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## **PULLING (CLOSER) AND PUSHING (AWAY): VERBS EXPRESSING ATTRACTION AND REPULSION IN ENGLISH**

### **Abstract**

Set within the theoretical framework of cognitive semantics and the embodied cognition thesis, and based on the force-dynamic system (Talmy 2000) and the image schema concept (Johnson 1987), the paper explores some of the prototypical verbal exponents of the *ATTRACTION* and *REPULSION* image schemas. Its aim is to examine how force interactions which include two entities – one of which is exerting its force (the Antagonist) to either pull closer or push away the other entity (the Agonist) – are expressed in English. The paper focuses on abstract force interactions, resulting from interactions in the concrete, physical domain being mapped onto more abstract domains, via conceptual metaphor, which accounts for the polysemy of the verbs (Lakoff & Johnson 1980).

**Key words:** verbs expressing attraction and repulsion, *ATTRACTION*, *REPULSION*, *FORCE*, force dynamics, image schema, cognitive semantics, cognitive linguistics

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## 1. Introduction

The paper<sup>1</sup> deals with the English verbs which are prototypical exponents of two opposite force interactions – *ATTRACTION* and *REPULSION* – from the perspective of cognitive linguistics. The former describes a situation in which one entity (the Antagonist) exerts its force to pull another entity (the Agonist) closer to itself, while the latter refers to a situation where the force-exerting entity pushes the other entity away. These interactions are not limited to the use of physical force, but extend to more abstract aspects of our experience, such as emotions and social interactions. This is made possible by conceptual metaphor, a cognitive mechanism which allows us to understand abstract concepts in terms of more concrete ones (Lakoff & Johnson 1980), and which stems from the notion that human cognition is influenced by embodiment (Lakoff & Johnson 1980, Lakoff 1987, Johnson 1987). The approach to the analysis of the exponents is based on Leonard Talmy's (2000) system of force dynamics and Mark Johnson's (1987) image schema concept.

## 2. Theoretical framework

### 2.1 Force dynamics

The force dynamics system, introduced by Leonard Talmy, refers to “how entities interact with respect to force” and includes, among others, “the exertion of force, resistance to such a force, the overcoming of such a resistance, blockage of the expression of force, removal of such blockage.” Force dynamics also includes the notion of causation, and places it within the same framework that encompasses ‘letting’, ‘hindering’ and ‘helping’ (Talmy 2000: 409; 2011: 633).

Force-dynamic patterns revolve around a clash between two opposing forces. The central issue is whether one entity, called the Agonist (*AGO*), is “able to manifest its force tendency or, on the contrary, is overcome” by the opposing, force-exerting entity, known as the Antagonist (*ANT*) (Talmy 2000: 413). The force tendency of an entity is always intrinsic – regardless

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<sup>1</sup> This paper is part of the author's MA thesis research, which is a contrastive study of the English and Serbian verbs that encode *ATTRACTION* and *REPULSION*.

of whether it is constant or temporary – and it is either towards action or inaction. The entity whose force tendency overcomes that of the other is considered to be the stronger one and this clash of opposing forces leads to a resultant, which is either dynamic or static, and is assessed only for the Agonist, since it is the focus of attention (Talmy 2000: 414-415).

Force dynamics is, as Talmy (2000: 409) points out, represented in grammar, and can be identified in different closed-class exponents, such as prepositions and conjunctions, but also in the category of modality. This holds for cases when modal verbs are used in their deontic and/or dynamic meaning, but also for the epistemic interpretation of modals (Talmy 2000, Sweetser 1990, Radden & Dirven 2007). In a similar vein, open-class or lexical elements convey not only physical force, but also that which is termed psychosocial “pressures”, i.e., psychological (inter and intrapsychological) and social forces. In addition to this, the presence of force dynamics is noticeable in discourse, since it is expressed through the form of what Talmy (2000: 452) dubs force-dynamic logic gaters (e.g. *yes but, nevertheless, moreover, granted, all the more so, on the contrary*, etc.) which serve as organizers in the process of argumentation. The force-dynamic system can even be applied in discourse analysis, as shown by Todd Oakley’s (2005) examination of two rhetorical texts from different eras of US history.

