SOME ASPECTS
OF THE HEBREW VERB *SAXAH* 'SWIM'

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1. Introduction and background: two aspects of verbs' meanings

Before plunging into the semantics of the Hebrew verb *saxah* 'swim', a word is in order on the kind of approach to lexical semantics undertaken here. In general, work in lexical semantics distinguishes two aspects of verbs' meaning, templatic and idiosyncratic. Templatic meaning — that part of the meaning that the verb shares with other verbs of the same semantic class, and idiosyncratic meaning, that part of its meaning that is specific to that verb (Pinker 1994, Levin 1999). For example, *boil* shares the templatic meaning of being a change of state verb with many other English verbs: *open, close, dry, tighten, clear* etc. All these verbs encode an aspect of change of state in them, and this templatic meaning has also been shown to be relevant for the syntactic behavior of these verbs with respect to alternations (Levin 1993). Thus, all change of state verbs undergo the causative alternation:

(1) a. *John boiled the water.*
    b. *The water boiled.*

Now, there are some aspects of meaning that the verb *boil* does not share with other verbs of change of state. For example, the fact that this verb involves a hot liquid releasing bubbles. This is precisely the idiosyncratic part of the meaning of *boil*.

The following can be said, as broad generalization: most work in lexical semantics, especially within the generative tradition, concentrates on the templatic part of verbs meaning. I believe this is mainly due to two reasons. First, it is considerably easier to investigate that part of verbs' meaning that interacts with tangible elements such as syntactic alternations. Second, it may seem, at first sight, that there are no interesting generalizations to be made regarding the idiosyncratic of verbs' meaning: if *boil* is about a hot liquid releasing bubbles, then this is about all that can be said. After all, isn't this part of verbs' meaning supposed to be idiosyncratic?

In this paper I will use the method put forward in Rakhilina (2004) to perform an indepth investigation of the verb *saxah* 'swim' in Hebrew. I will look both at the idiosyncratic properties of the verb *saxah* 'swim' in Hebrew, and at its templatic properties, relating to its being a manner of motion verb. This paper, as part of the larger project undertaken in this book, serves to justify the approach to lexical semantics where, indeed, inter-

esting generalizations are found at the supposedly idiosyncratic level. At the same time, my main goal here is, primarily, just that — to establish the facts at the idiosyncratic level of the verb 'swim' in Hebrew. Given the nature of this project, I shall also concentrate on the comparison of Hebrew to Russian.

The paper is organized as follows. Section two investigates the idiosyncratic lexical properties of the Hebrew verb *saxah*. In section three, I examine the templatic properties of that verb, namely, those properties shared by all manner of motion verbs. As it turns out, this verb behaves like other manner of motion verbs in Hebrew, not participating in syntactic alternations and not creating other, related verbs. Section four cites the meta-phorical extensions of the verb *saxah*. Those metaphors retain the lexical nucleus of the verb, specifying immersion. Finally, in section five I compare the verb *saxah* with other related Hebrew verbs (meaning 'float', 'dive' etc.) and show how their subtly different lexical cores result in different uses.

2. 'Swim in Hebrew' — a preliminary investigation

2.1. Directionality

Unlike Russian, which distinguishes unidirectional and multidirectional verbs of motion, Hebrew has only one verb of motion for both uses. This includes *saxah* 'swim.' Thus, the verb may appear with a directional phrase (2a) or with a locative phrase (2b):

(2) a. *Ha   yeled   saxah   la   gadah.*
       'The boy   swam   to the   shore.'
    b. *Ha   yeled   saxah   ba   nahar.*
       'The boy   swam   in the   river.'

This non-distinction in directionality also means that the verb *saxah* 'swim' can take both types of temporal phrases, bounded (e.g. *in an hour*) and unbounded (*for an hour*). The bounded temporal phrase is coherent with the directional reading, the unbounded one — with the non-directional reading:

(3) *Ha   yeled   saxah   la   gadah tox šaah   / $^?$mešex   šaah.*
    'The boy   swam   to the   shore in an hour   for   an hour.'

(4) *Ha   yeled   saxah   ba   nahar mešex šaah   / *tox šaah.*
    'The boy   swam   in the   river for   an hour in   an hour.'

