

LEXICAL CONFLATION PATTERNS IN DUTCH AQUAMOTION VERBS

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1. Introduction

In this paper we survey the verbs speakers of Dutch use most frequently to encode the horizontal movement of a non-liquid Figure in or on a liquid Ground. To our knowledge, there are no previous studies on this subject. Our results are mainly based on non-elicited data from electronically available corpora. Occasionally, data from dictionaries and internet examples have been taken into account.

We will argue that Dutch *lexicalizes* the *Manner* of motion, i.e. it encodes the source of propulsion in the verb, leaving the interpretation of directionality to optional satellites or to contextual inference¹.

1.1. Domains of Motion

As Talmy (2000: 25) has aptly put it, motion events can be defined as the movement or location of one entity, the **Figure**, situated with respect to another entity, the reference object or the **Ground**. The specifics of the Figure and the Ground play a major role in the conceptualisation and coding of the motion event.

The present study limits itself to the domain of AQUAMOTION in Dutch, i.e., movement with respect to one type of **Ground**: water (or, by extension, liquids in general). More specifically, the verbs studied in this paper are those that encode horizontal movement *across* or *through* a body of water, as for instance, a person 'swimming' across the river, a boat 'sailing' to the other side of the lake or a log 'floating' to sea. The domain of AQUAMOTION is one of the three basic domains distinguished on the basis of the type of Ground, next to AEROMOTION (consider verbs such as *fly* or *hover*) and TERRAMOTION (e.g., *walk*, *crawl* or *drive*). It should be noted that this distinction is pitched at a relatively high level of abstraction distinguishing as Ground types AIR, EARTH and WATER (more on Ground incorporation into the verb below). Obviously, not all languages carve up the Ground-space in this way: some may have no distinction at all, others may conflate two (e.g., AIR

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and WATER) and there may even be languages that impose more fine-grained distinctions (Atsugewi, for instance, is reported to have some 50 different morphemes that incorporate different Paths and Grounds, distinguishing e.g., ‘into a liquid’ from ‘into a fire’ or ‘into an areal enclosure’, cf. Talmy 2000, II: 110ff). Nevertheless, we assume that the AIR, EARTH and WATER triad is useful for comparing languages across the world. In addition to differences between languages, there are language internal transgressions between different domains. A verb of one domain can extend to another because of a gap in the lexicon (as is the case of Dutch *zweven* ‘float’, an aeromotion verb that has taken over one particular type of aquamotion) or a ‘freer’ type of variability, e.g., fast driving (terramotion) can be conceptualized as flying (aeromotion). More closely related to the aquamotion verbs studied here, *drijven* ‘float’ is often used for (casual) movement through air and *duiken* ‘dive’ for fast downward movement through air.

As most Germanic languages, Dutch requires specific verbs for the expression of motion in each of these three domains, depending on the manner of motion as well as the type of **Figure** that is moving. In fact, we will argue below that in Dutch the type of Figure is restricted by the Manner of motion used. In its strictest set-up, the present study does not include verbs that take the liquid as Figure, i.e., expressing the movement of the liquid itself. Most typically, these are verbs like *stromen* ‘stream’, *vloeien* ‘flow’, *golven* ‘surge, undulate’ or *druppelen* ‘drip’. However, given the range of aquamotion verbs available in Dutch, the lexical situation is often not clear-cut (as is also the case for many other languages). A first case where the distinction between two lexemes may be somewhat blurred is that of liquid Figures moving on liquid Grounds, as for example oil ‘floating’ on water. A second, and more important overlapping between liquid Figure and liquid Ground motion verbs, occurs with cases of metonymical alternation, where one finds an alternation between the movement of the water and the object moved by the water (e.g., *deinen* ‘billow, bob’ for which the movement of the water is etymologically first, cf. Appendix).

In sum, while for many cases the distinction between the three domains, i.e., aqua-, aero- or terra- Grounds, as well as that between non-liquid versus liquid Figures can be maintained, the distinctions do not present a strict repartition. Rather, one observes various types of cross-references and cross-domain extensions creating an intricate network of coding possibilities, where each choice imposes its own image on the event.

1.2. Types of Motion

By and large, the lexical field of Dutch aquamotion verbs follows the subcategorization that Talmy (2000) has suggested for motion verbs in general. This subcategorization, focusing on the presence per se of motion or location, can be summarized as follows.

- **translational motion**: motion event where “an object’s basic location shifts from one point to another in space” (Talmy 1985; 2000, II: 35);
- **self-contained motion**: motion event where “an object keeps its same basic or ‘average’ location” (ibid.); generally this involves oscillation, rotation, expansion, and local wander;
- **stationary motion**: motion event where an object is located in one particular place (typically expressed by location verbs).

As we will see, all three types are pertinent to the field of aquamotion in Dutch, yet the fact that water is a less stable Ground than earth makes it more difficult to distinguish rigorously between self-contained motion and stationary motion on the basis of the definitions Talmy provides. Moreover, it has to be borne in mind that while each verb may have its proper ‘niche’, it is clearly not the verb in isolation that needs to be considered, but the whole construction in which it occurs. For example, when stationary verbs such as *drijven* ‘float’ or *dobberen* ‘float, bob’ occur in a translational frame (e.g., FIGURE <VERB> TO <LOCATION>), they will be interpreted as translational motion verbs.

1.3 Types of Manner

A motion event consists of different components. Three of those, the Figure and the Ground (Section 1.1), as well as the type of Motion (Section 1.2) have already been mentioned. Following Talmy's description, the **Path** should also be taken into account, i.e., the path followed or the site occupied by the Figure. Talmy's typological distinction predicts that Verb-framed languages frame the Path in the verb, with Manner or Cause optionally expressed in a satellite, e.g., *Il traversa la rivière (à la nage)*, whereas Satellite-framed languages express the core schema (Motion, generally the Path alone) in a satellite leaving the verb free to express other co-events (mostly Manner or Cause), e.g., *He swam across the river*. Verbs may, in other words, conflate two different concepts, such as [MOTION & PATH] or [MOTION & MANNER]². Dutch (as generally all other non-Romance Indo-European languages, cf. Talmy 2000, II) typically conflates Manner (as a Co-event) into the verb and expresses the Path via satellites, whereas other languages (e.g., all Romance languages) cannot (or only in restricted contexts) simultaneously express Motion and Manner in the verb.

2. Description of the lexical field

This section will provide an overall, yet non-exhaustive, description of the different verbs making up the field of horizontal movement in or on liquids without paying attention to all the semantic features that distinguish them, however. These details will be further elaborated in the analysis presented below (Section 3).

Dutch aquamotion verbs divide into the three types of motion events discussed above (Section 1.2). The translational motion verbs are undoubtedly the most salient, as they best exemplify a 'true' change of location through or across the Ground. The number as well as the frequency of translational aquamotion verbs by far exceeds that of stationary and self-contained motion (translational motion accounts for approximately 85% in our sample).

The most common Dutch translational aquamotion verbs are *zwemmen* 'swim', *duiken* 'dive', *zinken* 'sink', and *varen* 'move by vessel'. There are also some verbs that conflate the instrument into the pattern of translational motion, such as *zeilen* 'sail', *roeien* 'row', *(wind)surfen* '(wind)surf', *waterfietsen* lit. 'watercycle', 'ride the pedal boat', and a few others. In principle, this group of 'INSTRUMENT verbs' is an open set, since any new means of transportation via water could (but need not) give rise to a new verb. In yet other cases, the means of transportation may give rise to a single verb next to a compound with the verb *varen*, e.g., *kanoën* ('canoe') and *kano varen* ('sail the canoe').

