for a combination of quantitative analysis, revealing which usage patterns are more and less common, and qualitative analysis, which is "necessary to understand the basic motivations for the verb's usages" (Lemmens 2007: 265). The focus of this study is motion, and the concordance lines were coded with respect to figure, ground, direction (when it was possible to derive from the context), and transitivity.

The search term used in the TV Corpus was BEAM_v, which extracted all occurrences of all (verb) forms of *beam*. In total, 1,266 occurrences were found. The corpus part-of-speech tagging software is largely reliable, but during the manual analysis 66 occurrences of mis-tagged uses or duplicates were found and removed. *Beams* only occurred once in the data set. To make sure this was not due to any error in the method of data collection, an additional search was made in the corpus for *beams* (not just verb-tagged). It yielded 73 results, 71 of which were nouns, which means the initial search parameters correctly identified one of the verb occurrences and mis-tagged the other. This occurrence was added to the data set, which therefore amounts to 1,201 occurrences. Table 2 shows the distribution of the verb forms in the final data set.

5 Results and analysis

This section accounts for transitivity, figure, path, direction, and ground in relation to *beam*. The concept of self-motion or caused motion (Zlatev et al. 2010: 396), largely corresponds to the grammatical notion of transitivity. As

Table 3: Distribution of transitive and intransitive tokens of *beam* and their correlation to animate and non-animate figures.

	Animate	Non-animate	Indeterminable	Total
Transitive	518	123	16	657
Intransitive	537	2	5	544
Total	1,055	125	21	1,201

Table 4: Categories of moving figures and examples of each, together with the number of occurrences of each category in the data set.

Category	Examples	Number of tokens
Pronouns		
Personal pronoun	*I*, *me*, *him*, *they*	551
Indefinite pronoun	*anyone*, *everyone remaining*, *somebody*	25
Reflexive pronoun	*ourselves*, *yourself*, *himself and that entity*	6
People (not by name)		
Number	*two*, *five*, *fourteen*	105
Group with specific purpose	*boarding party*, *an armed detachment*, *medical team*, *the away team*, *landing party*	83
Unnamed group	*the passengers*, *the wounded*, *those men*, *the crew*, *the entire ship's complement*	59
Unnamed person	*our former guest*, *a crewman*, *the woman*, *a patient*	29
People (by name and/or title)		
Name	*Da Vinci*, *Mr. Jonas*, *B'elanna*, *La Forge*, *Troi and Prieto*, *Jameson and the hostages*	59
Title and name	*Captain Picard*, *General Martok*, *Captain Kirk with a scouting party*	40
Title	*the Ambassador*, *Captain*, *the Chief and the Doctor*	23
Alien (name of their species)	*the Ferengi*, *some Klingons*, *a Tholian*, *an apparent Romulan defector*	15
Other		
Objects	*crystals*, *three containers of Trellium*, *Tantalus cargo*, *the probe*, *a talking bomb*, *it*	129
Animate (not clearly human or alien)	*the egg*, *a possible life form*, *several viral organisms*	12
Bodies/body parts	*their captain's body*, *the lungs*, *glial cells with Vantika's neural patterns*	10
Cases where it was not possible to determine the moving figure from context		55
Total		1,201

noted in the OED (2022) definition of *beam*, it can be used in both its transitive and intransitive forms. Table 3 shows that the transitive use is slightly more common. Furthermore, in line with Pourcel's (2010: 424) claim that the nature of the figure determines how it can move, transitivity correlates with the animacy of the figure in the expression. The intransitive form almost exclusively correlates with animate figures, which makes sense since non-animate entities cannot move of their own volition. The transitive form is a bit more flexible but mainly correlates with animate figures.

Table 4 shows a more detailed division of the moving figures[2] appearing together with *beam*. Coding for this category proved complex. Firstly, it is not always possible to determine the moving figure from the immediate linguistic context. A common example is the phrase *prepare for beaming*, which does not make clear who or what is to be beamed. Furthermore, in a world populated by all sorts of alien life forms, certain figures are referred to

2 The moving figures have been categorized according to the first figure mentioned. For example, *Captain Kirk with a scouting party* has been put into the category "title and name", rather than in the category "group with specific purpose".

Table 5: Number of occurrences and distribution of directional expressions (including complex ones) in the data set.