## 2.2 The FORCE image schema

A similar approach to the concept of force within the cognitivist study of meaning is that of philosopher Mark Johnson’s. Johnson views force as an image schema, “a recurring dynamic pattern of our perceptual interactions and motor programs that gives coherence and structure to our experience” (Johnson 1987: xiv). The notion of experience is not limited to the sensorimotor interaction, it extends to the more abstract aspect of life, since, according to the embodied cognition thesis (Lakoff & Johnson 1980, Johnson 1987), the structure of our physical bodies shapes how we create, understand, and communicate meaning (Johnson 1989: 109). In other words, “there can be no thought without a brain in a body in an environment” (Johnson 2005: 16).<sup>2</sup>

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<sup>2</sup> It should be noted that there are differing opinions as to how image schemas are formed. Interdisciplinary research from the point of view of cognitive linguistics and neuroscience

Force is, according to Johnson, an integral part of our daily lives which we fail to notice unless it is a particularly strong one. What we typically overlook is that “our bodies are clusters of forces and that *every* event of which we are a part consists, minimally, of forces in interaction. However, a moment’s reflection reveals that our daily reality is one massive series of forceful causal sequences.” (Johnson 1987: 42). Just as we use our hands to physically pull someone closer to us, the cognitive mechanism of conceptual metaphor (Lakoff & Johnson 1980) allows us to understand the process of attracting someone as pulling them by means of a force that is not available to our senses.

The *FORCE* image schema consists of seven more specific gestalts, or sub-schemas, which pervade our physical experience of the world and those experiences that belong to abstract domains. The *COMPULSION* schema entails a scenario in which an external force is being exerted on a particular entity, thus forcing it into motion. The *BLOCKAGE* schema, on the other hand, depicts a situation in which a moving entity comes across a static obstacle. The third schema, *COUNTERFORCE*, involves two opposing forces in an interaction which can be likened to a head-on collision of two vehicles, whereas the clash of forces in *DIVERSION* results in a change of force vectors. The *REMOVAL OF RESTRAINT* schema involves the removal of an actual barrier, or the absence of a potential one. *ENABLEMENT* points to a potential force, one whose vector is not actualized. The final image-schematic gestalt, *ATTRACTION* refers to a force which operates in the way a magnet or a vacuum would (Johnson 1987: 45-48).

Sandra Peña Cervel (1999) recognizes the existence of another gestalt complementary to *ATTRACTION – REPULSION*. However, she does not consistently refer to it as an independent gestalt, but rather as part of a gestalt she terms *ATTRACTION/REPULSION*. Both *ATTRACTION* and *REPULSION* are, according to Peña Cervel (1999: 202), conceptually dependent on the *COMPULSION* schema.

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suggests that image schemas have a neural basis (Dodge & Lakoff 2005, Rohrer 2005), whereas the findings of developmental psychology favour the notion that image schemas are abstractions or simplifications of the information obtained by means of perception (Mandler 2004, 2005).

### 3. Methodology and corpus

Although they are not the only verbal exponents of the *ATTRACTION* and *REPULSION* image schemas, the focus of this paper are verbs which – in cooperation with prepositional and adverbial phrases – convey the senses of drawing an entity closer or pushing it away in a literal or metaphorical sense. The verbs that were chosen for the purpose of the research are: *pull (in)*, *draw (in)*, *drag (in)*, and *attract*<sup>3</sup> (*ATTRACTION*); and *push (away/off)*, *shove (away/off)*, *thrust (away/off)*, and *repel* (*REPULSION*). Some of these verbs belong to, what Levin (1993: 137) refers to as, *Push/Pull* verbs, which are also described as *verbs of exerting force*, and, which can denote “causation of accompanied motion” (1993: 138).

The majority of the examples were extracted from The British National Corpus (BNC), while a smaller number was taken from other sources, which are accordingly cited. The exponents of the *ATTRACTION* schema yielded more examples than those of *REPULSION* – 726 and 413, respectively – but also a higher number of different meanings, which is evident when comparing sections 4 and 5 of the paper.

It should be noted once again that the data presented here is part of the author’s MA thesis research, encompassing both the verbs analyzed in the paper and their Serbian counterparts.

## 4. Attraction

### 4.1 Physical force

The image schema of *ATTRACTION* depicts a situation in which the *ANT* exerts a force in order to physically pull the *AGO* towards itself. What this means is that *ATTRACTION*, a kinesthetic schema, interacts with spatial schemas, since “[f]orces possess a source, a directionality, and some destination or goal. Furthermore, they trace a path when moving themselves or when impelling other entities to move” (Peña Cervel 1999: 189). These aspects are, however, not always explicitly encoded in language. For example, (1)

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<sup>3</sup> The verb *attract* was found to express physical force in examples that belong to the scientific register, such as: *Gravity attracts objects towards each other; antigravity would make them repel each other.*

contains no overt reference to direction, goal, and path, but we implicitly understand that the ANT pulls the AGO towards itself. Conversely, in (2), there is explicit mention of the direction and goal of the AGO's movement.