The self-contained motion has only a few members (all with relatively low frequency): *spartelen* 'flounder' (not necessarily restricted to aqua-Ground), *ploeteren* 'splash', and *plonzen* 'splash, splatter'. The latter incorporates an onomatopoeic reference to a splashing sound. In the realm of stationary aquamotion verbs, there are two important verbs: the most common one is *drijven* 'float', the other, *dobberen* 'float, bob', is more restricted in use, as we will substantiate below.

² Recent research has shown that there is in fact a third group attested in e.g., serializing languages, where manner and path are expressed by equipollent grammatical means (hence, *equipollently-framed*); see Slobin (2004: 228).

Following and extending the subcategorization suggested by Maisak & Rakhilina (this volume), the different verbs have been grouped into the following subgroups (a simplified definition for each of the subgroups is given):

Table 1

Subcategories with the field of aquamotion

SWIM verbs	swimming of animate beings, prototypically <i>zwemmen</i> ('swim');
SAIL VERBS	motion of vessels / people on vessels (instrument incorporation), i.e., <i>varen</i> ('sail')
FLOAT verbs	non-controlled, non-directed location/movement, as expressed by <i>drijven</i> ('float') and to a lesser extent by <i>dobberen</i> ('bob')
CONTAINMENT verbs	movement within the water, e.g., <i>zweven</i> 'hover, float'
IMMERSION verbs	up/down movement in and out of water such as <i>duiken</i> 'dive' and <i>zinken</i> 'sink'
SPLATTER verbs	movement which makes water move as well, e.g., <i>plonzen</i> 'splash'
FLOW verbs	movement of water itself, e.g., <i>stromen</i> 'stream'

Ignoring some of the lexical intricacies, the lexical domain can be represented as in Figure 1. The most important and/or typical representatives for each subgroup have been highlighted in Figure 1 in bold face³.

While essentially expressing stationary motion, the FLOAT verbs *drijven* and, less so, *dobberen*, occur in constructions expressing translational motion (e.g., 'float towards/into/past X' etc.), as indicated by the dashed-dotted line in Figure 1. The diagram also shows how the different domains interact. AQUAMOTION and TERRAMOTION interrelate in two different ways. First, the SAIL verbs, as salient representatives of volitional/directed translational motion, can alternate with the neutral verbs *komen* 'come' and *gaan* 'go' (in addition to some other verbs, e.g., *reizen* 'travel'). In the diagram, this is represented by the dashed double-headed arrow. Both verbs are neutral verbs that can be used for any type of motion, and they form the deictic opposition FROM vs. TOWARD the SPEAKER. However, only *komen* is fully neutral as *gaan* retains a link with the domain of terramotion: it can be used in reference to walking (as opposed to running, cycling, or driving, for example). Second, in some contexts the AQUAMOTION verbs may alternate with the cardinal posture verbs *liggen* 'lie' or *zitten* 'sit', the former being an alternative for the stationary FLOAT verbs, *drijven* and *dobberen*, the latter for expressing containment in water.⁴ Interestingly, the concept of containment in water is where AQUAMOTION and AEROMOTION overlap, since Dutch does not have a specific aqua-verb to express this concept, but uses two AEROMOTION verbs, *zweven* 'hover' and, less common, *dwarrelen* 'whirl (down)'. *Zweven* pertains to the unhindered and self-sustained movement of an entity through the air; *dwarrelen* refers to entities whirling downward under gravitational force yet with considerable friction so that the movement occurs slowly and swayingly. These two verbs, and especially the former, have become the typical encoding for entities moving through water in a comparable fashion. It involves full containment in the liquid, in opposition to the FLOAT verbs (*drijven*, *dobberen*,

³ Because of their special status the FLOW verbs have not been included in Figure 1. Note also that the extended uses of *drijven* 'float' and *duiken* 'dive' to aeromotion have not been represented explicitly here.

⁴ See Lemmens (2002) on the use of the posture verbs *liggen*, *zitten*, *staan* in Dutch.

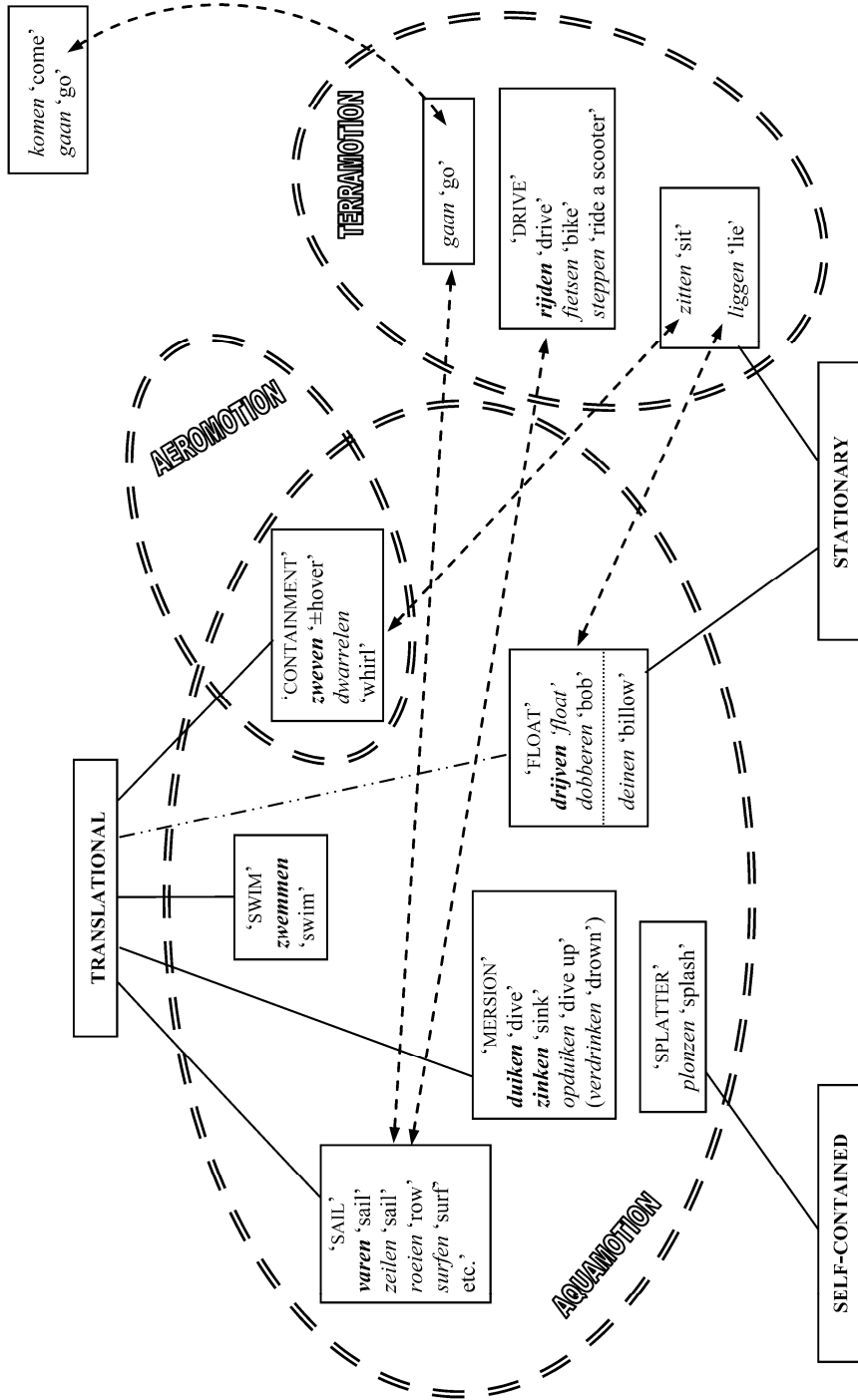


Figure 1. A simplified view on the lexical field of AQUAMOTION in Dutch

deinen) where typically the liquid ‘carries’ the Figure. The following example from our corpus nicely illustrates the opposition:

- (1) *Zichtbare olie kan **drijven** (olievlek), in kleine deeltjes in het water **zweven**, of op de bodem **liggen**.* [GP93—4]
 ‘Visible oil can float (oil slick), float in the water in small parts, or lie on the bottom’.