Number of tokens	Directional expression	Combines with[a]
244	*down*	*down to* (46), *down from* (4), *down into* (1)
240	*up*	*up to* (13), *up from* (2)
220	*aboard*	*aboard from* (4)
132	*to*	
87	*out*	*out of* (31), *out through* (2), *out to* (2), *out from* (1), *out into* (1)
74	*back*	*back to* (22), *back up* (5), *back up to* (1), *back from* (1), *back aboard* (1), *back into* (1), *back onto* (1)
46	*over*	*over to* (5)
41	*into*	
28	*off*	
14	*in*	
14	*onto*	
12	*away*	*away from* (1)
11	*through*	
10	*from*	
5	*here*	
3	*anywhere*	
2	*inside*	
2	*there*	
1	*ahead*	
1	*along*	
1	*around*	
1	*at*	
1	*beneath*	
1	*somewhere*	
10	No directional expression	

[a]The third column in Table 5 shows the number of occurrences of more complex expressions. For example, out of the 244 occurrences of *down*, 46 cases are the complex expression *down to*, four are *down from*, and one is *down into*.

by (made up) names such as *the Ferengi*. In order to code these instances accurately, search engines and Wikipedia pages were consulted. Finally, some moving figures blur the line between what constitutes a person, and what counts as animate or not, such as *B'Elanna's cardiopulmonary system*. This results in rather obscure categories such as: "animate (not clearly human or alien)" and "bodies/body parts".

Table 4 shows that the most common way of referring to the moving figure is by using (personal) pronouns. Another common way is to refer to people by number alone, which primarily comes from the request *one/two/five to beam*. Moving figures can also be referred to using more general terms such as *the passengers* or *the woman*, as well as by their specific purpose such as *the medical team*. Also, many moving figures are referred to by their name and/or their title, the latter also reflecting the military context in which *Star Trek* is situated. As for "objects", the name of the category implies that it is rather mundane. However, the moving figures that constitute this category are often specific to the science fiction genre at large and *Star Trek* specifically. *A talking bomb*, for example, was first mistakenly coded as a person (referred to metonymically). Upon further examination it turned out to actually be a bomb, with sufficiently sophisticated artificial intelligence to be able to talk.

Directional expressions reveal how *beam* relates to the notions of motion, specifically regarding the path and ground. According to the OED (2022), *up* is the most common direction of *beam*. However, as Table 5 shows, *down* and *aboard*[3] are almost equally as common in the data set. Furthermore, Table 5 also shows that there is a great deal of variation in the directional expressions used, meaning that *beam* does not seem to be restricted to a particular direction. Only 10 occurrences of *beam* do not contain any directional expression at all.

3 *On board* and *aboard* have been conflated, as these are used interchangeably in the dialogue.

Table 6: Number of occurrences of different types of ground in the data set, with examples.

Type of ground	Examples	Number of tokens
Part of a ship	*the bulkhead, cargo bay 2, directly to sickbay, the bridge*	108
The main ship	*the ship, Voyager, Enterprise, our vessel, directly aboard*	79
Relative	*here, there, far enough from the ship, where it came from*	64
Planet	*the planet, the surface, Gideon, the planet's surface*	58
Another ship	*their ship, the flyer, the Lakota, a civilian transport*	47
Medium	*space, the geostrata, the radiation, the shields, the nebula*	32
Specific place on planet	*the prison, these coordinates, directly to the crash site*	28
Other	*the heavens, safety, the entity, directly into her mouth*	16
Total		432

In 761 of the occurrences, the only linguistic information about the ground is the directional expression itself (e.g., we only get to know that someone is beaming *down*, not where *down* is). However, in 440 of the occurrences, the directional expressions are followed by a more specific description of the ground. Sometimes it is short, such as *to the Enterprise* and sometimes it is longer, such as *to a primitive glaciated planet in the Sigman Draconis star system*. The three most common directional expressions (*down, up*, and *aboard*) are primarily used in isolation. Only 67 occurrences of *down*, 20 occurrences of *up*, and 40 occurrences of *aboard* have a more elaborate path or ground attached to them. However, these expressions are rather unambiguous, even without additional context. *Aboard* always refers to a ship. *Up* and *down* are interesting since they only have meaning when the ship is located near a planet. *Up* is used when the characters travel from a planet to a spaceship. Vice versa, *down* is used when the characters travel from the ship to the planet. When floating free in space, there is no up or down to adhere to (when characters beam in between ships located in space, the expression used is generally *over*). Contrary to *down, up*, and *aboard*, which are mainly used in isolation, *to, into, onto*, and *from* always need a more specific description. *From* is particularly interesting as it is often used as part of a longer string which specifies both the source and goal, as in the phrase *from the transporter room to sick bay*. Table 6 shows the type of ground involved for the 440 occurrences where this is specified. The most common is motion in relation to spaceships, or specific parts of spaceships. The figures also move with respect to planets, and specific places on these planets. It is also quite common to refer to the ground using relative terms (such as *here* and *there*), which we can assume is made clear from the context. Finally, the category called *medium* involves motion in relation to grounds such as space, shields, radiation, and so on. This category generally correlates with the directional expressions *into* and *through*.

