An Examination of the Spatial Term 'Vehrev' in Eastern Armenian

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Abstract

This paper is an examination of the ways in which Eastern Armenian speakers conceptualize the spatial term '*vehrev*' (akin to 'above' in English). The goal is to develop a semantic profile of a frequently used postposition. Data was collected in the form of elicitations with three native speakers between the ages of 58 and 72. The findings suggest that: (1) the prototypical sense of the word '*vehrev*' references a fixed verticality with no surface contact; and (2) peripheral senses include one with a horizontal trajectory and an emphatic use which correlates to 'exactly above' when repeated twice. As a result, I argue that the semantic value of this spatial word is composed of a set of interrelated senses.

1. Introduction

This paper examines the semantic profile of the spatial adposition '*vehrev*' to develop an understanding of how it is conceptualized by speakers of Eastern Armenian. A spatial adposition is a relational term that is used to describe the position of an object in relation to another object. Numerous studies have demonstrated that speakers in all languages utilize spatial relational terms in order to orient themselves with the world around them.[1] No study addresses how Eastern Armenian speakers conceptualize the term '*vehrev*' (a close association to '*above'* in English). Using the theory of Image Schema (Johnson, 1987; Lakoff, 1987) and Figure/Ground relationships (Talmy, 2000) I conduct analysis in the form of elicitations from three native Eastern Armenian speakers to understand the semantic profile of '*vehrev*'. As Talmy explains, "the Figure object is a moving or conceptually movable point whose paths or site is conceived as a variable [...]. The Ground object is a reference-point, having a stationary setting within a reference-frame" (Talmy 1978, 627; cf. Talmy 2000, 315- 316). With this in mind, the aim of this research is to find: (1) what Figure/Ground relations are encoded in the spatial term '*vehrev'*; and (2) whether '*vehrev*' has numerous senses.

The results of the analysis indicate that *'vehrev'* does indeed have a prototypical sense that has a static Figure centrally located above a Ground, with which no surface contact can exist. The interaction of the Figure and the Ground also allow for interrelated peripheral senses, which include: one with a horizontal trajectory, and an emphatic use, which has no horizontal component and is equivalent to a sense meaning 'exactly above'.

[1] See References Section under Bowerman, Melissa (2003); Morrow, D.G. & Clark, H. H. (1988); See link for additional info: http://lclab.berkeley.edu/papers/maihiki-v13.pdf

This paper is organized as follows: In Section 2, I give a background on relevant literature and concepts concerning Cognitive Linguistics; In Section 3 I describe my methodology; In Section 4, I present my data and analysis. The final sections are the discussion of my findings in Section 5 and my conclusion in Section 6.

2. Literature Review

2.1 Cognitive Linguistics

Cognitive Linguistics (henceforth CL) is "concerned with the patterns in which and processes by which conceptual content is organized in language" (Talmy, 2011: 622). It emerged largely from the work of George Lakoff, Ronald Langacker, Mark Johnson, and Leonard Talmy in the late 1970s and early 1980s. A main tenet of CL is to understand how our interaction with the world is embodied and helps explain the structured characteristics of language. This framework rejects the formalism of a Chomskyan approach and places its foci on "the way an observer construes a situation, based on his or her conceptual framework" (Saeed, 2003: 357).[2] The CL perspective is vital in analyzing how prepositions organize entities in space. As Tyler and Evans note, a CL approach "provides a more accurate, systematic account" for prepositions "provide good evidence that prepositional meanings are extended from the spatial to abstract domains in ways that are regular and constrained" (Evans & Tyler, 2005: 5).

2.1.1 The Semantics of Spatial Terms

Within CL is the subfield of cognitive semantics, which highlights the way conceptual structure is encoded in language. Speakers use spatial language to "localize themselves and the entities with which they interact" and it is well known that "all humans have the same ability to perceive spatial relations" (Feist, 2004). The semantics of spatial terms act as a window into cognition for spatial terms help us construct meaning with the world around us. We learn to orient ourselves in relation to objects. Spatial relational terms are oftentimes in the form of adpositions. Terms such as ON, IN, BEHIND, and ABOVE help pinpoint our position in relation to another object. In describing two objects, I rely heavily on Leonard Talmy's concept of

[2] For such views, see Chomsky, Noam (1988) *Language and Problems of Knowledge*. The Managua Lectures. Cambridge, MA: MIT Press.

Figure/Ground relations.[3] As Talmy says, the concept of a Figure is something "that needs anchoring" and the concept of a Ground is something "that does the anchoring" (Talmy, 2000:113). To help illustrate Talmy's point, the Figure (F) and the Ground (G) are assigned in one of his classic example sentences:[4]

(a) The bike (F) is near the house (G).

Associated characteristics for the Figure are more movable, smaller, and more dependent; the Ground is more permanently located, larger, and more independent (Talmy, 2000: 315). Spatial terms bridge semantic representations with conceptual representations. Knowledge in how to relate to the world is stored in the form of lexical items.

2.1.2 Image Schema Theory

Image schemas are an abstract way of representing spatial relations. The term "image schema" appeared simultaneously, in 1987, in Mark Johnson's *The Body in the Mind* and George Lakoff's *Women, Fire, and Dangerous Things*. An image schema is "a recurring dynamic pattern of our perceptual interactions and motor programs that gives coherence and structure to our experience. Experience is to be understood in a very rich, broad sense as including basic perceptual, motor-program, emotional, historical, social and linguistic dimensions" (Johnson, 1987: xiv, xvi). The central notion is that these perceptual and motor structures are embodied, and "arise from, or are grounded in, human recurrent bodily movements through space, perceptual interactions, and ways of manipulating objects" (Hampe, 2005:1).