In our corpus, only 7 attestations out of 91 (7.1%) for *zweven* refer to aquamotion, the other pertain to its source domain of aeromotion or metaphorical extensions thereof. For *dwarrelen*, the number is even lower, as only 1 attestation on 22 (4.5%) refers to aquamotion. The use of *zitten* ‘sit’ to express containment is a logical extension of its locational use, it neutralizes the idea of motion that *zweven* and *dwarrelen* still have.

The contrast with the MERSION verbs (*duiken* ‘dive’ and *zinken* ‘sink’) is that the latter typically encode a faster and directed motion down- or upwards, whereas the other translational verbs basically express horizontal movement. As such, they are the ‘aqua-counterparts’ of *vallen* ‘fall’ and (*op*)*rijzen* ‘rise (up)’. *Duiken* is the counterpart of *zwemmen*, referring prototypically to human (by extension, animates and inanimates) self-propelled *downward* motion. By adding the particles *op* ‘up’ or *omhoog* ‘upwards’ the verb can also be used for upward motion (typically emerging out of the water). *Zinken* is the counterpart of *drijven* as it is the (necessarily downward) movement under gravitational force. The verb *verdrinken* ‘drown’ does not really belong to the same domain as it does not express motion but a causative or non-causative event where an entity drowns or is drowned.

3. Lexical semantic analysis

The three most important neutral aquamotion verbs in Dutch that do not conflate manner of motion with means of motion the way for example *zeilen* ‘sail’ does, are undeniably *zwemmen* ‘swim’, *varen* ‘sail’ and *drijven* ‘float’. One could say that, in their prototypical use, they make up a triadic opposition between respectively (i) Agent-propelled motion through water and (ii) Instrument-propelled motion through water, and (iii) Ground-propelled motion through water.

The following more detailed analysis draws on three different sources. Dictionary examples provide quick access to the main semantic peculiarities of each verb and can be subjected to different types of modifications in order to elucidate the borders of the verbs’ semantic compatibility. Judgments on the acceptability of these artificially created sentences stem from introspection and comparison against Internet data. Finally, non-elicited data from corpora have been used to both elucidate the patterns that are most typical for each verb and to refine the semantic analysis proposed. Our corpus data have been selected from the largest freely available electronic corpora from the *Instituut voor Nederlandse Lexicologie* in Leiden.⁵ The attestations were drawn from a 7.8 million word sub-corpus of the INL corpora, restricted to contemporary non-fictional prose (newspapers, magazines, and books). Table 2 gives an overview of the number of analysed sentences for the three verbs as well as for *dobberen* (‘bob’) which has been added to the set for contrastive purposes, as its semantic structure closely resembles that of *drijven*:

⁵ The authors are grateful to the *Instituut voor Nederlandse Lexicologie* for the use of their corpora. See www.inl.nl for more information on the corpus material.

Table 2

Corpus extractions

Item	Frequency	%
<i>Zwemmen</i> ('swim')	234	33.7%
<i>Varen</i> ('sail')	289	41.6%
<i>Drijven</i> ('float')	149	21.5%
<i>Dobberen</i> ('bob')	22	3.2%
Total	694	100%

The overall frequency of *varen* in the corpus is actually much higher than 289 (there are 1,550 attestations), yet to keep matters doable, a smaller set has been randomly selected from the total number of extractions for this verb⁶. While unfortunately the corpus is restricted to non-fictional written prose and is biased to Northern Dutch (695 or 81.6% of all cases), it turned out to be well-suited for the purpose of investigating the non-metaphorical usage of aquamotion verbs as it contains three collections from magazines that centre on water and water recreation.⁷

3.1. *Zwemmen*

The verb most oriented towards human self-propelled aquamotion is undoubtedly *zwemmen* ('swim'). It is, in fact, the basic aquamotion verb in opposition to the basic terramotion verb *gaan* 'go' and the basic aeromotion verb *vliegen* 'fly'. The verb seems little inclined to be used metaphorically, as most of the corpus examples (223, or 95.3%) involve a true swimming event; of these, the vast majority take a human Figure (149, or 66.8%)⁸, the remaining cases, except for one or two (for a discussion see below), involve animals (****)⁹. The latter group comprises both water animals (fish, dolphins, whales,

⁶ The corpus extractions have been analysed using some rudimentary codes. For each attestation, it was specified whether its usage was literal (aquamotion), extended (aero- or terramotion), or metaphorical. Further, the type of Figure was marked, basically distinguishing humans and animates from different kinds of inanimate entities. The latter were further divided into solid and liquid objects, with solids providing a separate tag for vessels (an important subtype, see discussion below). Another code concerned the type of motion: stationary vs. translational, with the latter divided up into directed or non-directed. Whenever explicitly expressed, we also marked the Figure's relation to the Ground (e.g., on, in, etc.). Finally, we recorded whether there was any explicit encoding of start and endpoints (e.g., from-to) and whether an instrument was explicitly mentioned (e.g., sail by raft).

⁷ These are: *Greenpeace Magazine* (GP), *Waterkampioen* (WK, a magazine about boating) and *Waddenbulletin* (WB, reports about the Northern Dutch waters).

⁸ In our sample, 45 cases (30.2%) pertain to swimming as a sport.

⁹ Because of editorial reasons, the results of the significance testing that was carried out on the corpus-data are presented in condensed form. The main distributions discussed are systematic in the larger population, with (*) indicating $p \leq .05$, (**) signaling $p \leq .01$, (***) revealing a $p \leq .001$, and (****) being reserved for $p \leq .0001$. Wherever possible, the Fisher Exact test was chosen over the Chi-square statistic. All values were computed using SAS version 8.1.

etc.) for which it is the default motion verb as well as occasionally ‘swimming’ animals (cats, dogs, etc.). Here are some typical examples ¹⁰:

- (2) [De andere jongens] **zwommen** naar hem toe. [GP90-2]
‘The other boys swam towards him.’
- (3) *Met forse staartslagen* **zwemt** de walvis voor hen uit. [GP90-1]
‘With a strong flap of its tail, the whale is swimming ahead of them.’
- (4) Alle honden kunnen overigens **zwemmen**. [WK199212]
‘Moreover, all dogs can swim.’
- (5) *In de sloot* **zwommen** ook jonge eendjes. [GP92-3]
‘In the creek also some young ducks were swimming.’

The last example shows how the verb is also used for ducks and the like even if they ‘swim’ in a different way than humans and animals do, as they are in fact more afloat and the visual effect is similar to that of a boat moving through the water. The use of the verb *zwemmen* is, however, fully appropriate, given that it involves directed motion (as opposed to what is implied by *drijven* ‘float’) which is fully self-propelled (as opposed to what is implied by *varen* ‘sail’).

The restriction to animate Agents (ranging from humans to invertebrae) moving by their own efforts, i.e., movement of body and/or limbs, is quite strong, and one cannot felicitously say **De boot zwemt naar de overkant* ‘the boat swims to the other side’ as this would imply that the boat is moving just like a human being. In our corpus, there are only two examples of an ‘inanimate’ Agent with *zwemmen*. One involves spermatozoids which are, however, sufficiently ‘animate’ to count as a special subcase; for the other example, featuring as Agent *dingetjes* (‘little things’), it is indeterminate whether we are dealing with animate Agents swimming in the polluted water or inanimates (and therefore this example is left out of the calculations). In the latter case, *zwemmen* would be the equivalent of *zweven* (‘float’). Now, clearly, in metaphorical uses, the Agent restriction can be overruled, as will be discussed in Section 4.