- (1) The man grabs my arm and *pulls* me.
- (2) He reached out with his foot *to drag* the lunch bag *towards* him.

Another spatial schema that often interacts with ATTRACTION is the CONTAINER schema, which is a frequent conceptualization of the AGO's destination, as seen in (3) and (5), although (6) shows that there are instances of it being conceptualized as a SURFACE. Even the starting point, or source, from which the ANT draws the AGO, can be conceptualized as a container, as exemplified by (4), which is a paraphrase of (5) with a shift in direction.

- (3) She *drew* me *into the kitchen* and stretched out her arms, leaning backward a bit, and said, 'How I love people who say 'Yes' to life.'
- (4) She *drew* me *out of the kitchen* and stretched out her arms [...]
- (5) He slid an arm around her waist, *pulling* her *into the warm circle of his embrace*.
- (6) He gasped and reached up to her, *pulling* her down *against his chest*, and then with a swift movement he turned her beneath him.

## 4.2 Abstract force

Metaphorical projection allows us to use the act of pulling in a concrete, physical manner to understand more abstract experiences in terms of pulling. This accounts for the polysemy of the verbs initially used only to denote physical force, and entails that abstract instances of the ATTRACTION schema also interact with spatial schemas. The spatial schemas accordingly refer to abstract space, which is, again, a result of metaphorical projection.

### 4.2.1 Causation

As noted in the introduction to the force-dynamic system (subsection 2.1), force dynamics is closely connected to the concept of causation. In fact, as Talmy points out, "force dynamics is a generalization over the traditional notion of "causative" in the linguistic literature" (2000: 428). This claim is reflected in the corpus compiled for the purpose of this research. The corpus shows instances of verbs of pulling being used to refer to the ANT causing the AGO to perform an action, as evident in (7) and (8). There are

also examples, such as (9-12) in which the ANT exerts its force to bring about different consequence (AGO).

- (7) The enigma of the stones *draws* druids *to perform their weird rituals*.
- (8) [...] all were somehow *drawn to mark their passing* above the bed of this little stream.
- (9) Which is not to say that old-fashioned, blue-chip brands do not continue to *pull in the plaudits*.
- (10) If other aspects, such as the seating, *draw some criticism* (in my opinion justified), well its competitors have their faults too.
- (11) When she was younger her summer tan *drew abusive comments like 'Paki'* [...]
- (12) Carrying a firearm in the commission of a crime *can attract up to a life sentence*.

#### **4.2.2 Sexual attraction and seduction**

In the same way that we are able to move another person towards us by physically pulling them in our direction, we are also able to pull them using our physical appearance and charm. This means that the process of attracting another person – whether it is done intentionally or not – is conceptualized as an interaction between the entity that exerts the force (ANT), and the entity that is exposed to the influence of that force (AGO). The force in question comes in the shape of either physical or personality traits which function as a magnet. In fact, some of the examples contain explicit references to magnets or magnetic forces or qualities of a particular entity (13-14).

- (13) You *pull* me, like steel to a magnet.
- (14) [...] she **is** increasingly *drawn towards the brusque yet magnetic charms* of the Cornishman [...]

The act of seduction, in which a person who is setting out to attract another person engages willingly, can also be lexicalized by verbs whose meanings encompass pulling an entity (closer) using physical force. Seducing women can be referred to as *pulling* them (15) and there is even an idiomatic expression which conveys the meaning of looking for a sexual partner – *to be on the pull*.

- (15) A lot of blokes say the reason they got into music in the first place was they thought it would be a great way of *pulling women*.

### 4.2.3 Attention

The act of attracting someone's attention is structured in such a way that attention is allotted the role of the AGO being pulled towards the force-exerting ANT, as seen in (16). However, there are also instances in which the ANT is not pulling the AGO towards itself, but towards a different destination, which is exemplified by (17).

- (16) But it was the eyes that *drew her attention*, dark and smouldering with lovely long lashes.
- (17) I *draw the attention* of the Secretary of State to a *damaging allegation made last week* by the chairman of the Northern Ireland Conservative party [...]

Because of a close connection between gaze and attention, the examples which contain *gaze* (18) or *eyes* (19) in the role of the AGO, being pulled by an ANT, could retain their meaning even if these words were substituted with *attention*.