We reason spatially through image schemas and the following is a partial list showing such categories and types:[5]

SPACE:	UP-DOWN, FRONT-BACK, LEFT-RIGHT, NEAR-FAR [PROXIMITY], CENTER-PERIPHERY, CONTACT, STRAIGHT, VERTICALITY
CONTAINMENT:	CONTAINER, IN-OUT, SURFACE, FULL-EMPTY, CONTENT

[3] Talmy, Leonard. 2000. Toward a Cognitive Semantics, 2 vols. Cambridge, MA: MIT Press.
[4] (Talmy, 2000: 314)
[5] For a list of the major image schemas, see pg. 126 in Mark Johnson's *The Body in the Mind*.

LOCOMOTION:	MOMENTUM, SOURCE-PATH-GOAL
SCALE:	MORE-LESS

To illustrate an example of an image schema, consider the Source-Path-Goal schema within the Locomotion category. The source is the starting point of a moving object. The path is the area that it traverses and the goal is the endpoint where it comes to rest. Figure 1 below shows the Path image schema:[6]

Figure 1: The PATH embodied schema

Since it has a kinesthetic basis, the Path-schema is hypothesized to be one of the fundamental conceptual structures for interpreting reality (Johnson 1987; Casad 1993). The following sentence uses brackets around linguistic units to demonstrate the correspondence with a Source-Path-Goal schema:

(b) Michael walked [from his house] [through the woods] [to school].
Source Path Goal

Image schemas constitute the basis of embodied meaning. They give rise to meaning extensions of directional expressions like that of adpositions.

2.1.3 Cognitive Lexical Semantics

Previous approaches concerning the process of meaning construction, such as the famous study of the English preposition *over* by Brugman (1981) and Lakoff (1987) argued for a large number of distinct senses for a lexical unit. Their pioneering analysis was based on the spatial characteristics of the preposition along with "the perceptual variables present in each configuration" (Martin, 2000: 12). Syntactic analysis was not considered, as this was primarily a semantic analysis that also assessed figurative meanings. Their methodology had a limited scope

[6] From: http://www.cleanlanguage.co.uk/articles/articles/245/1/Embodied-Schema-The-basis-of-Embodied-Cognition/Page1.html

for analysis was constrained to a particular preposition. Meanings were split and context was not considered because it folded into the division of senses.

Instead of creating an extensive list of meanings for one particle, Tyler and Evans posited their Principled Polysemy Approach, with the intent to build a polysemy model for all English spatial particles. They suggested that, "the distinct but related senses associated with a single spatial particle constitute a semantic network organized with respect to a primary sense" (Tyler and Evans, 2003: 2-3). This theory aimed to account for word meanings that display fluidity. They argued that sense extensions for prepositions were context based and not necessarily fixed. In the CL realm, traditional studies of polysemy — in which a single lexical unit can have a range of meanings — are concerned with categorization. For the purposes of this study, the fact that we are dealing with the possibility of multiple meanings is not the main point. What is of importance is how those meanings are related and/or extended.

2.2 Spatial Terms of Eastern Armenian

It is well documented that the languages of the Caucasus are known for their extremely rich spatial systems (Arkhangelskiy, T., & Belyaev, O., 2011: 287). In fact, Armenian has very few prepositions and far more postpositions (Hagopian, 2007:81) As an agglutinative language, "postpositions are inflected for case, number, definiteness and possession" (Arkhangelskiy: 288). One of the ways that Armenian accounts for spatial information lexically is through the use of spatial predicates. Spatial predicates "capture the positions of two entities in relation to each other" (Oliver & Gapp, 1998: 126). These two entities are also known as the F and the G. Case markings in the ablative and locative forms of Armenian give insight into directionality and add to the semantics. Although the morphosemantics of case markings will not be the focus of this analysis, I briefly introduce the case system of Modern Eastern Armenian as it pertains to '*vehrev*' in examples (a)-(d) below:

Adverbial form: Adverbs of place are most often in citation form.

In example (a) below, the adverbial form is bolded:

(a) **vehrev**

Gndaguh **vehrev** gnats.
ball above went

'The ball went up.'

Nominative case: Along with other word classes in Armenian, postpositions can be nominalized. When this occurs, it has a largely copular function, i.e. it links the subject to its complement. It is used to indicate a current state, status, or presence (Sakayan, 2007: 78).

In example (b) below, this form is bolded as (-**a/-ena**):

(b) vehrev-**a**/ vehrev-**ena**

Gndaguh	geesht	eem	glchee	vehrev-**ena**.
ball	right	my	head	above-is

'The ball is right above my head.'

Ablative case: This is the most common form that the postposition '*vehrev*' takes.[7] Armenian adds the ablative marker to several word classes. One of the ways it is used is "To describe various circumstantial details such as source, origin, removal, or distance. It can indicate, for instance, the starting point of an event or an action" (ibid: 129-130).

In example (c) below, the ablative marker is bolded as (-**eets**):

(c) vehrev-**eets**

Gndaguh	vehrev**eets**	egav	tsats.
ball	above-from	came	down

'The ball came down from above.'

Here we see that the spatial predicate '*vehreveets*' is describing the motion of the ball (F) with the ablative marker (-eets). A directed path of the ball (coming down from above) is encoded in the predicate.

Locative case: Armenian employs the use of the locative case marker by adding it to several word classes (ibid: 209). The preferred use is with a noun phrase of place. When used with inanimate objects, the locative is still possible but "the postpositional construction is often preferred" (Kittilä, Västi, & Ylikoski, 2011:164).

[7] Although this is not a cross-linguistic study between Armenian and English, a mention of the locative and ablative cases in English is necessary for a brief comparison. When describing the morphological system of Armenian, most often there are no English equivalent forms. For example, English expresses locative meaning by a preposition such as *in* (cf. *in school*), *at* (cf. *at home*), etc. The ablative (of place) meaning is expressed by such prepositions as *from (from outside), of,* etc (Sakayan, 2007).