The self-propelled nature of the motion implied by *zwemmen* gives the verb a translational character, which provides a polar contrast to *drijven* (not self-propelled and often stationary). The translational character may in some cases be backgrounded, e.g., when referring to the act itself, as in *Ik kan niet goed zwemmen* (‘I cannot swim very well’). Approximately one third of the examples has an explicit translational frame, as in (6) ¹¹.

- (6) *Even dachten we echt dat we* naar de boot **moesten zwemmen**. [WB94-4.SGZ]
‘For a moment we really thought we would have to **swim** to the boat’.

The Ground in a swimming event is by default “water”, explicit mention of it is usually restricted to contexts where it has some qualitative modification, such as *vervuild*

¹⁰ Underlining in the examples is restricted to the elements in focus.

¹¹ Other possible translation frames include for example *van X naar Y* (‘from X to Y’), *langs X* (‘along X’), *achter X aan* (‘following X’), *heen en weer* (‘to and fro’), etc. The set of possibilities is virtually open-ended, similar to any other translational motion verb.

(‘polluted’), *koud* (‘cold’), *stromend* (‘running’), etc. The other explicit expressions of the Ground with the prepositional phrase *in* (‘in’) mostly occur with bodies of water, e.g., *rivier* (‘river’), *kanaal* (‘canal’), *zee* (‘sea’), etc. When swimming, the Figure is necessarily contained by the water; this explains, for example, why *zwemmen *op* ‘swimming on’ is infelicitous. (Notice that this equally applies to ducks that are actually partially ‘floating’ on the surface: *Het eendje zwom in/*op het water* ‘The little duck swam in/*on the water.’) At the same time, Dutch (as some other languages) has conventionalized a subtle distinction here between those entities that are constrained to moving in water and those that are not. Consider the following contrast:

- (7) *Ik **zwem** in de rivier / onder water.* [own example]
 ‘I am swimming in the river / under water’.
- (8) *De vis **zwemt** in de rivier / *onder water.* [own example]
 ‘The fish is swimming in the river / *under water’.

The contrast *in/onder* only occurs with those entities that cannot permanently stay underneath the water and have to surface for oxygen (notice that mammals like whales and dolphins are included in this set).

3.2. *Varen*

Etymologically, the verb *varen* is related to English *fare* (now only used metaphorically), German *fahren* and now obsolete Swedish *fara*, but in Dutch it has specialized to (prototypically) encoding an event involving directed motion over or through the water using a vessel of some sort. In older periods, the verb could be used to encode terramotion using a wheeled vehicle (as still is the case for German *fahren*) or more general motion (‘go’) which, judging from the information in the *Woordenboek der Nederlandse Taal* (roughly speaking the Dutch equivalent of the *Oxford English Dictionary*), seems to have been the verb’s original meaning. As illustrated in Section 4 below, this more general meaning ‘go’ underlies many of the verb’s metaphorical expressions.

The verb *varen* has become the default verb for aquamotion by human Figures using vessels. *Varen* can thus be considered as the counterpart of *rijden* (‘drive’) for terramotion by vehicle and of *vliegen* for aeromotion by aircraft, as the following examples nicely illustrate¹²:

- (9) *Duizenden historische legervoertuigen, vliegtuigen en schepen **rijden, vliegen en varen** in formatie door het land.* [NRC_APR_1995]
 ‘Thousands of historical army vehicles, airplanes and ships drive, fly and sail in formation through the country’.
- (10) *Maar hoe zie je in het pikkedonker of het schip **stilligt** of **vaart**?* [WB94-4]
 ‘How can you see in total darkness whether the ship is ‘lying still’ or sailing?’

¹² Notice that *vliegen* is still slightly different as it does not necessarily imply the use of an instrument, whereas *rijden* en *varen* do. As pointed out in section 3.1, *vliegen* is thus also the counterpart of *zwemmen* ‘swim’ and *gaan* ‘go’.

The last example pertains to the contrast between motion, *varen*, and non-motion, *stilliggen*, 'lie still' (*liggen* is the default location verb for ships).

The verb *varen* typically encodes directed motion towards a goal, in 17.3% of the cases the translational character is rendered explicitly, using expressions similar to those mentioned above for *zwemmen* (and which, as said, occur with any motion verb). Yet, *varen* displays more variation for the Figure than does *zwemmen*, as Table (3) shows:

Table 3

Distribution (****) of Figure types for *varen*

Figure	<i>Varen</i> ('sail')	
	N	%
Animate: human	197	74.6%
Inanimate: vessel	60	22.7%
Ambiguous	1	0.4%
Indeterminate	6	2.3%
Total	264	100%

A metonymical alternation typical for *varen* is that the Figure can either be the vessel as in (11) or the person steering it or sailing on it (12), as is typical for motion using a means of transportation in general:

- (11) *Voor de sluis liggen een paar boten die het niet gehaald hebben om de vorige avond vóór 8 uur 's avonds door de sluis te varen.* [WB91-4]
 'There are few boats lying by the lock that did not manage to sail through the lock the night before by 8 p.m.'
- (12) *De toename was dusdanig dat [...] de vissers niet eens meer goed konden varen, omdat ze de radar niet meer konden gebruiken voor de navigatie.* [WB91-3]
 'The increase was such that [...] the fishermen could not even sail any longer because they could not use the radar to navigate.'

The vessel as Figure occurs in 60 (22.7%) of the corpus examples, the person steering or sailing on the vessel as Figure is encountered in 197 (74.6%) of all cases. Sometimes the type of Figure is indeterminate, and there is one case that could be argued to sanction both readings because of an explicit simile between the vessel, an *unidentified sailing object* and *we*, the persons sailing on the vessel:

- (13) *En zo varen we dus als een soort 'ongeïdentificeerd varend voorwerp' door de Antwerpse haven.* [WK199224]
 'And thus we sail as a sort of 'unidentified sailing object' through the port of Antwerp.'

In cases where the Figure is the person steering the vessel, the latter may be expressed in a peripheral construction, if at all (it remains unexpressed in 162 or 82.2% of the cases),

for which there are essentially two possible constructions. The most common construction (27 or 77.1% of the 35 cases where the vessel is peripherally expressed) is to assign the vessel the role of a ‘true’ instrument, expressed in a prepositional phrase using *met* (‘with’), as in example (14):

- (14) *We varen met een open zeilboot van het type Centaur.* [WK199318]
 ‘We sail with an open sailboat of the Centaur type.’

The second possibility, illustrated in example (15), is to express the vessel as a location, using prepositions as *in* (‘in’) or *op* (‘on’), which occurs in 8 cases (22.1% of the cases with the vessel peripherally expressed):

- (15) a. *Op een Greenpeace-schip varen is spannend.* [GP95—4]
 ‘Sailing on a Greenpeace ship is exciting.’
 b. *Waarom willen Nederlanders in Amerikaanse boten varen?* [WK199318]
 ‘Why do Dutchmen want to sail in American boats.’