6 Discussion

This study has assumed a definition of motion that, at the most basic level, involves a change in location. Furthermore, a motion event is assumed to have a figure, which moves along a path in relation to a ground, and the motion has direction. *Beam* fulfils the most basic criteria as it involves a change in location. Furthermore, the presence of figure, ground, and direction is unambiguous. Not only are these features present in most constructions, but they are also quite variable. Rather than being limited to a specific situation, *beam* was found to be productive in the sense that it is used to describe many different situations. It occurs in several forms, takes a vast array of moving figures, can be used both transitively and intransitively, and describes motion in many different directions. Only 10 examples out of 1,201 (0.8 %) do not contain any directional expressions, and do not encode any path at all. Two of the most common directional expressions, *up* and *down*, presuppose a particular direction, whereas some, such as *aboard, back*, and *out*, are relative to the characters' location. There are also examples of more elaborate paths, which Slobin (2004: 195) describes as "a series of satellites and prepositional phrases", such as *from the transporter room to sick bay*.

The only aspect of a traditional description of motion that disqualifies *beam* from being a motion verb is the necessity for the path to be continuous. However, even for regular motion verbs, this contiguousness is seldom explicit in the linguistic construction. When using *go to*, we assume that there is a path of motion which starts from the speaker and moves towards the goal, even though the path is not explicitly described in a step-by-step fashion. Zlatev and colleagues (2010: 393) disqualify *beam* from the category of motion on the basis that it is not continuous and that it takes place "in the sphere of the imaginable". As previously argued, the fact that the motion is imagined is a philosophical argument, not a linguistic one. As for the lack of continuity, this is only apparent in the visual modality. Linguistically, there is nothing that implies a disruption of motion, rather, *beam* is used like any other motion verb. Both Radden (1996) and Zlatev and colleagues (2010) talk about how motion events relate to our perception, whether we perceive something as being in motion or not. However, this investigation of *beam* shows that conception might actually be of more relevance to the language of motion than perception. *Beam* is construed as (and consequently conceived as) motion in the linguistic modality, even though it might not be perceived as such in the visual modality.

The suggestion that *beam* is a motion verb might be partly explained by the etymology of the word, partly by the embodied nature of language. Firstly, *beam* is not a neologism, it is an existing word which has been repurposed. The more basic definition of *beam* is based on the movement of light or particles, and as such, involves motion. In the OED (2022), the science fiction sense of beam even describes it as "transport[ing] (someone or something) through space as if along a beam of light or energy". In other words, the connotation of motion might be embedded in the verb itself (and our use and interpretation of it). Secondly, in a cognitive linguistic view of language, language is assumed to be embodied and grounded in experience. We do not, yet, have any experience of transporting ourselves without the involvement of motion. Even if *beaming* takes place in an imaginary world, the dialogue in *Star Trek* is written by people who are grounded here on earth, and in some sense limited by their own embodied experiences. Language is based in our embodied experiences of the world we inhabit, not the worlds we imagine, and moving through outer space in an instant is not part of that embodied reality.

7 Conclusions

This study has mapped out the usage patterns of *beam* within the *Star Trek* TV series. Its usage largely corresponds to other motion verbs in that it appears in constructions which contain a moving figure, a path, a direction, and a ground. It was also found that its usage patterns are varied, both in terms of who (or what) is moving as well as in which direction they move. Visually, the movement is not continuous, which would disqualify it from most (linguistic) definitions of motion that are based on the notion of perception. However, this lack of continuity remains in the visual modality. In the spoken modality, *beaming* is conceived as a continuous motion from one location to another. This might be partly explained by the etymology of the word *beam*, and partly by the embodied nature of language making it hard to imagine transportation without the presence of motion. These two factors might also be intertwined. Describing transportation without motion would require not only a new word (instead of *beam*), but a completely new register, separate from that with which we describe motion today.