In example (d) below, the locative marker is bolded as (-**um**):

(d) vehrev-**um**

Gndaguh saree vehrev**um** mnats.
Ball mountain top-at the stayed

'The ball stayed at the top of the mountain.'

In this instance, the spatial predicate '*vehrevum*', describes the position of the ball (F) on top of the mountain (G). The importance of mentioning these case systems is to demonstrate how Armenian morphology requires the spatial predicate to conceptualize the relationship between a Figure and a Ground.

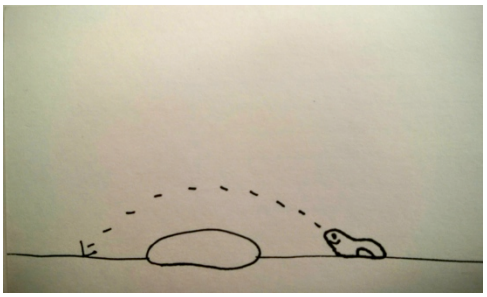
3. Methodology

Data was collected in the form of elicitation interviews with three trilingual Eastern Armenian (EA) speakers. The aim of this approach was to obtain open-ended responses from 15 picture prompts drawn on index cards.[8] Each card depicted a scene between two objects in order to identify the relationship of the Figure and the Ground. Some images were abstract in nature, containing only shapes, and some included 'real-life' representations involving a person. Picture prompts were balanced to include both a viewer-centered and an object-centered reference frame.[9] In a viewer-centered reference frame, "the orientations of the vertical and horizontal axes change with a change in the viewer's orientation" while in an object-oriented reference frame, "the orientations of the axes are defined with respect to the internal coordinate axes of the reference object" (Carlson-Radvansky, 1994: 648). Figures (2) and (3) are representative of the types of pictures and elicitation prompts used. The prompts were asked in Armenian:

[8] A full list of pictures with elicitation prompts is in the Appendix

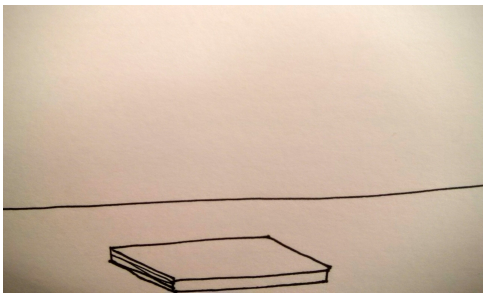
[9] There are several types of reference frames, such as viewer-centered, environment-centered and object-oriented frames. For further information, see Carlson-Radvansky, L., & Irwin, D. E. (1994).

Figure 2:



(a) When is the frog above the rock?

Figure 3:



(b) Describe where the book is

3.1 Consultants

Three native speakers of Eastern Armenian (EA) participated in individual interview sessions that lasted one hour. These speakers who are also fluent in English and Farsi, speak a Modern (EA) dialect representative of speakers from Tehran, Iran. The interviews were conducted in their homes, in Armenian, and the sessions were recorded using digital audio on a laptop. All consultants were chosen to be heritage language speakers who had no formal Armenian language schooling. My decision in choosing these types of speakers was twofold: (1) on a personal level, as a heritage language speaker of (EA) myself, I aimed to probe my own way of thinking; and (2) I wanted to see if there would be any overlap in the conceptualization of the spatial term among speakers. For this reason, all consultants were chosen to have similar skill levels in terms of speaking, reading and writing. The age range was from 58-72 years and the gender of participants was that of two females and one male.

3.2 Data Coding

The data was coded in accordance with Feist's (2004) study yet with a much more limited scope. While her study coded for attributes of geometry, function and qualitative physics, I homed in on geometry. Geometry is a major component in the way we talk about spatial relational terms. A simple shift in a geometric relation between a Figure and a Ground can change the way a speaker intuitively describes a spatial scene (Coventry, Prat-Sala and Richards, 2001). The geometric information relevant to this study includes the "relative vertical and horizontal positions of the Figure and the Ground, their proximity to one another (including contact), and their relative sizes" (Feist, 2010: 95).

I manually coded sentences into the following four categories: (1) motion of the F; (2) a difference in vertical position where F is higher than the G; (3) surface contact; and (4) the relative size of the F and the G. For each of the four categories, a No indicates that the attribute is absent while a Yes indicates it is present. For example, if the F is static, it is coded as a No indicating No motion and conversely a Yes indicates movement. In coding for verticality, I accounted for two instances when the position of the F could be higher than the G. One possibility includes the F in an Upright Vertical Alignment, where it is directly centered above the G. The second instance is when the F is either to the left or to the right of the presumed center of the G. In coding for contact, I noted whether the F had surface contact with the G. By coding for the relative size of the F in comparison to the G, the intent was to analyze a possible interaction between an expansive G and a small F. For this study, I chose to control the size of the F and keep it small in comparison to the G.

4. Data Presentation and Analysis

This section presents the results of the coded data in Section 4.1. Prototypical and peripheral senses are examined in Sections 4.2 and 4.3, respectively. Assigned letters in the interviews are as follows, I=Interviewer, C=Consultant, F= Figure, G=Ground.