While the semantic difference between the two construction types illustrated in (14) and (15) is self-evident (INSTRUMENT in (14) vs. LOCATION in (15)), the factors that determine the choice between the two are not. What seems to be a tendency is that the role of LOCATION is favoured in contexts where the human subject is a larger group (hence, mostly in the plural form) that do not all do the actual sailing. Further, the LOCATION role also tends to be used when the sailing is functional and/or professional as in the following example:

- (16) *Nergens staat beschreven wat de gewone zeeman heeft meegemaakt. Van de zes schepen waarop hij voer, is alleen de Dempo vergaan.* [NRC_APR_1995]
 ‘Nowhere it is described what the common sailor has gone through. Of the six ships on which he sailed, only the Dempo has sunk.’

There is, moreover, a third possibility, as the vessel may also be expressed as the object of transitive *varen*, i.e., as a Patient affected by the sailing activity of the human Agent, as in example (17):

- (17) a. *Miles besloot het schip naar Rog Ruchay te varen.* [WK199417]
 ‘Miles decided to sail the ship to Rog Ruchay.’
 b. *De boot blijkt zeer gemakkelijk te varen en erg comfortabel.* [WK199510]
 ‘The boat seems to be easy to sail and quite comfortable’.

However, this construction is quite infrequent, (17b) is the only example in the randomly selected sample, and for all the 1504 attestations for *varen* extracted from the INL corpora (from which (17a) has been taken), there only 17 such transitive constructions (1.1%).¹³ The motivation for the transitive construction is to profile the Agent’s interaction with the vehicle; an adverbial comment seems typical for this construction (cf. *gemakkelijk* ‘easy’ in (17b)), but further research is needed to warrant this conclusion.

¹³ Example (17b) may in fact even be considered ambiguous as it supports an active reading (“the boat sails easily”) as well as a passive one (“the boat is being sailed easily”). This is common with middle-like constructions such as these.

When it comes to the type of vessel used, *varen* is quite neutral as it can be used in reference to motion across the water using any kind of vessel, powered by an engine, oars or the wind (to give the three most common propelling forces). For the latter two, Dutch has more specific verbs as well: *roeien* ('row') and *zeilen* ('sail'). *Roeien*, more an activity verb, is restricted to a human Agent: **De boot roeide naar de kant* ('the boat rowed towards the bank'). *Zeilen*, which according to the *Woordenboek der Nederlandse Taal* is probably a verb derived from the noun *zeil* 'sail', exclusively refers to motion using a sailboat, unlike its English cognate *sail* which has become an autohyponym having also generalized to "motion using any vessel" (where Dutch uses *varen*). The opposition is clear in the following examples:

(18) *Het maakt daarbij niet uit of ze zeilen of op de motor varen.* [WK199312]
'It does not matter whether they are 'sailing' or 'sailing on engine'.'

(19) *In het kanaal kan niet of nauwelijks gezeild worden. Dit zul je moeten motoren.*
[WK199406]
'You cannot or can hardly sail in the canal. You'll have to 'motor' it.'

The verb *zeilen* is quite frequent in the INL corpora (439 attestations), especially due to the magazine devoted to boating. The verb *motoren* (lit. 'motor'), formed on the noun *motor* is unusual, but occurs three times in the *zeilen*-sample as a contrast to *zeilen*. As mentioned in section 2, other more specific verbs exist, built on the vessel used, e.g., *kanoën* ('to canoe'), *kajakken* ('to kayak') or *waterfietsen* (lit. 'watercycle', 'ride the pedal boat'). In other cases, the general verb *varen* can receive a more specific interpretation through a compound structure where the first element specifies the vessel being sailed; the most common such compounds are *kanovaren* (lit. 'canoe sail') and *bootje varen* (lit. 'boat sail'). The latter, however, remains general as to the type of vessel; arguably, it originates from the time when *varen* was still a general motion verb and aquamotion not yet its default reading.¹⁴ It is probably no coincidence that most of the specific verbs (*roeien*, *zeilen*, *surfen*, etc.) are also (Olympic) sports, but that *varen* is not.

3.3. *Drijven*

Different from *zwemmen* and *varen* that typically encode intentional motion in or on water directed towards a goal, *drijven* merely specifies the aqua-related action as taking place on or near the surface of the water, the Ground. The Figure does not have an agentive role, i.e., it is not responsible for maintaining its position with respect to the Ground nor can it cause any directed motion. Instead, for stationary events the interaction between the supporting force of the Ground and the weight of the Figure determines the position of the Figure (i.e., whether the Figure sinks or floats); for translational events, it is the movement of the water that causes and controls the Figure to move.

In its literal application (82 cases, or 54.7%), the verb *drijven* occurs most frequently (41 cases, or 50%) with inanimate Figures that refer to solid objects, as illustrated in (20).

¹⁴ Notice that the noun *boot* 'boat' occurs here with the diminutive suffix *-je* which may suggest that the compound found its origin in informal speech.

Solid objects typically lack Agentivity (they have no intention, force, or control), a fact to which we will return below. Fluid substances (21) barely make it over 10% (9 examples). Interestingly, human beings (22) occur in about 18.3% or 15 of all examples. Vessels (separate from solid objects) are used as Figure in 12 or 14% of all cases (23). Although other types of Figure are likewise attested, they are only rarely used and hence seem less typical. Overall, the distribution of Figures found is systematic in the larger population (****).

- (20) *IJs is lichter dan vloeibaar water en drijft dus.* [STDEC1995]
 'Ice is lighter than water and thus floats.'
- (21) *Als er nu ergens een olievlek drijft dan wordt dat meteen gemeld.* [WB94-4]
 'Now, if an oil slick is floating somewhere, this will be reported immediately.'
- (22) *Een zeilpak bevat zoveel lucht, dat je de eerste minuten zeker blijft drijven.* [WK199318]
 'A life vest contains so much air that you will stay floating (afloat).'
- (23) *Je doet dat door even dwars in het vaarwater te gaan liggen en te peilen waarheen je schip drijft.* [WK199514]
 'You do that by 'lying' crossways in the water and to check where your ship is floating to' (recall that *liggen* is the default posture verb for ships).'

In short, in line with the non-agentivity associated with *drijven*, the verb seems to express a kind of aquamotion atypical for animate beings; when these are moving in or on water, they are usually in control of the motion and typically *zwemmen* and *varen* are used (see above). Our corpus provides only two (real) examples with living animate Figures, both stressing the fact that these Figures are not sinking. All other examples with a human Figure either metonymically refer to the Figure located on a vessel, e.g.,

- (24) *Blijf even dwars voor je ligplaats liggen en peil welke kant je op drijft.*
 'Remain 'lying' crossways in front of your mooring place and to check where you are floating.' [WK199514, a variant formulation to example (23)]

or they involve the use of some sort of floating instrument, see example (22). Obviously, when animate Figures or vessels are dead or their vessel inactive, as in examples (25) and (23) respectively, they behave like inanimate solid objects:

- (25) *Vissers vertellen dat er geregeld dode vissen in de rivieren drijven.* [GP91-4]
 'Fishermen report that regularly dead fish are floating in the rivers.'

Although the typical Figure is non-agentive and does not initiate any motion, *drijven* is appropriate when talking about stationary as well as translational motion. In our corpus the stationary reading of *drijven* (42 cases or 51.2%) is slightly more frequent and focuses on the fact that the Figure does not sink, as in (26). Example (26) also shows that this stationary reading of *drijven* is often stressed by verbs like *blijven* ('remain, stay'). Other verbs that can modify stationary *drijven* are *laten* ('let'), stressing the non-self-propelledness of the motion, as in (27), or *liggen te* ('lie to'), as in (28), that stresses the lower degree of activity. In 16 of the 17 cases (94.1%) where *laten* and *blijven* occur, they combine with sta-

tionary *drijven*; they are found once, illustrated in example (27), with non-directional translational *drijven*.