The unbounded temporal phrase in (4), *for an hour*, implies that although the boy swam for an hour, he did not reach the shore (in Russian the verb would have appeared in the imperfective form *plaval*; Hebrew does not distinguish perfective and imperfective verbs morphologically). On the other hand, the bounded temporal phrase in (4), *in an hour*, is completely incoherent with the sentence.

Hebrew does not have the wealth of prefixes that attach to motion verbs, as in Russian. Therefore, many of the prefixed forms of *plyt'/plavat'* have to be expressed periphrasti-

cally in Hebrew. The form *poplyl* 'started to swim', for example, is expressed through the aspectual verb *hitxil* 'begin' plus *lisxot* — the infinitive of *saxah*:

(5) *Mal'chik* [*prygnul v   vodu   i*] *bystro poplyl   k   beregu.*
    Ha yaled kafac   la   mayim ve maher   hitxil lisxot   le ever ha gada.

Other uses of prefixed *plyt'/plavat'* sound highly marked or even a little unnatural in Hebrew. The precise translation of *priplyl*, for example, is 'arrive by swimming', and of *otplyl* — 'leave (the shore) by swimming':

(6) a. *On   priplyl   k beregu.*
        Hu   higia   be   sxiya   la gada.
        'He   arrived by   swimming to the shore.'
     b. *On   uplyl   ot berega.*
        Hu   azav   be   sxiya   et ha gada.
        'He   left   by   swimming   the shore.'
     c. *On   pereplyl   cherez reku.*
        Hu   xaca   be   sxiya   et ha nahar.
        'He   crossed by swimming   the river.'

The Russian prefixed verb is the natural way to express movement through water. The Hebrew paraphrase is highly marked, and is used only when the speaker wishes to stress that the swimming took place, as opposed to other means of transportation (e.g., that a person crossed the river by swimming, *rather than* using the bridge).

2.2 Animate vs. non-animate subjects

The subject of *saxah* in Hebrew is typically human, but does not have to be so, as illustrated in (7) below (this example will be further qualified later in section 2.3):

(7) *Ha   kelev / ha dag   saxah ba   yam.*
    'The   dog / the fish   swam   in the   sea.'

Unlike Russian, the subject of *saxah* does have to be animate. The following examples, which are grammatical in Russian, are not possible in Hebrew:

(8) **Ha   kora saxata*[1]   *ba   nahar.*
     'The   log   swam   in the   river.'

(9) **Ha   gezer   saxah   ba   marak.*
     'The   carrot swam   in the   soup.'

(10) **Ha   karxon   saxah   ba   yam.*
     'The   iceberg   swam   in the   sea.'

Such inanimate subjects usually appear with other verbs of motion in water, as will be illustrated in section five below.

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[1] The verbal form *saxata* is the feminine equivalent of masculine *saxah*. Also, in (11) below, *saxu* is the plural masculine form and, in (15) below, *soxe* is the present masculine form. The reader will notice similar morphological variations for some of the other Hebrew verbs cited in this paper.

2.3. Contact with surface vs. immersion

As noted above, the subject of *saxah* in Hebrew may be non-human. Still, the following sentence is unacceptable:

(11) *$^{/?}$*Ba*   *nahar*   *saxu*   *barvazim* /   *barburim.*
  ʿIn the   river   swam   ducks   swans.ʾ

Clearly, the difference between (11) and (7) above is in the type of motion in water. Swans and ducks only establish contact with the water. Humans, dogs and fish have their entire body (or most of it) *in* the water when achieving motion in water. This subtle example shows that Hebrew *saxah*, unlike Russian *plyt'/plavat'*, entails immersion in a liquid. Indeed, while most swimming occurs in water, any liquid medium is acceptable with Hebrew *saxah*:

(12) *Ha*   *zvuv* *saxah* *ba*   *marak.*
  ʿThe   fly   swam   in the   soup.ʾ [2]

I mention in passing that it is quite likely that the underlying meaning of *saxah* is not so much ʿaqaumotion involving immersionʾ as, perhaps, ʿaquamotion whose prototype is humanʾ. It is the intuition of several speakers that humans are the subjects of *saxah* picked most naturally, dogs somewhat less so, fish a little less, ducks or swans not at all — suggesting a gradual metaphorical extension of human aquamotion to other animals. Whether this is indeed the case calls for more detailed study.