4.1 Geometric Attributes of the Figure and the Ground

This section provides the results of the geometric attributes that characterize the relationship between the Figure and the Ground. Table 1 illustrates the results coded for the F and the G:

Table 1: Attributes of and Relations Between the Figure and Ground

Motion of F	**Verticality F higher than G**		**Contact**	**Relative Size of F**		**Relative Size of G**	
	Upright Alignment	**Left/Right Alignment**		**Small**	**Large**	**Small**	**Large**
No	Yes	No	No	Yes	No	No	Yes
No	No	Yes	No	Yes	No	No	Yes

Yes	Yes	No	No	Yes	No	No	Yes
Yes	No	Yes	No	Yes	No	No	Yes
Yes	No	Yes	No	Yes	No	No	No
No	Yes	Yes	No	Yes	No	No	Yes
Yes	No	No	No	Yes	No	No	Yes
No	Yes	No	Yes	Yes	No	No	Yes
No	No	Yes	Yes	Yes	No	No	Yes
Yes	No	No	Yes	Yes	No	No	Yes
No	Yes	No	No	Yes	No	No	Yes
No	No	No	Yes	Yes	No	No	Yes
No	No	Yes	No	Yes	No	No	Yes
No	Yes	Yes	No	Yes	No	No	Yes
Yes	No	Yes	No	Yes	No	No	Yes

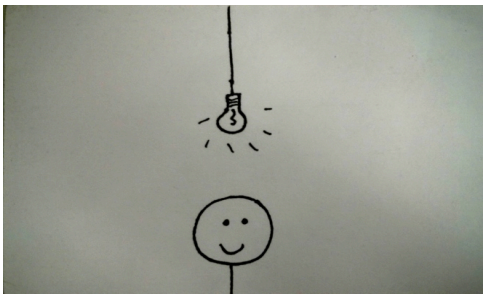
Since my analysis is focusing on the semantic profile of *'vehrev'*, I will examine the Figure/Ground relations of this chart in more detail below.

4.2 Prototypical Sense

For the purposes of this study, I use the general prototype theory of categories, as proposed by Eleanor Rosch and her colleagues (1976). This theory has been used by several linguists and is comprised of two basic cognitive principles: the first is to achieve maximum differentiation, with the prototypical instance of a category being that which distinguishes it most clearly from all other categories. The second is to avoid cognitive overload, which would result from over differentiating and a consequent loss in flexibility in grouping those things which share important characteristics, whilst being in other respects alike (Johnson, 1985:12-13).

Prototypical senses have characteristic attributes that are not only definable, but universally understood to pertain to a category. Consultants were in complete agreement that a fixed verticality of the F and no surface contact with the G were two essential components. Examples (1)-(2) are in response to Figure 4 below. The light is the F and the person is the G:

Figure 4:



(1) **C:** Jerak ga era **vehrevuh** yev looyc degha bahoom.
[ĵəɹak ga ɪɹa vɛɹɛv-ə jɛv lujs dɛɣ-a bahum]
light EXST.PRS.3SG his above-DEF and light place-NOM keep

'There is a light above him and it lights the area up.'

(2) **C:** Glchees **vehrevoom** lampena gachveh
[glxi:s vɛɹɛv-um lamp-əna gax-vɛ]
head-my above-LOC lamp-DEF.EXST.PRS.3SG hang-PRS.3SG

'Above my head hangs a lamp.'

In these examples, the consensus was that an object above one's head, not within reach and retaining a static position was understood as being directly above. The examples illustrate the Up-Down schema where the F is higher than the G in a static position. The lack of a Contact schema is also in use as there cannot be surface contact between the F and G for it to be understood as '*vehrev*' in a prototypical sense.

Conversely, follow up questions revealed that the position of a fixed object (F), when moved to the left or to the right of one's head was not a similar sense for '*vehrev*' as seen in examples (1) and (2) above. In examples (3) and (4) below, the data show the discrepancy:

(3) **I:** *Essee der ko gloocheed* ***verehvuh*** *gelner yeteh geesht era* ***verehv, verehvuh*** *chelner?*
[ɛsi dɛɹ ko glux-id vɛɹɛv-ə g-ɛlnɛɹ jɛtɛ dʒ̂iʃt ɪɹa vɛɹɛv vɛɹɛv-ə tʃ-ɛlnɛɹ]
this still your head-your above-DEF FUT-be if right it above above-DEF NEG-be

'Would it still be above your head if it were not right above your head?'

I: *Gorogha meh kiitch atch goghmuh elner gam dzach goghmuh elner?*
[gaɹoɣ-a mɛ kitʃ atʃ goɣm-ə ɛlnɛɹ gam dzax goɣm-ə ɛlnɛɹ]
able-PRS.3SG a little right side-DEF be or left side-DEF be

'Maybe to the right a little bit or to the left?'

C: *Che, endegh du gasess looycuh eem gloochees atch goghmuhna, gom dzach goghmnuhna.*
[tʃɛ ɛndɛɣ du g-asɛs lujs-ə im glux-is atʃ goɣm-ə-na gam dzax goɣm-ə-na
NEG there you possible-say light-DEF my head-GEN right side-DEF-is or left side-DEF-is

'No, there you would say the light is to the right or to the left of my head.'

(4) **I:** *Yev yeteh looycee meh goghmuh gangenatz chelner, vor geesht looycuh glchee* ***vehrevuh***
[jɛv jɛtɛ lujs-i mɛ goɣm-ə gangən-adz tʃ-ɛlnɛɹ voɹ dʒiʃt lujs-ə glux-i vɛɹɛv-ə
and if light-GEN one side-DEF stand-PRS NEG-be that right light-DEF head-GEN above-DEF

'And if he was standing a little to one side of the light, so that the light was not right above

chelner, der gaseer vor looycuh era ***verehvena****?*
tʃ-ɛlnɛɹ dɛɹ g-asiɹ voɹ lujs-ə iɹa vɛɹɛv-əna]
NEG-be still possible-say that light-DEF it above-COP.PRS.3SG

him, would you still say that the light was above him?'

C: No, no (headshake)

Speakers do not equate this as a prototypical instance of '*vehrev*' for the center-of-mass orientation of the F is not directly centered with the G. An example of this is shown below in Figure 5, (Regier, 1992) where the Verticality schema is not activated in a similar way as it is in the prototypical sense.