- (18) Her hair [...] *had drawn his gaze* as he sat impatiently in a line of cars [...]
- (19) [...] that face which *drew the eye* and held it.

### 4.2.4 Attracting people and money

Customers – whether they are readers, viewers, gamers or something else – tourists, investors, voters, and the money that they bring assume the role of the AGO, while the companies, tourist agencies and organizations and political parties function as the ANT, although the explicitly mentioned ANT is often a particular strategy or tactic.

- (20) [...] but the low prices still *pull in crowds of eager buyers*.
- (21) [...] the BBC's £27 million package of films, comedy and drama to *pull in viewers* [...]
- (22) [...] 'enchanted attractions' which *pull in millions of foreign visitors*.
- (23) [...] his message of change *pulled in voters of all parties* who feared the future and were fed up with Bush.
- (24) [...] and could also tinker with tax allowances to *pull in extra revenue*.
- (25) National sales *pull in business*. While this reform may seem small in itself, it will play an important part in the overall strategy



being advocated here of people being able *to draw an income* from work, wealth, as well as welfare.

#### 4.2.5 Emotions

Our emotions have been known to serve as powerful driving forces in life. These forces can pull us in the direction of a particular place or person. Instances of person's emotions functioning as a dynamic ANT, while they themselves are a static AGO are an example of what Talmy (2000: 66-68, 460-461) calls introjection. This cognitive operation refers to a situation in which an external conflict typically requiring two separate entities is internalized into one. If this entity is a person, introjection leads to a split of the psyche where one part is the AGO, and the other is the ANT. An emotion which seems to frequently take on the role of the ANT is love, metaphorically represented by a vital organ of our body, the heart, which is taken to be a symbol of this emotion.

- (26) [...] you are more beautiful / than the first day / *my heart pulled me* in your direction [...] <sup>4</sup>
- (27) But *my heart drew me* toward the rosebud, for it longed for no other place. <sup>5</sup>
- (28) There, in the early hours of the morning *her fears dragged her* into dark caves [...] <sup>6</sup>
- (29) *Worry dragged me* through the corridors, down to the babble of voices that signified lunch. <sup>7</sup>

#### 4.2.6 Dragging into trouble

Trouble, often described as something we *fall into*, can be conceptualized by means of the CONTAINER schema. Falling into trouble is usually caused

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<sup>4</sup> Example taken from <https://books.google.rs/books?id=cJF5e-0s1Q0C&dq> (Accessed on 15 September 2015)

<sup>5</sup> Example taken from <https://books.google.rs/books?id=2Z3oAAAIAAJ&dq> (Accessed on 15 September 2015)

<sup>6</sup> Example taken from <https://glintonbrokenglass.wordpress.com/2014/05/07/tank/> (Accessed on 15 September 2015)

<sup>7</sup> Example taken from <http://archiveofourown.org/works/5015440/chapters/11650657> (Accessed on 11 November 2015)

by our own or other people's actions that can either push or pull us into it, depending on the respective positions of the AGO and the ANT. Trouble, to be more precise, refers to situations and states that are perceived to be negative: disputes, feuds, conflicts wars, crises, debt, and death among others. The corpus shows that the most frequent exponent of this particular meaning is the verb *drag*, which includes the component of difficulty and resistance. This entails that even when the CONTAINER is not explicitly encoded by a noun phrase that has a negative connotation in and of its self, the utterance can still be understood as describing a negative situation, without the knowledge of the particular context, as exemplified by (33).

- (30) But her father and her uncle fought over her continually, *dragging her into their lifelong feud* [...]
- (31) President Bush is warning Saddam Hussein he won't get away with *trying to drag Israel into the Gulf crisis* [...]
- (32) But David Howell [...] said there was a risk Britain *could become 'dragged into a major war and military commitment'*.
- (33) The gravitational pull in the Treaty — which is endorsed by the bill — *would take us, indeed drag us, into a federal Europe.*

#### **4.2.7 Drawing from a source**

The source from which the ANT is pulling the AGO towards itself can, as mentioned, be conceptualized via the CONTAINER schema. The container itself does not have to be a physical object and often appears in the shape of a situation or even feeling, from which we draw, among other things, lessons, conclusions, inspiration, and comfort

- (34) Lamarckism *drew much of its inspiration from a moral distaste for the 'trial-and-error' process of natural selection.*
- (35) It would have been so good to just sit there and let Luke hold her, *to draw comfort from his strength* [...]
- (36) The conclusions which *can be drawn from this examination* [...]
- (37) [...] the lessons *drawn by the leadership from the failure of the 1956–62 campaign.*

The origin of the members of certain groups can also be depicted as being drawn from a source, whether that source is a city, country, political party or some other organization.