2.4. Swimming as a volitional action

Finally, another aspect where Hebrew *saxah* differs from *plyt'/plavat'* is that it entails a volitional action. The subject of the verb has to move volitionally. From the volition property follows the animacy requirement on *saxah* in Hebrew, as noted above. Similarly, the following is acceptable in Russian but not in Hebrew:

(13) *Ha*   *gviya* *saxata* *ba*   *nahar.*
  ʿThe   corpse   swam   in the   river.ʾ
  (cf.   *Trup*   *plaval*   *v*   *reke*.)

In this respect, *swim* behaves like many other manner verbs in Hebrew, which require a volitional subject (such as *cava* ʿpaintʾ, *laxaš* ʿwhisperʾ, etc.). Similarly, verbs that specify mere contact, such as *plyt'/plavat'*, often do not impose a volitional subject [3].

2.5. Summary

The detailed examination of the Hebrew verb *saxah* reveals some subtle aspects of its meaning, which are otherwise left obscure: First, *saxah* specifies a specific manner of mo-

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[2] Note that this example becomes marginal if the fly is not alive.
[3] See, for example, *splash* in English, which is possible in contexts such as *The mud splashed on the wall*. *Splash*, unlike other similar verbs such as *smear*, merely specifies contact with the surface, but not manner.

tion. This is unlike Russian, where the verb only specifies some smooth motion, without naming its specific type or even insisting that the motion be in water. Second, the particular manner of motion named by *saxah* is motion *in* water (i.e., the body of the swimming person or animal has to be in the water). Again, this distinguishes the Hebrew verb from its Russian counterpart, which only specifies contact with surface. Finally, the Hebrew verb names a volitional action, while the Russian one describes an action that can be either volitional or non-volitional.

What seems like the equivalent of *plyt'/plavat'* in Hebrew is, in fact, a verb with different lexical contents. Russian *plyt'/plavat'* specifies smooth movement, not necessarily volitional, including contact with a surface. Hebrew *saxah* specifies volitional movement through liquid medium, with the subject being immersed in the liquid.

3. Saxah 'swim' as a manner of motion verb in Hebrew

Let us now examine the templatic aspects of *saxah*, those shared with other manner of motion verbs in Hebrew. This verb patterns with most other manner of motion verbs in Hebrew, with respect to the following properties: it does not participate in syntactic alterations and does not create similar, related verbs using the same root. Both these properties will be explained below.

Syntactic alternations in the Hebrew verbal system include passive formation, reflexivization and causative verb formation. Both passivization and reflexivization occur only with transitive verbs. Manner of motion verbs, by definition, have no direct object, because they describe a manner of motion applied to the *subject* of the verb. Therefore, they do not form passives or reflexives (Hebrew does not have impersonal passives, which can be formed from intransitive verbs). Regarding causativization, it is a well known observation that causative verbs are most easily formed from change of state verbs (Levin 1993, Levin and Rappaport Hovav 1995). In some languages, including English, causativization of motion verbs is limited to a small number of verbs, in specific contexts (e.g. *walk the dog*, *march the soldiers*). Hebrew allows causativization of a somewhat larger number of manner of motion verbs, including *run*, *crawl* and *jump* (Arad 2002). Even so, it does not causativize motion verbs regularly, and does not have a causative verb whose meaning is *cause to swim*[4].

Now to the other property of *saxah*. Hebrew has seven verbal forms, known as *verbal patterns* or *binyanim*. Some verbal roots create two or three verbs, when combining with different *binyanim*. For example, the root √*xšb* creates three verbs, related in their meaning (all specifying a mental process):[5]

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[4] This may be just a lexical gap: Berman and Sagi 1981 report children's neologism, *masxe*, whose intended meaning is 'cause to swim'.
[5] Note that *b* is spirantized in post vocalic positions, yielding *v*.

(14) a. *Xašav*   'think'
   b. *Xišev*   'calculate'
   c. *Hexšiv*   'consider'

Interestingly, manner of motion roots create in Hebrew no more than one verb (according to Arad (2005), where a complete corpus of verb-creating roots is analyzed). My hypothesis is that the lexical core of such roots is highly specified, and does not lend itself to multiple interpretations. This is opposed to roots such as √*xšb*, which only specify a mental process, but do not *name* that process. The actual process can be thinking, calculating of considering. The root √*sxh*, like all manner-naming roots, creates only the verb *saxah* 'swim'.