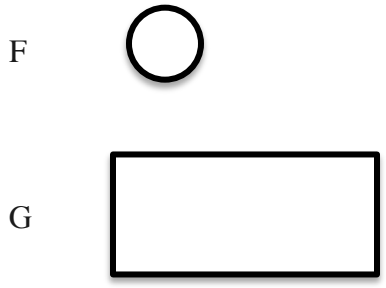
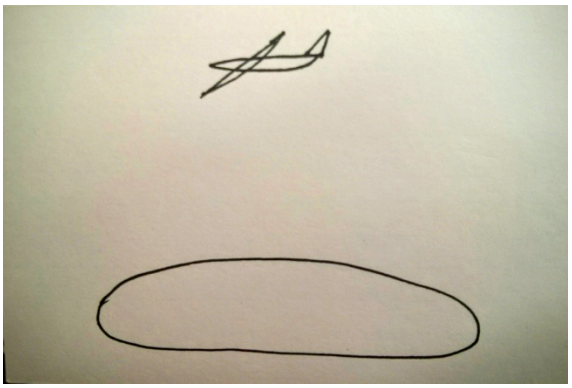


Figure 5: Non-prototypical Sense for 'vehrev'

In fact, every consultant was in agreement that this sense needed additional clarification by adding 'to the left or to the right', as the data showed in example (3). This was also found to be the case when the image of a plane and a lake, as we see in Figure 6 below, was shown:

Figure 6:



Although it looks as if the plane is directly centered in the air above the lake, it was not conceptualized as such, creating vagueness. Here consultants hesitated to state that the plane (F) was directly above the lake (G) because of a few unknown factors. Since the trajectory of the plane was not explicitly indicated with dotted lines to depict it as having either a horizontal or arched path, this led to the need for additional information. As we see in example (5) below, a typical response when asked if the plane was '*vehrev*' the lake was the following:

(5) **C: Vehrevena**	ed	leegee	bayts	[maybe]	geesht	meshdeguh	che.
[vɛɪɛv-əna	ɛt'	lidʒ̄i	baɪts		dʒ̄iʃt	mɛʃdɛɣ-ə	tʃi
above-COP.PRS.3SG	that	lake	but		right	middle-DEF	NEG

'It is above that lake but maybe not right in the middle.'

This is an instance of a grammatical use of '*vehrev*' in which the term confirms a perceived separation between the F and the G. The only clearly definable characteristic here is the existence of a vertical relationship between the F and the G. It is not understood to mean directly above.

In analyzing this data, I arrive at the conclusion that the best representation for a prototypical sense for '*vehrev*' is the one that corresponds to Regier's prototypical sense for 'above' in English (1992: 24). The F is directly centered 'above' the G. In other words, as seen in Figure 7, "the center-of-mass orientation and the proximal orientation are both perfectly aligned with upright vertical", while the possibility for potential motion in which gravity pulls the F directly downward, is also acceptable (ibid).

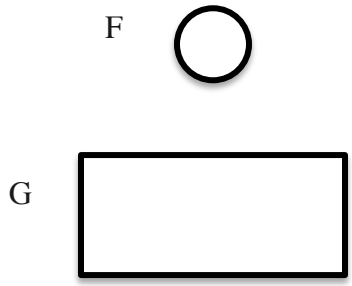


Figure 7: Prototypical Sense for 'vehrev'

4.3 Peripheral Senses

Peripheral senses are less frequent but just as important in adding meaning to '*vehrev*'. Sections 4.3.1 and 4.3.2 showcase two peripheral senses discovered in this investigation.

4.3.1 Horizontal Trajectory Sense

A horizontal trajectory can have movement of a F that runs parallel with a G, as seen in Figure 8 below (taken from Tyler and Evans: 2001).

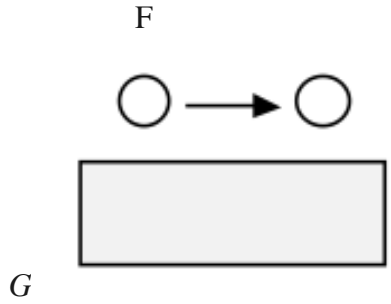


Figure 8: Dynamic Horizontal Trajectory

However, Figure 9 (ibid) below shows another instance in which an object (F) has an arched trajectory. When F is in motion, and has an upward trajectory, it is conceptualized in this sense:

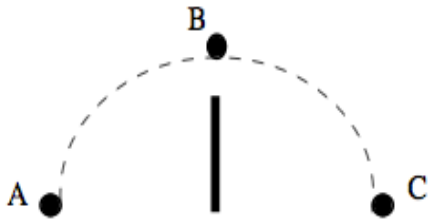


Figure 9: Source-Path-Goal schema for Over

The Source-Path-Goal schema (S-P-G) is a central schema here because it takes into account our vantage point while standing. An object must move from its starting point (A), up to its midway point (B) and down to its endpoint (C). This sense is found in example (6) below,

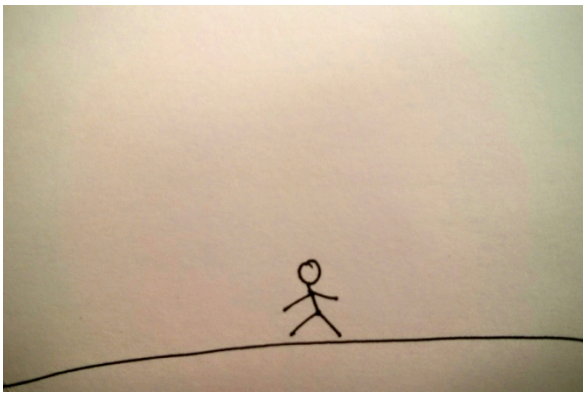
(6) **C:** *Gndaguh* *badee* ***vehreveets*** *gnats*.
[gndag-ə bad-i vɛɹɛv-its gna-ts.
ball-NOM wall-GEN above-ABL go-3SG.PAST

'The ball went over the wall.'