- (26) *De onderdelen van de olie die niet oplossen, blijven **drijven** of zakken naar de bodem.* [GP93-4]
 ‘The parts of the oil that do not dissolve, remain floating or sink to the bottom.’
- (27) *Meer iets voor oudere dames die niet zwemmen in het water, maar zich laten **drijven** op de golven die door meer actieve zwemmers geproduceerd worden.* [STNOV1995]
 ‘More something for elderly ladies who do not swim in the water but let themselves float on the waves...’
- (28) *En jij ligt daar tenslotte maar wat te **drijven** met dat logge stuk polyester.* [WK199417]
 ‘And you are just ‘lying about floating’ with that sluggish piece of polyester.’

The translational use of *drijven* highlights either directional motion along a path (23 examples or 28.0%) or non-directional motion (15 cases or 18.3%). In 21 or 91% of the directional events, the intended endpoint of *drijven* is expressed, by prepositions like *naar* (‘to’), as in (29), or other directional expressions (e.g., *zuidwaarts* ‘southbound’). Non-directed motion easily combines with adverbs like *rond* (‘around’), as in (30). The invariable addition of explicit “directional” expressions when translational events are at issue may be taken in support of our classifying the verb as essentially referring to stationary events (cf. Figure 1).

- (29) *Toen ze op de kant waren brak er een ijschots af en **dreven** ze naar zee.* [NRC_MAR_1995]
 ‘When they got to the edge, an ice floe broke off and they floated to sea.’
- (30) *Een deel van de lading Engels laken **dreef rond** of lag op het strand.* [WB94-3]
 ‘A part of the load English sheets was floating around or was lying on the beach.’

When directed motion is involved, this is not as much a consequence of the Figure’s intention and/or effort, but a side effect of the movement of the Ground. As example (31) illustrates, *drijven* can be opposed to *motoren*, implying that the vessels make use of the current (*drijven*) or their motor (*motoren*) to move forward.

- (31) *De schepen **drijven** en motoren langzaam verder tot ze bij een engte komen.* [WK199216]
 ‘The ships are floating and motor slowly along until they come to a narrow passage.’

This opposition between *drijven* and *motoren* is remarkably similar to that in example (19) where *zeilen* was contrasted to *motoren* and confirms the semantic opposition between self-propelled motion (*varen*) and motion caused by external forces (wind, water). At the same time, the non-intentional nature of the movement encoded by *drijven* explains why *met de stroom mee drijven* (‘flow **with** the stream’) is quite acceptable, but **tegen de stroom in drijven* (‘flow **against** the stream’) is not. Either construction is possible with

zwemmen en *varen* as well as with *zeilen* and *motoren*, since they all refer to controlled and/or intentional movement independent of the Ground moving or not.

Given the support by the water in a *drijven* event, one would expect that the preposition *op* ‘on’ figures most prominently in the examples, but in the 30 cases where the Ground is explicitly mentioned (36.6% of the total), *op* (occurring 8 times) — see example (27) above — is actually less frequent than *in* ‘in’ (19 times)¹⁵, yielding a systematic distribution (*). In addition to example (25) above, we can mention the following case which further deviates from the norm by the Figure floating vertically rather than horizontally¹⁶.

- (32) *Drijfnetten zijn reusachtig lange slierten net van soms wel 45 km lang en 15 meter hoog, **drijven** rechtop in het water en vangen alles wat voorbij komt.* [GP95-4]
 ‘Driftnets are gigantically long nets of possibly 45 km long and 15 meter high; (they) float vertically in the water and catch all that comes in their reach.’

3.4. *Dobberen*

In some way, *dobberen* could be regarded as *drijven*’s little sibling: it is clearly less frequent (only 22 attestations in our corpus, of which 18 literal uses), which motions to caution in interpreting the results.

Corpus data show that the distribution of the type of motion for *dobberen* — stationary as in (33), directed translational, as in (34), and non-directed translational as in (35) — matches that of *drijven* almost perfectly, as shown in Table 4.

- (33) [...] *beelden van een camera die **dobbert** op het Canal Grande in Venetië.* [stnov1995]
 ‘[...] shots of a camera that bobs on the Canal Grande in Venice.’
- (34) *De wanhopige bevolking is bereid op autobanden naar Florida te **dobberen**.* [NRC_MAR_1995]
 ‘The desperate population is willing to ‘bob’ on car tyres to Florida.’
- (35) *een bootje **dobbert** rond in een waddengebied* [GP91-4]
 ‘A little boat ‘is bobbing around’ in a wadden area.’

¹⁵ Recall that for *zwemmen* the Figure’s position vis-à-vis the water cannot felicitously be expressed by *op* (given that the figure is contained by the water), whereas for *varen* the preposition *op* is felicitous, although *in* can be attested in rather marginal encodings. There are no examples in our corpus, but with some effort the following attestation was found with a Google search (notice also the infelicity of the English gloss with *in*):

- (i) *De Drie Zijlen is het enige schip van de Marechaussee dat op de Waddenzee **vaart**.* [WB94-4]
 ‘The Three Sails is the only police ship that sails on the Wadden Sea’.
- (ii) *Vaartuigen die onder vreemde vlag **varen** in volle zee en in de Belgische zeewateren.* (Internet data)
 ‘Vessels that sail under a foreign flag ‘in’ open sea and ‘in’ the Belgian waters’.

¹⁶ Hence also the appropriateness of *liggen* ‘lie’ to encode the position/location of floating objects, of which ships are a salient subcategory, as they usually rest on their longest and widest side.

Table 4

Distribution of Motion types for *drijven* and *dobberen*

		<i>Drijven</i> ('float')		<i>Dobberen</i> ('bob')	
MOTION		N	%	N	%
stationary		44	53.7%	10	55.6%
translational	directional	23	28.0%	5	27.8%
	non-directional	15	18.3%	3	16.7%
Total		82	100%	18	100%

A difference between *drijven* en *dobberen* lies in the type of Figure, as shown in Table 5: for *dobberen* the ratio of human Figures, as in (36), is higher than that of vessels, as in (37) (61.1% for humans vs. 33.3% for vessels). As was pointed out in the discussion above *drijven* has a high proportion of inanimate Figures of which solids and liquids are the largest group.

- (36) *Ik moest de motor bijzetten, anders had ik nog bij die stomme kaap gedobberd...* [WK199224]
 'I had to put the engine in a higher gear, otherwise I would still have been bobbing by that stupid cape.'
- (37) *De rode ark dobbert doelloos en verlaten aan steiger 14.* [NRC_APR_1995]
 'The red ark is bobbing aimlessly and abandoned at quay 14.'

Table 5

Distribution (****) of Figure types for *drijven* and *dobberen*

		<i>Drijven</i> ('float')		<i>Dobberen</i> ('bob')	
FIGURE		N	%	N	%
animate		15	18.3%	11	61.1%
inanimate	vessel	12	14.6%	6	33.3%
	solid & liquid	50	61.0%	1	5.6%
	miscellaneous	5	6.1%	0	0%
Total		82	100%	18	100%

The results need further interpretation, however, as the human Figures with *dobberen* are invariably metonymical references to human beings on vessels or floating objects (like air mattresses). Our corpus has no attestation of humans bobbing on their own accord.

3.5. Summary

Table 6 gives a schematic summary of the prototypical uses of the four verbs. The numbers between brackets refer to the examples that illustrate these features. The following marking has been used: (i) a “+” indicates prototypical features, (ii) a “±” indicates that the distribution is even, (iii) a “-” sign followed by an example number indicates possible but less typical uses, and (iv) “--” indicates unacceptability of the feature.