4. Metaphoric extensions

Both *plyt'* / *plavat'* and *saxah* have metaphorical extensions. As expected, their metaphorical uses are different in each language. Interestingly, those differences stem from the basic lexical difference between the two verbs. Russian *plyt'/plavat'* can be extended to refer to almost any smooth movement, gliding or flowing. It describes the smooth motion of clouds or airplanes in the sky, the flow of a crowd of people in the street, of a couple dancing or of music across a ballroom, and even the flow of the course of currency. The metaphorical extensions of *saxah* in Hebrew are more limited. I believe this is because it is more specified with respect to the manner of motion it encodes — and the more specified the verb is the more difficult it is to extend its uses (for a similar claim regarding Hebrew roots, see Arad (2005)).

The major way in which the verb gets metaphorically extended is as follows — describing total immersion. The sense then is of possessing a lot of a certain property. Examples are given below:

(15) a. *Soxe*   *be*   *kesef.*
       'Swim   in   money   (be very rich)'.
   b. *Soxe*   *ba*   *xomer.*
       'Swim   in the   material   (be very well informed)'.
   c. *Soxe*   *be*   *xara.*
       'Swim   in   shit   (be in deep trouble)'.

5. Saxah and similar verbs in Hebrew

Now let us consider a few Hebrew verbs related to *saxah*, which are sometimes used where Russian uses *plyt'/plavat'*. I will concentrate on each aspect of *saxah* mentioned above and compare it with the related verbs.

5.1 Immersion vs. contact: *saxah* vs. *šat* and *caf*

As noted above, the verb *saxah* entails the act of immersion of the subject in water. Thus, dogs can be used as subjects of the verb, but not ducks, ships or icebergs (whose immersion is constant).

A verb closely related to *saxah*, but specifying precisely contact with water (or constant immersion) rather than the act of immersion, is *šat* (roughly translated as ʿglide'/ ʿsail'). This verb can be felicitously used with those subjects that move smoothly on water rather than by being immersed in it. (In the following example, note that *caf* could be used as well, but only with a non-directional meaning.)

(16) a. *Barvazim   šatu   ba   agam.*
         ʿDucks   sailed in the   lake'.
     b. *Ha   karxon   šat   ba   yam.*
         ʿThe   iceberg   glided   in the   sea'.

Like *saxah*, the verb *šat* may be used either as non-directional (moving about) or with a goal, as illustrated below:

(17) *Ha   sfina   šata   el   ha   xof.*
      ʿThe   ship   sailed   to   the   coast'.

The verb *šat* is the most natural verb for vehicles such as ships. It can also be used for the person sailing the ship or boat. Unlike *saxah*, the verb *šat* has a causative alternant, *hešit*:

(18) a. *Ha   yeled   šat   ba   sira.*
         ʿThe   boy   sailed   in the   boat'.
     b. *Ha   yeled   hešit   et   ha   sira.*
         ʿThe   boy   sailed   OBJECT the   boat'.

In (18a), the boy is understood to be a passenger on the boat, while in (18b) he is the person who directs it.

Another related verb, *caf* ʿfloat' is polysemic between two meanings. One is emersion — the inchoative verb specifying the transition from the state of being fully immersed in water, to becoming only partly immersed (19a). In its second meaning, *caf* is a motion verb sharing with *šat* two properties: contact with surface (rather than immersion), and its being used with either animate or inanimate subjects (19b, c):

(19) a. *Ha   baqbuq   šaqa'   ve   az   caf.*
         ʿThe   bottle   drowned   and   then   floated'.
     b. *Ha   yeled   caf   ba   mayim.*
         ʿThe   child   floated   in the   water'.
     c. *Ha   gezer   caf   ba   marak.*
         ʿThe   carrot   floated   in the   soup'.

The difference between these two verbs is, that *caf* strongly prefers a non-volitional reading while *šat* may be volitional or non-volitional, and that *caf*, unlike *šat*, is hard to construe with a directional phrase:

(20) [?]*Ha   gviya   cafa   el   ha   xof.*
    'The   corpse   floated   to   the   shore'.