Consultants agreed that a horizontal trajectory that combined the dynamic movement in Figure 8 with the encompassing nature of the F in Figure 9 was also possible for '*vehrev*'. Interestingly, in this sense, it is not the F that evokes this sense, but the G. The data show that when the relative size of the F is tiny in comparison to an expansive G, '*vehrev*' is recognized as 'above' and 'across'. As Ekberg says, "It is understood that in several Indo-European languages the word for UP may also be used to designate horizontal movement/location away from the reference point (canonically the speaker) (Ekberg, 2001: 308). In this instance, '*vehrev*' is understood via the absence of a Contact schema in addition to the UP-DOWN schema.

Figure 10 illustrates this point further where a tiny person (F) and the sky (G) are shown.

Figure 10:



Example (7) references this image. Consultants all agreed that the sky is universally understood to be above, over and across in nature:

(7) **C:** *Yergeenkuh* *mer* ***vehrevoomena.***
[jɛɪgink-ə mɛɪ vɛɪɛv-um-əna]
Sky-NOM our over-LOC-COP.PRS.3SG

'The sky is above us.'

This sense is abstract for there is no suggestion of enclosing by the sky (larger G) and no indication of a S-P-G trajectory (Dewell, 1994: 4). In addition, the sky is also understood to be 'above and ahead' as we can see in example (8):

(8) **C:** *amen* *deghuh* *era* ***vehrevuh*** *gelnee. Meesht* *aracheda,* *yerp* *vor* *oozoomes*
amɛn dɛɣ-ə iɪa vɛɪɛv-ə g-ɛlni. miʃt aɪatʃ-əda, jɛɪp voɪ uz-umɛs
all place-DEF it above-DEF FUT-be always front-your when that want-2.PRS

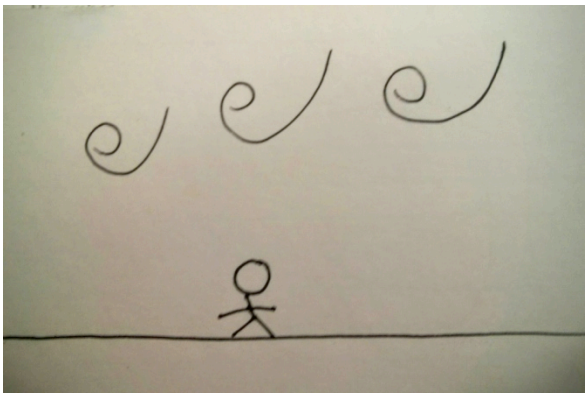
'It would be above him everywhere. It's always in front of you, whenever you want

nayes *ehsentses* *anoom.* ***Vehrev*** *yev* *deemats.*
naj-ɛs ɛsɛnts-ɛs an-um. vɛɪɛv jɛv dimats]
look-2.PRS like.this-2.PRS do-3.PRS above and ahead

to look, you do this. {lifts head up} Above and ahead.'

In example (9) below we again find mention of the fact that it is much harder to understand the Verticality schema with an unidentifiable entity. This time however, it is the F that is abstract in nature. Example (9) is in reference to the wind (F) as pictured in Figure 11:

Figure 11:



(9) **C:** *Kahmeen ches gorogh assess ambayman* ***vehreva*** *vorovhedev kameen,*
[kami-n tʃɛs gaɹoɣ as-ɛs ambaɪman vɛɹɛv-a voɹovhɛdɛv kami-n
wind-DEF NEG able.PRS.3SG say-PRS.3SG absolutely above-is because wind-DEF

'You can't say that the wind is absolutely above us because the wind

[object] chee, me ban chee
[obdʒɛkt] tʃi mɛ ban tʃi]
object NEG one thing NEG

is not an object, it is nothing.'

In this instance, the wind can serve as a F but it is such an abstract entity that it does not make for a good filler. Perceptually, the person in Figure 11 is unable to place focal attention on the F, for it is invisible and does not exhibit a prominent S-P-G trajectory. It should be noted that the non-central use of '*vehrev*' in this context is not semantic but grammatical as it is the nominalized form.

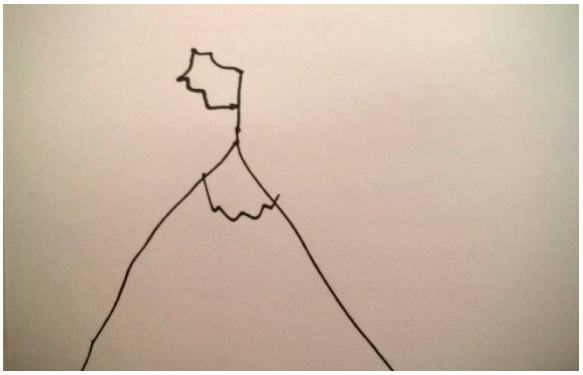
In sum, the inability to pinpoint a S-P-G trajectory makes this sense of '*vehrev*' vague and categorizes it as a peripheral one. When moving through space, if a F is not representative of a concrete object, participants are unable to perceive it as a prototypical instance of '*vehrev*'. In this environment, the location of the F in relation to the G becomes fuzzy.