- (38) Their work-force was then *drawn from surrounding towns, villages and farms* [...]
- (39) The new and more streamlined Cabinet *was drawn from all four political parties* [...]
- (40) Silver Helm Knights *are drawn from all the realms of Ulthuan* and include many of its finest and most noble sons.

#### **4.2.8 Pulling in discourse**

Talmy (2000: 452) argues that force dynamics is extensively featured in the domain of discourse, especially in the process of argumentation. The arguments employed to prove something function as an ANT that exerts its force in order to pull the listener or reader over to our point of view. A few of the examples from the corpus contain either an explicit mention of an argument as possessing pulling power (41), or refer to one of the force-dynamic logic gaters as being able to pull an essay in a particular direction (42).

- (41) *An argument which pulls in the opposite direction* is this [...]
- (42) Rather, “*however*” creates a contrast [...] — something which *pulls the essay in a different direction* from one which might create the expectation that Othello would be introduced.

## **5. Repulsion**

### **5.1 Physical force**

The REPULSION image schema refers to an interaction in which the ANT exerts force in order to physically move away the AGO from itself. The direction of the AGO’s movement is, therefore, opposite to its direction in the ATTRACTION schema, where the AGO moves towards the source of the force.

- (43) With strength born of the alarming change, Theda *thrust the heaviness of Benedict’s body from her* and staggered out of reach.
- (44) She ducked under the water and emerged, *pushing her long hair away from her face*.
- (45) He had instructed his staff to stay calm and *repel intruders with ‘physical force’*.

There are also examples of the exertion of physical force, in which there is only one entity that functions as both the AGO and the ANT. The entity uses its own (physical) force to move itself from a particular location. This is typically encoded by a reflexive pronoun, as seen in (46), although (47) suggests that it is possible to convey such a meaning without the pronoun.

- (46) With a gasping breath she *thrust herself away*. ‘Put me down,’ she ordered.
- (47) He *pushed away from her*, and she was forced to lean against the door [...]

## 5.2 Abstract force

As with the ATTRACTION schema, the mapping of one domain onto another enables us to understand abstract interactions in terms of one entity physically pushing another away from itself.

### 5.2.1 Repelling people and money

When our physical appearance, personality traits, actions and decisions put other people off, this is conceptualized as an ANT who pushes the AGO away from itself. In addition to this, certain circumstances and situations can also act as ANTS, and companies and organizations of various kinds can just as easily repel their customers, investors, tourists and voters, as they can attract them.

- (48) The lugubrious publican had seen it as his job *to repel strangers* and had employed to that end an impressive armoury of taciturnity, malevolent glances, warm beer and poor service.
- (49) But there was a hard veneer to her, a cold ruthlessness, which *repelled many who came into contact with her*.
- (50) I want to challenge and excite as much as I can but I’m not going to create a work for the Scottish Ballet that *is going to drive their audience away*.
- (51) The mechanism that *thrust him away from advertising* and into politics and enabled him to change his life was the London Business School.
- (52) [...] in the end the savagery of the English attack *drove the Scots away from the new idea of friendship with England* and back into the arms of their natural and ancient allies, the French.

### **5.2.2 Hostile forces**

The reason why a particular entity takes on the role of a repelling ANT often has to do with the perception of the other entity, the AGO, as posing some sort of threat to it. While this would normally conjure up wartime images of battles and sieges entailing direct physical contact, there are other intruders that can be driven away without the use of physical force. Some of them belong to the world of flora and fauna (53-54), while others belong to the sphere of supernatural (55-56), and, accordingly, require an arsenal of weapons such as counter-curses, good-luck charms, rituals, potions, and the like.

- (53) A plant produces essential oils for its own survival: to influence growth and production; to attract pollinating insects; *to repel predators*; and to protect itself from disease.
- (54) When they had scraped and gouged all the fat from the buffalo's hide, Jacques Devraux showed the others how to rub in arsenical soap *to repel the hordes of flies* [...]
- (55) [...] in fact the purpose of the ceremonies *was to drive evil spirits away from the tribe's vicinity*.
- (56) As with any other evil-intentioned fairy, they *may be repelled with cold iron or an opened Bible*.