To the extent that (20) is judged to be grammatical by speakers, it is understood that some extra force, i.e. the stream of water, has moved the corpse. This related directly to the next important difference: *šat* entails movement, whether self-induced or just by being carried by the stream, while *caf* does not entail any movement of the floating object, and in fact prefers a non-movement reading. To the extent that there is movement with *caf*, it is never self induced. Consider the following pair:

(21) a. *Gušey   kerax   šatu   ba   mayim.*
      'Lumps   of ice   sailed   in the   water'.
    b. *Gušey   kerax   cafu   ba   mayim.*
      'Lumps   of ice   floated   in the   water'.

(21a) entails that the ice lumps were moving somewhere with the stream, while (21b) does not have this entailment, and the ice lumps may be stationary.

Finally, note that the difference between *caf* and *šat* may perhaps sometimes tied directly to specific subjects. While lumps of ice may be the subject of either verb, a stain of oil is only felicitous with *caf*:

(22) *Ketem ha neft   caf   / [?]šat   al   pney   ha   mayim.*
    'The oil   stain   floated / sailed   on   the face   of the   water.

Perhaps, *šat* includes a component of contact with the water, but also an entailment that part of the subject is above the water.

5.2. Volition and animacy: *saxah* vs. *šat*

Another difference between *šat* and *saxah* is that *šat* may refer to either a volitional movement (when the subject, e.g., is a duck) or a non-volitional one (when the subject, e.g., is an iceberg or a carrot in the soup). *Saxah*, on the other hand, is always volitional. As a result, it was noted above, *saxah* may only have an animate subject. When *šat* is understood as a volitional action, it refers to motion induced by the subject (23a). When it is non-volitional, the subject is understood to be carried away by water (23b) or operated by someone else (23c):

(23) a. *Ha   barbur   šat   ba   agam.*
      'The   swan   sailed   in the   lake'.
    b. *Ha   kora   šata   ba   mayim.*
      'The   log   sailed   in the   water'.
    c. *Ha   sfina   šata   ba   yam.*
      'The   ship   sailed   in the   sea'.

To express non-volitional motion through liquid medium, Hebrew uses the verb *nisxaf* 'be carried away'. As expected, this verb could be used with animate or inanimate subjects:

(24) a. *Ha   yeled   nisxaf   ba   zerem.*
      'The   boy   got carried   in the   stream'.

b. *Ha   sira   nisxafa   le   lev   ha   yam.*
   'The   boat   got carried   to   heart of the sea'.

Interestingly, this verb does not distinguish between contact and immersion. The subject could either be completely covered in water or, as with boats or logs, only have contact with it.

Finally, a verb almost synonymous with *šat*, but used exclusively for vessels or people operating them, is *hiflig*. It can be taken as either stative or inchoative (either ʿsail' or ʿset sail'), and it is stylistically preferable for relatively large vessels, embarking on relatively large voyages (otherwise, *šat* may be more appropriate):

(25) a. *Ha   sfina   hifliga   ba   yam   /   le   yapan.*
        'The   ship   sailed   in the sea   /   to   Japan.
     b. *Ha   malax   hiflig   ba   sfina.*
        'The   sailor   sailed   in the   ship'.

5.3. Motion vs. non-motion: *saxah* vs. *hištaxšex* / *hitraxec*

Two more verbs in Hebrew share with *saxah* the property of their subject being immersed in water. Unlike *saxah*, they are not verbs of motion, and so are not allowed with a directional phrase:

(26) a. *Ha   yeled   hitraxec   /   hištaxšex   ba   yam.*
        'The   boy   washed   /   bathed   in the sea'.
     b. *Ha   yeled   hitraxec   /   hištaxšex   *la   xof.*
        'The   boy   washed   /   bathed   to the   shore'.

5.4. Motion in water vs. motion into water: *saxah* vs. *calal, tava, šaka*

Finally, *saxah* is distinguished from another verb, that specifies movement deep into the water, *calal* ʿdive':

(27) a. *Ha   yeled   saxah   xamiša   meter.*
        'The   boy   swam   five   meters'.
     b. *Ha   yeled   calal   xamiša   meter.*
        'The   boy   dived   five   meters'.