Table 6

Prototypical semantic oppositions

			<i>Zwemmen</i> (‘swim’)	<i>Varen</i> (‘sail’)	<i>Drijven</i> (‘float’)	<i>Dobberen</i> (‘bob’)
I Figure	Animate		+ (2)—(5)	± (11)	- (27)	- (36)
	Inanimate	vessel	--	± (12)	+ (23)	± (37)
		other	--	-	+ (20)	+ (33)
II Position to Ground	IN		+ (27)	- Fn. 15, (ii)	± (32)	-
	ON		--	+ Fn. 15, (i)	+ (27)	+ (33)
III Motion type	Translational		+ (6)	+ (10)	± (23)	± (34)
	Stationary		--	--	± (26)	± (36)

Table 6 clearly shows that Dutch Aquamotion verbs differ as to what kind of Figure they prefer and we would like to present these findings in terms of a cline of Agentivity. The continuum of Agentivity could be represented as follows:

+Agentive	-Agentive
<i>Zwemmen</i> (‘swim’)	<i>Varen</i> (‘sail’)
	<i>Drijven</i> (‘float’)

Zwemmen ‘swim’ can be argued to be completely on the Agentive side of the continuum, since it is the exclusive domain of the animate Figures that cause the motion. *Varen*, then, assumes that the animate, i.e., human, Figures make use of a vessel to move in or on water, whereas *drijven* implies that the motion is due to the movement of the Ground, which explains why the number of animate Figures (possibly on vessels) is significantly lower.

Table 7

Distribution (****) of the Type of Agent for *zwemmen*, *varen*, and *drijven*

	<i>zwemmen</i> ¹⁷ ('swim')		<i>varen</i> ¹⁸ ('sail')		<i>drijven</i> ('float')		Total	
	N	%	N	%	N	%	N	%
Animate	221	99.5%	197	76.7%	15	18.3%	433	77%
Inanimate	1	0.5%	60	23.3%	67	81.7%	128	23%
Total	222	100%	257	100%	82	100%	561	100%

4. Extended and metaphorical uses

In this last section we will present some of the main extended and metaphorical uses. The former refer to extensions from aquamotion to terra- or aeromotion.

The only extended uses attested in our corpus occur with *drijven* and *zeilen*. As with English *float*, the verb *drijven* can be used for moving clouds or smoke (6 cases, or 0.4%) as in example (38).

- (38) *Het weer wordt steeds mooier, prachtige stapelwolken drijven voorbij.* [WB91-4]
'The weather is getting nicer, beautiful cumulusclouds are floating by.'

In contrast to the literal uses as well as the metaphorical uses these extended uses strongly evoke the idea of translational motion (notice, however, once again the explicit translation expression *voorbij* 'past, by'), probably because if static location in the air were at issue, the verb *hangen* ('hang') is used, the only true equivalent Dutch has for English *hover*¹⁹.

In our sample for *zeilen* 'sail', 10 attestations pertain to aeromotion and 3 attestations to terramotion; these extended uses are illustrated by the following two examples respectively:

- (39) *De kraai wipt van de tak en zeilt laag over de grond naar de volgende boom.* [GP92-2]

'The crow hops down from the branch and 'sails' low above the ground to the next tree.'

- (40) *Kwebbelend zeilt ze door de coffeeshop.* [NRC_APR_1995]

'Chattering away she 'sails' through the coffee shop.'

The use of *zeilen* implies a movement where the Figure does little effort but is steered by the wind (39) or some equivalent thereof (40).

¹⁷ The one example with *dingetjes* ('little things'), mentioned above, for which the type of Figure could not be unambiguously determined has been left out of the calculations.

¹⁸ One ambiguous and five indeterminate Figures have been left out of the calculations.

¹⁹ There is one specific verb, *bidden*, that refers to birds (usually birds of prey) or insects hanging still in mid-air, but its use is quite restricted and infrequent.

Strikingly, metaphorical uses are also quite limited. In part, this may be due to our corpus being restricted to non-fictional prose, yet even information gathered from dictionaries is rather scarce. The following discussion will thus necessarily be brief and has been restricted to the three most frequent aquamotion verbs, i.e., *zwemmen*, *varen* and *drijven*.

There are basically two types of metaphorical extensions. First, we will introduce some extensions that pertain to the fluid character of the Ground. Next, we will give some examples in which the motion event itself is used metaphorically.

In our corpus, *zwemmen* is strongly restricted to the domain of aquamotion, the metaphorical uses of amount to less than 3.4% (9 cases)²⁰. The metaphorical uses essentially build on two notions. One relies on the image of the Figure's containment in the water, emphasizing the **omnipresence and/or abundance of the surrounding substance or atmosphere** (no longer necessarily fluid). Perhaps the most typical idiom illustrating this pattern is the one where the containing substance is money, luxury or wealth, as in the following corpus example:

- (41) *Als voormalige spaarbank **zwemt** de VSB in het spaargeld.* [NRC_APR_1995]
'As former savings bank the VSB is swimming in (the saved) money (= is loaded with).'

Similarly, in a sentence like *De vis **zwemt** in de boter* 'the fish is swimming in the butter' (the fish being served as food on a plate necessarily evoking a metaphorical reading), the verb indicates abundance of butter. In fact, it comes close to metaphorical uses of *drijven*, e.g., *De vis **drijft** in de boter* 'the fish is floating in the butter' which is equally acceptable to describe the situation. (Notice that in both cases the butter has to be liquid.) The two sentences are not fully synonymous, however, as there seems to be a difference of degree: *zwemmen* much more than *drijven* implies the excess of the liquid which makes the Figure 'swim'. This is a logical extension from the fact that full containment in the liquid is much more strongly associated with *zwemmen* than with *drijven*; for the latter, full containment is possible, yet it is less typical. In short, the image imposed by *zwemmen* and *drijven* is one where the **containment by far exceeds what is generally considered necessary or appropriate** (which accounts for these constructions' common negative connotation). More data on these metaphorical uses is however needed to support our claim that the two verbs differ with respect to the degree of the excess.

The second metaphorical pattern also builds on the notion of containment in a liquid, but with the implication that one thus lacks a solid support when advancing in one's movements or actions. **Absence of support and the subsequent lack of advancement** clearly underlie the following uses:

- (42) *Onze mensen [laten] **het recht op deeltijdarbeid gewoon **zwemmen**.*** [RVM92-3]
'Our people let the right for part-time work simply swim (= "dangle unsupportedly").'

- (43) *Dit was wel even **zwemmen!*** [personally attested by ML]
'This was some swimming!'

²⁰ The low percentage of metaphorical uses also impedes a search on the Internet, e.g., the first 300 hits of *zwemmen* (on a total of 362,000) all refer to literal swimming.

The latter example was uttered by a choir conductor after a first reading of a complicated musical score with many choir members being unsure of the notes, leading to rhythmically and melodically unstable singing.

Notice that the notion of being lost associated with *zwemmen* in these contexts contrasts to metaphorical uses of *drijven* that capitalize precisely on the notion of motion through support, as for example apparent in the frequent use of *drijven op* (lit. 'floating on'), as in the following example:

(44) *Je kweekt voetballers die alleen op voorzichtige impulsen drijven.* [STNOV95]
'You raise football players who float on careful impulses only.'

(45) *...zijn lange carrière, die helemaal drijft op zijn drang om veel muziekjes te spelen.* [STNOV95]
'... his long career that completely floats on his urge to play many tunes.'

More than 38 or 62.3% of the metaphorical uses of *drijven* focus on support of this kind with the Ground expressed in an *op*-phrase (recall that for literal uses, it was *in* 'in' that was more common). In general, 41 or 67.2% of all metaphorical uses refer to stationary *drijven* (vs 42 or 51.2% in literal uses, see above). Yet, it seems that these uses still retain a hint of translational motion as is reflected in the use of 'dynamic' Grounds that imply some sort of metaphorical advancement and/or movement, e.g., *ontwikkeling* 'development', *muzikaal thema* 'musical theme' or concepts that can give rise to dynamics, e.g., *overtuiging* 'conviction' or *drang* 'urge'.