### **5.2.3 Mental states and emotions**

When we try not to think of something that bothers or worries us, or try to get rid of sadness, boredom, suspicion, etc., we push these things *away from* ourselves (57-58) or *out of* our mind/head (59-60), which is then conceptualized via the CONTAINER schema. The latter case is another example of introjection, where our psyche is divided into two parts – one part (AGO) is preoccupied with, for example, negative thoughts, while the other (ANT) pushes those thoughts out.

- (57) And suddenly the emotions that went tearing through her were so terrifying, so cataclysmic, that she *had to thrust them from her*.
- (58) The fact that unhappy feelings *are pushed away with food* is an avoidance style of coping with stress.
- (59) She *pushed all thoughts of Julius out of her head*, scrambled out of bed, and began to open her presents.

- (60) By Monday morning Merrill had succeeded in *thrusting the memory of that dream firmly out of her mind*.

If the psyche or mind is conceptualized via the CONTAINER image schema, then it is understood in terms of occupying space. The space that it occupies can, therefore, be sectioned off into areas, which allows us to refer to something as being *in the back of our mind*. What we push towards the sidelines or far reaches of our mind ceases to occupy the center of our mind and is moved into the periphery. This is in accordance with the CENTER-PERIPHERY SCHEMA, which entails that “whatever occupies the center of the perceptual horizon tends to become *more important* than that which is peripheral” (Johnson 1989: 112).

- (61) Hari *thrust her worries into the back of her mind* and helped her mother to sit up against the pillows.  
(62) *Myra and Dreams had been pushed to the back of her mind*.

#### **5.2.4 Pushing into trouble**

It has been established that trouble – which is taken to refer to any unpleasant situation that can befall a person – can be viewed as a container that we can either be pulled or pushed into (cf. subsection 4.2.6). Instances of an AGO being pushed into a negatively connoted CONTAINER, however, are, in most cases, examples of the COMPULSION image schema (63-64), which is superordinate to REPULSION. In order for it to be an exponent of REPULSION, a starting point (which is usually positively connoted) from which the AGO is pushed away into trouble has to be explicitly mentioned (65).

- (63) [...] as the enemy forces *pushed the Tsarist regime into more and more desperate expedients to raise the finance and manpower with which to conduct the war*.  
(64) If Mr Lawson now *drives the economy into deep recession*, [...] the Government would almost certainly perish at the polls.  
(65) [...] ever since the Romans colonized Sardinia and drove *the indigenous population off the rich pasture in the lowlands up into the Barbagia [harsh mountainous region]*.

### 5.2.5 Expletives

It is interesting to note that even segments of language such as expletives exhibit the presence of the force-dynamic system. When we tell someone to shove off, we are asking them to relieve us of their presence, which would, physically speaking, make that person both the AGO and the ANT. At the same time, we are, as the speaker, taking on the role of the ANT and exerting the illocutionary force of a directive speech act.

(66) ‘*Shove off*, Rincewind,’ snarled Broadman.

(67) In other words, *shove off*, matey, she’s mine.

## 6. Concluding remarks

The image schemas of ATTRACTION and REPULSION are responsible for conceptualizing not only our physical interactions with other animate and inanimate objects in our surroundings, but are also present in other, more abstract, aspects of our lives that have to do with our psyche, social interactions and even our professional careers and how we earn money.

What the research has shown, however, is that there is a discrepancy between the number of senses belonging to the two schemas. The image schema of REPULSION has not only yielded fewer examples, but also fewer specific meanings, which is obvious when looking at the number of different subsections for each of the schemas. Such a situation may be accounted for by the fact that the majority of the examples for the verbs encoding REPULSION found in BNC are, in fact, exponents of the COMPULSION schema, which is broader than REPULSION, and on which REPULSION is conceptually dependent. For instance, most of the examples of the sense presented in subsection 5.2.4 are instances of COMPULSION. In addition to this, out of the consulted literature, the only author who explicitly mentions REPULSION is Peña Cervel (1999), although she mostly treats it as one image schema called ATTRACTION/REPULSION, while the other authors include only ATTRACTION in their lists.

Because of the fairly limited scope of this research, other verbs that convey ATTRACTION and REPULSION had to be overlooked and only the ones considered to be prototypical were taken into account. It would be interesting to not only look into other verbs, but also into other verb classes which encode these schemas. Another aspect that would be worth

exploring further is the interaction and mutual connection of ATTRACTION and REPULSION with image schemas such as CONTAINER and CENTRE-PERIPHERY, but also with those that were not encompassed by this research.

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