As for future research, there are many possible directions. One could continue to explore the current data set but using a multimodal approach, looking into how the linguistic and visual interact, and if this changes over time in the series. One could also expand the scope to include other modes of transportation, both in *Star Trek* and other science fiction or fantasy franchises. However, the most interesting avenue for the word *beam* itself would be to study if and how this specific sense of *beam* has entered the general lexicon and in which situations, real and metaphorical, it is used in everyday language.

References

Davies, Mark. 2019. The TV Corpus. https://www.english-corpora.org/tv/ (accessed 28 May 2022).

Glynn, Dylan. 2010. Corpus-driven cognitive semantics: Introduction to the field. In Dylan Glynn & Kerstin Fischer (eds.), *Quantitative methods in cognitive semantics: Corpus-driven approaches*, 1–42. Berlin & New York: De Gruyter Mouton.

Grech, Victor. 2011. “The trick in hard SF is to minimize cheating, not just disguise it with fancy footwork”: The transporter in Star Trek – can it work? *Foundation* 40(111). 52–67.

Gries, Stefan Th. 2010. Introduction. In Stefan Th. Gries & Anatol Stefanowitsch (eds.), *Corpora in cognitive linguistics: Corpus-based approaches to syntax and lexis*, 1–17. Berlin & New York: De Gruyter Mouton.

Johnson-Smith, Jan. 2005. *American science fiction TV: Star Trek, Stargate and beyond*. London: I. B. Tauris.

Lakoff, George. 1987. *Women, fire, and dangerous things: What categories reveal about the mind*. Chicago: University of Chicago Press.

Lemmens, Maarten. 2007. Caused posture: Experiential patterns emerging from corpus research. In Stefan Th. Gries & Anatol Stefanowitsch (eds.), *Corpora in cognitive linguistics: Corpus-based approaches to syntax and lexis*, 261–296. Berlin & New York: De Gruyter Mouton.

Newman, John & Sally Rice. 2007. Transitivity schemas of English EAT and DRINK in the BNC. In Stefan Th. Gries & Anatol Stefanowitsch (eds.), *Corpora in cognitive linguistics:Corpus-based approaches to syntax and lexis*, 225–260. Berlin & New York: De Gruyter Mouton.

OED. 2022. *Beam, v*. Oxford University Press. https://www.oed.com/view/Entry/16507 (accessed 21 December 2022).

Pourcel, Stephanie. 2010. Motion: A conceptual typology. In Vyvyan Evans & Paul Chilton (eds.), *Language, cognition and space: The state of the art and new directions*, 419–450. London & Oakville: Equinox.

Radden, Günter. 1996. Motion metaphorized: The case of coming and going. In Eugene H. Casaf (ed.), *Cognitive linguistics in the Redwoods: The expansion of a new paradigm in linguistics*, 423–458. Berlin & New York: Mouton de Gruyter.

Slobin, Dan I. 2004. How people move: Discourse effects of linguistic typology. In Carol Lynn Moder & Aida Martinovic-Zic (eds.), *Discourse across languages and cultures* (Studies in Language Companion Series 68), 195–210. Amsterdam & Philadelphia: John Benjamins.

Suvin, Darko. 2016. *Metamorphoses of science fiction: On the poetics and history of a literary genre*. Bern: Peter Lang.

Talmy, Leonard. 2000. *Toward a cognitive semantics*, vol. 2, *Typology and process in concept structuring*. Cambridge, MA: MIT Press.

Weitekamp, Margaret A. 2019. “Ahead, warp factor three, Mr. Sulu”: Imagining interstellar faster-than-light travel in space science fiction. *Journal of Popular Culture* 52(5). 1036–1057.

Whitfield, Stephen E. & Gene Roddenberry. 1968. *The making of Star Trek*. New York: Ballantine Books.

Wozniak, Monika. 2014. Technobabble on screen: Translating science fiction films. In Rosa Maria Bollettieri Bosinelli, Elena Di Giovanni & Linda Rossato (eds.), *Across screens across boundaries* (Special issue of *inTRAlinea*). Bologna: University of Bologna. http://www.intralinea.org/specials/article/2074 (accessed 21 October 2022).

Zlatev, Jordan, Johan Blomberg & Caroline David. 2010. Translocation, language and the categorization of experience. In Vyvyan Evans & Paul Chilton (eds.), *Language, cognition and space: The state of the art and new directions*, 389–418. London & Oakville: Equinox.