The metaphorical uses of *varen*, finally, essentially refer to a more general type of motion, aligning it with the semantics of its Germanic cognates (cf. above). Thus, most of the metaphorical uses are not immediate extensions of the verb's contemporary literal use ("move over water by vessel") but of the more general etymological origin 'go', 'travel'. In our sample of metaphorical uses, making up little over 8% of the corpus examples (23 on 289), there is one idiom that can be directly linked to aquamotion, i.e., *een <ADJ> koers varen* 'sail a <ADJ> course', for which the corpus also has a literal usage (meaning 'keep one's course while sailing'). Given that one always sails a certain course, the noun *koers* invariably occurs with a modifying adjective ('new', 'different', 'one's own', etc.) which lies in line with the Agentive meaning implied by this usage of *varen* as well.

The most common of the other metaphorical uses is the construction *laten varen* (lit. 'let sail/go'), as in the following example:

(46) *Moskou liet zijn vijandschap tegenover Israël varen.* [STNOV1995]
'Moscow let its hostility toward Israel sail (= let go of its hostility).'

The 'moving' entity is always an abstract entity, viz. some plan, idea, or sentiment one cannot or does not want to keep.

Another metaphor that is relatively productive is the construction *ergens goed bij varen* (lit. 'sail/go well with something'). The closest English equivalent to this expression, *fare well* lends further support to the claim that metaphorical *varen* is pitched at the more general level of its older usage ('travel') than at the level of its contemporary literal use 'sail'. This is also apparent in some relics of extended uses (which probably originally

were not extended but core uses), as *een luchtballon varen* ('sail a hot air balloon') or *ten hemel varen* 'sail to heaven', referring, for example, to Christ ascending to heaven. The related noun *vaart* is also situated on the more general domain of motion, as one of its meanings is "speed of movement" (e.g., *vaart minderen* 'reduce one's speed'); another refers to the activity of moving, e.g., *scheepvaart* 'shipping trade, navigation' or *luchtvaart* 'aviation'.

In sum, it seems that it is particularly the literal uses of the verb *varen* that have specialized to aquamotion; the metaphorical uses of the verb and other related forms seem to have retained a link with the more general domain of motion as do its Germanic cognates.

5. Conclusion

In a nutshell, the main Dutch aquamotion verbs are distinguished by a number of features. Dutch *lexicalizes the Manner* of motion, i.e., it encodes the source of propulsion in the verb, leaving the interpretation of directionality to optional satellites or to contextual inference. Controlled and volitional self-propelled motion is expressed by *zwemmen* (*duiken* 'dive' is its counterpart for a vertical Path). As such, it is maximally opposed to uncontrolled and unidirectional motion expressed by *drijven* and *dobberen* (which has *zinken* 'sink' for a vertical Path). *Varen* (and the Instrument verbs) are used to encode directed motion by means of a vessel. The choice of Figure logically follows from these distinctions.

All these verbs allow a certain degree of metaphorical uses, although the corpus examples did not yield all that many. Mostly, the key to the metaphorization is the Ground no longer being of the liquid type (e.g., swimming in money, navigating through a crowd, etc.), yet this is often accompanied by other semantic changes.

In a larger typological perspective, the Dutch aquamotion verbs confirm Talmy's typological distinction between Satellite and Verb-framed languages. At the same time, some Verb-framed languages, such as French, have similar verbs (e.g., *nager*, *flotter*, *plonger*, *somber*, etc.). As an extension to the present research, it would be interesting to see whether these lexical distinctions function differently in Verb-framed languages.

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Corpora & Dictionaries

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Appendix:

Dictionary definitions & etymologies (in alphabetical order).

The following information is based on the Van Dale dictionary (11th edition).

Deinen ('billow, bob')

Def.: *(van de waterspiegel) zich in onregelmatige golving zonder schuimkoppen op en neer bewegen; (van vaartuigen op het water) zachtjes op en neer gaan;*
 '(of the water surface) move up and down in irregular movements without foam; (of vessels on the water) move softly up and down'

Etym. uncertain; first meanings attested pertain to water moving up and down, later extended to vessels or object on the water

Idioms: *deinende heupen* (rare) 'swaying hips'

Dobberen ('bob')

Def.: *drijvende zachtjes op en neer gaan (in het water)*
 'gently move up and down while floating (in the water)'

Etym: from Middle Dutch *dobben* 'submerge'

Drijven ('float')

Def.: *in een vloeistof liggend door de opstuwende werking daarvan aan de oppervlakte blijven en aan de bewegingen van die vloeistof deelnemen*
 'lie in a liquid by the upward force of which one stays at the surface and participate in the movement of that liquid'

Etym. uncertain; related to English *drive* and *drift*

Idioms: *zich drijvende houden* (lit. 'keep oneself afloat'): 'survive (often metaphorically)'
X drijft op Y (lit. 'X floats on Y'): 'Y is the driving force for X'

Duiken ('dive')

Def.: *zich (met een opzettelijke beweging) onder de oppervlakte van het water begeven*
 'move oneself (through deliberate movement) underneath the surface of the water'

Etym: Germanic origin, cf. Engl. *duck*, Gm *tauchen*, Sw. *dyka*

Idioms: 'move swiftly downward through air'

'move below a certain standard (e.g., prices)'

'move quickly into something', *in een jas, onder de wol duiken* (lit. 'dive into a coat, under the sheets')

'assume a hunched or squatting position', e.g., *achter zijn krant gedoken zitten* (lit. 'sit ducked behind one's newspaper')

Varen ('sail, (go)')

Def.: *reizen of vervoeren te water*

'travel or transport on water'

Etym: derived from general verb meaning 'go, move'

Idioms: *er wel bij varen* 'fare/do well'

iets laten varen 'let go of s.th.'

Zeilen ('sail with sailship')

Def.: (*van een vaartuig en van de personen daarin*) *zich met behulp van zeilen over het water voortbewegen; een zeilvaartuig besturen*

'(of a boat and persons therein) move over water with help of sails ; steer a sailboat'

Etym: formation based on the noun *zeil* 'sail'

Idioms: move as if sailing, propelled by an invisible force

Zinken ('sink')

Def.: *door eigen zwaarte naar de diepte, naar beneden gaan in een vloeistof, syn. ondergaan*
'through own weight go down in a liquid', syn. *ondergaan* 'go under'

Etym: possibly from Lithuanian *senku* ('I go down'); related to English *sink*

Idioms: 'go down in non-liquid substances' (in snow, etc.)

in de grond zinken van schaamte (lit. 'sink in the ground of shame'): 'be ashamed'

in een diepe slap zinken (lit. 'sink into a deep sleep')

de moed zonk in mijn schoenen (lit. 'the courage sank in my shoes'): 'lose courage'

Zwemmen ('swim')

Def.: *geheel omgeven zijn door, bedekt zijn met de genoemde vloeistof, syn. drijven; door bepaalde geordende bewegingen in het water zwevend, op een vloeistof zich drijvend houden en zich erin voortbewegen*

'be completely surrounded door, be covered with, the said liquid', syn. *drijven*; through certain, ordered movements float in the water, float on a liquid and move through it.

Etym.: conflation in Middle Dutch of intransitive *swimmen* and causative *swemmen* (cf. *sit/set*)

Idioms: *iets laten zwemmen* (lit. 'let something swim'): 'not support something'

ergens in zwemmen (of clothes, money, happiness, etc.): 'be surrounded by abundance of said substance'