4.3.2 Emphatic Sense

A most revealing finding was the emphatic use of '*vehrev*' as a way to mean 'exactly above'. In the process of elicitation, all three consultants used double repetition of '*vehrev*' when

describing the F on top of a G. The first instance was in reference to a flag (F) whose location was at the peak of a mountain (G), as shown in Figure 12 below:

Figure 12:



For this sense to be emphatic, the F must always be fixed atop a G that has internal verticality (e.g., mountains, hills, or buildings). It is understood to mean something like 'on top of the top' where the F is exactly above the top portion of a G. Examples (10), (11) and (12) show the data from all three consultants for Figure 12:

(10) **C:** *En droshaguh amena bartsr gagatena saree.* ***Vehrev, vehreva****, amena* ***vehreva****.*
[ɛn dɹoʃag-ə amɛna baɹtsɹ gagat-ɛna saɹ-i vɛɹɛv vɛɹɛv-a amɛna vɛɹɛv-a]
that flag-DEF all high peak-is mountain-GEN above above-is all above-is

'The flag is at the highest peak of the mountain. At the top, top, the highest.'

(11) **C:** *Droshaguh saree* ***vehrev*** ***vehrevena****.*
[dɹoʃag-ə saɹ-i vɛɹɛv vɛɹɛv-ɛna]
flag-DEF mountain-GEN above above-COP.PRS.3SG

'The flag is exactly above the mountain.'

(12) **C:** *Emanoomenk vor droshaguh* ***vehrevuh*** *beedee elnee. Saree* ***vehrev*** ***vehrevena****.*
[imanum-ɛnk voɹ dɹoʃag-ə vɛɹɛv-ə bidi ɛlni saɹ-i vɛɹɛv vɛɹɛv-ɛna]
know-3PL that flag-DEF above-DEF must be mountain-GEN above above-COP.PRS.3SG

'We know that the flag must be on top. It is exactly on top of the mountain.'

In the second sentence of example (10): "***Vehrev, vehreva****, amena* ***vehreva****"*, the first use of '*vehrev*' refers to the top of the mountain (G) and the second instance '*vehreva*' refers to the flag

(F), which is at the highest point of the mountain. Examples (11) and (12) confirm this use once again.

When asked if the meaning of '*vehrev, vehrev'* would remain the same if the (F) was moved slightly lower, the response was no, as we see in example (13) below:

(13) **I:** *Nooyna guhmedatzeenk yeteh en droshaguh geesht en bood boodee vren chelner,*
[nujn-ə gə-mədadz-ink jɛtɛ ɛn dɹoʃag-ə dʒ͡iʃt ɛn bud bud-I vɹ-ɛn tʃ-ɛlnɛɹ
same-DEF FUT-think-3PL if that flag-DEF right that point point-GEN on NEG-be

'Would you think the same if the flag was not right on the point

bayts meh keetch tsazsod elner bayts du getneetses nayoom.
baɪts mɛ kitʃ tsadzod ɛlnɛɹ baɪts du gɛdn-its-ɛs naɪ-um]
but a little low be but you ground-LOC-2SG watch-LOC

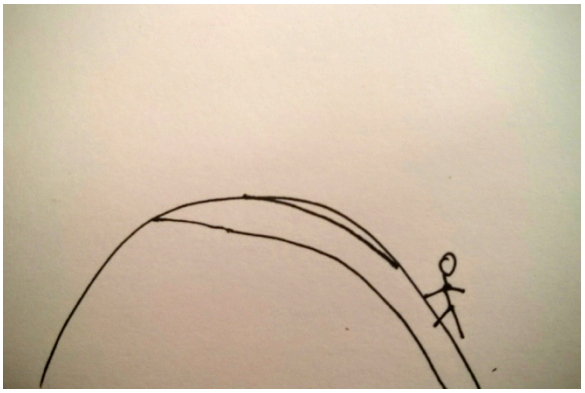
but a little lower but you are watching from the ground?'

C: *Che bayts **vehrevuh** cheem desnee. Yeteh tsatseets nayem darber gadesnem.*
[tʃɛ baɪts vɛɹɛv-ə tʃim dɛsni jɛtɛ tsats-its naɪ-ɛm daɹbɛɹ gə-dɛsnɛm]
NEG but above-DEF NEG see If below-ABL watch-1SG different FUT-see

'No but I wouldn't see the top. If I am watching from below I'd see differently.'

So, when the perspective of the viewer is from a low position looking up to a higher vantage point, the emphatic meaning is not as clear. This makes sense for it would not be as easily discernable, due to a greater proximity between the F and the G. The second instance of this sense was when a person (F) was on a hill (G), as depicted in Figure 13:

Figure 13:



Example (14) below illustrates why this instance is not the emphatic sense of '*vehrev*':

(14) **C:** *Bayts heema blooree **vehrevuh** chee, blooree **vehrevuh** eiseenka **vehrev** **vehrevah**.*
[baɪts hima bluɹ-i vɛɹɛv-ə ʧi bluɹ-i vɛɹɛv-ə aɪsinkə vɛɹɛv vɛɹɛv-a]
but now hill-GEN above-DEF NEG hill-GEN above-DEF means above above-DEF

'But now he isn't at the top of the hill, the top of the hill means exactly above it.'

The interesting point here is that the small F had contact with a large G that had an internal height component. Several image schemas are included in both examples, such as: CONTACT, STRAIGHT, and VERTICALITY. This may be why it is unambiguous in meaning and emphatic for it has the ability to draw upon so many schemas. It is clear and unmistakable in meaning 'exactly above'.

Surprisingly, as the researcher, I too used this emphatic sense without even noticing. In a previous example sentence I had asked the following:

(15) **I:** *Essee der ko gloocheed **verehvuh** gelner yeteh geesht era **verehv,** **verehvuh** chelner?*
[ɛsi dɛɹ ko glux-id vɛɹɛv-ə g-ɛlnɛɹ jɛtɛ dʒiʃt ɪɹa vɛɹɛv vɛɹɛv-ə ʧ-ɛlnɛɹ]
this still your head-GEN above-DEF FUT-be if right its above above-DEF NEG-be

'Would it still be above your head if it were not exactly above your head?'