(27b) means that the boy dived five meters deep, while (27a) means he progressed five meters. Another difference between the two verbs is that *calal* does not necessitate an animate subject. With an animate subject, the implication is that the action is volitional (28a). With an inanimate subject it is interpreted as *sink* in English:

(28) a. *Ha   yeled   calal   ba   yam.*
        'The   boy   dived   in the   sea'.
     b. *Ha   even   calela   ba   mayim.*
        'The   stone   sank   in the   water'.

While *calal* is understood as volitional with an animate subject, the verb *tava* ʿdrown' takes almost exclusively animate subjects (the only exceptions being vessels such as ship, boat, raft etc.) and is understood as non-volitional motion into the water:

(29) a. *Ha   yeled   tava.*
      'The   boy   drowned'.
   b. *Ha   sfina   tav'a.*
      'The   ship   drowned'.
   c. **Ha   even   tav'a.*
      'The   stone   drowned'.
   d. **Ha   bakbuk   tava.*
      'The   bottle   drowned' [6].

I assume that the exception for vessels is due to their typically carrying humans (although the verb may be used with them even when the vessel was not carrying any humans or animals). For inanimate subjects, the verb corresponding to *tava* is *šaka* 'sink'. For such an inanimate subject, the difference between *šaka* and *calal* may be that of register only (with *calal* as the more bookish equivalent).

(30) *Ha   even   šak'a   ba   mayim.*
     'The   stone   sank   in the water'.

Both verbs, *tava* and *šaka*, have causative counterparts, which is typical of verbs that do not require animate subjects:

(31) a. *Ha   oyev   hitbia   et   ha sfina.*
      'The   enemy   drowned   OBJECT   the ship'.
   b. *Ha   yeled   hitbia   et   ha xatul.*
      'The   boy   drowned   OBJECT   the cat'.
   c. *Ha   yeled   hiškia   et   ha bakbuk   ba   mayim.*
      'The   boy   sank   OBJECT   the bottle   in the water'.

5.5. Motion in and on water vs. motion of water

Finally, *saxah* cannot describe the motion of water itself. For that end, different verbs are used:

(32) a. *Ha   mayim zarmu   ba   nahar / ba   miklaxat.*
      'The   water   flowed   in the river   / in the shower'.
   b. *Ha   mayim nazlu / dalfu   / tiftefu   me   ha berez.*
      'The   water   dripped / leaked / dripped   from the faucet'.

6. Conclusion

The main Hebrew aquamotion verbs surveyed in this article were:
Saxah — 'swim': immersion in water (most naturally the degree of immersion keeps changing while the subject is making progress).
Šat — 'sail': constant degree of immersion in water.

These two are likely to be the two most common verbs in the system. Their typical use is for subjects making progress; static usages are derivative or less natural. Other verbs include:

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[6] Notice the morphological difference (in the informal transcription adopted in this article) between *tava* (masc.) and *tav'a* (fem.).

Caf — ʻfloat': contact with surface of water (does not entail a motion component). Here, the typical use is for subjects not making progress.

Hitraxec / hištaxšex (register variation) — ʻwash, bathe': contact with water, animate subjects only. Here, the clear entailment is that no progress is made.

Certain verbs involve, specifically, *downward* motion into water:

Calal — ʻdive': volitional (as in scuba-diving) or non-volitional (= *šaqa*).

Šaqa — ʻsink': non-volitional (inanimate subjects only).

Tava — ʻdrown': against one's will, animate subjects only.

At the same time, the verb *caf* mentioned above has the further, *upward* motion sense of emersion.

Finally, a verb clearly entailing progress, usually a substantial one, is:

Hiflig — ʻsail', ʻset sail': motion in water, making contact with surface, vessels (or their passengers) only.

For the system as a whole, verbs of aquamotion are the most natural to employ for events involving motion in water. More general verbs, such as *ba* ʻcome' will be acceptable, perhaps, for arrival via vessels (though the focus would be away from the vessel carrying the passanger, to the arrival itself), but decidedly awkward for arrival via swimming. As for ʻgoing', the verb expressing this most naturally in Hebrew is *halax* ʻwalk', which cannot be extended mataphorically to motion involving vehicles (where *nasa* ʻdrive' is used) or that involving contact with water. Note finally that the verb *nasa* ʻdrive' itself cannot be extended either for vessels making contact with water. The aquamotion system is autonomous in this sense.

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