In sum, from these examples we can see that the emphatic sense shares attributes with the prototypical sense when the F is vertically aligned with the G. The main difference here is that unlike the prototypical sense, there can be surface contact between the F and the G. Table 2 below lists the three profiles of '*vehrev*' examined in this investigation:

Table 2: Semantic Profile of 'vehrev'

Prototypical Sense: Static, centrally aligned verticality of the F and no surface contact with the G.
Peripheral Sense #1: A horizontal trajectory is equal to 'across and above' when the S-P-G image schema is undefined.
Peripheral Sense #2: An emphatic use occurs when the F is exactly above and in contact with the G.

5. Discussion

This examination of one spatial term, '*vehrev*', in Eastern Armenian is a step forward in developing a semantic profile of a frequently used postposition. I identified a prototypical sense that has a static Figure centrally located above a Ground, with which no surface contact can exist. The first peripheral sense has a horizontal trajectory in which '*vehrev*' has both an above and across meaning. This was the case when the Ground was not only expansive but also abstract in nature, as evidenced with the sky and the wind. In these instances, the Source-Path-Goal image schema was not clearly definable which may explain their conceptualization as a peripheral rather than a prototypical sense. The second peripheral sense was a surprising finding for this emphatic use of '*vehrev*', which correlates roughly to 'exactly above' when repeated twice, used several image schemas. These include CONTACT, STRAIGHT, and VERTICALITY. Here, the main difference was that unlike the prototypical sense, surface contact between the F and the G could exist.

One of the main findings from this analysis was that consultants not only favored but also unequivocally understood what constituted the requirements for the prototypical sense of '*vehrev*'. In instances where motion of the F was involved in relation to the G, the midway point of the F's trajectory, when arched, constituted the prototypical sense. The static position of the F must also include a substantial verticality with the G. This is why the presence of a Contact schema could not be part of this prototypical sense. In the case of a horizontal trajectory, this relation was interpreted as a peripheral sense for it equated to 'above and across' due to the movement of an object.

Although reference frames were briefly mentioned but not talked about in depth for this study, the importance of geometry is evident in understanding spatial term assignment. Since humans are bilateral, the Up-Down schema is most easily perceivable for it mimics our bodily experience with gravitational forces. Thus, if there is a shift in a vantage point, it "coincides with a shift in interpretation of the scene" (Langacker, 1987). Data that dealt with the emphatic sense of *'vehrev'* included this. When the perspective of the viewer changed from a higher position to a lower one when viewing a flag (F) on a mountain peak (G) for instance, the emphatic meaning disappeared. The results suggested that participants preferred the viewer-centered frame for vertical axis-alignment. Within this frame, slight variance arose in elicitations since each participant gave an account of their own experience when viewing a F in relation to a G.

The analysis of spatial terms is not only a study of semantics, but also one of cognitive psychology. In trying to decode the meaning of a word, we must consider several factors that turn it into a chunk of semantic information, such as the "form, function, purpose, personality or whatever else is salient" in the context it is found (Jackendoff, 1983: 139). Theorized cognitive primitives, like that of Johnson and Lakoff's Image Schema Theory (1987) and Talmy's (2000) Figure/Ground relationships, help conceptualize spatial terms, like '*vehrev*'. Tyler and Evan's Principled Polysemy model helped explain how "the speaker selects the preposition which, given the scene being described, is closest to accurately describing the key spatial relation" (Tyler, 145). In addition, the prototypical sense is "spatio-geometric in nature" and perhaps one of the reasons it is so innately understood is because historically, it is the "earliest lexical concept associated with a given prepositional form" (Hart, 2013:190).

Two types of limitations to this study need mention. The first type is a procedural one. The number of consultants was constrained due in part to the desire to match language fluency and age. Further study should expand the number of consultants in addition to the age range. The second type is a data limitation. Some picture prompts contained Figures that were good fillers. Abstract entities like wind, were not as easily understood by participants. Despite these limitations, the novelty of this research will hopefully inspire further study. I suggest that a much larger examination needs to be done not only on '*vehrev*' itself, but also on other spatial terms in Eastern Armenian. It would be interesting to conduct a comparative study of the two dialects, Eastern and Western Armenian, to see how such terms are conceptualized. Also, since case was not a focal point of this study, analysis that explores the ways that inflection semantically influences '*vehrev*' is called for.

6. Conclusion

The purpose of this research was to examine the semantic profile of the Armenian postposition '*vehrev*'. The analysis showed that this spatial term was favored most when conceptualized in its prototypical sense. Two additional peripheral senses were identified, adding to the network of senses. The overall findings indicated a heavy reliance on the use of image schemas in understanding spatial relations. The Armenian spatial term '*vehrev*' most often patterned with the Source-Path-Goal and Verticality schemas when describing its relation to the Figure and the Ground. This is the first stage in a detailed semantic analysis. So many influential

studies exist on spatial terms of English. This linguistic research has the capacity to broaden literature connected not only with spatial terms, but also within the field of cognitive linguistics for Eastern Armenian, an understudied language.

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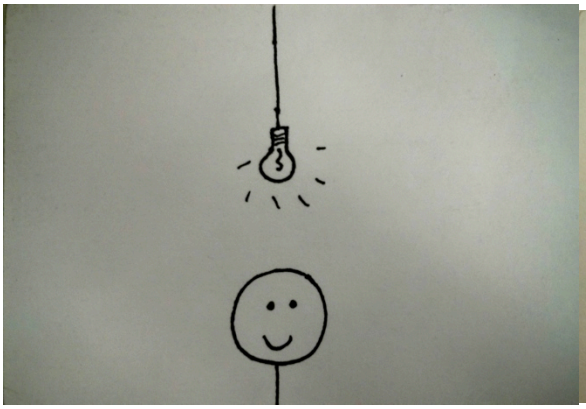
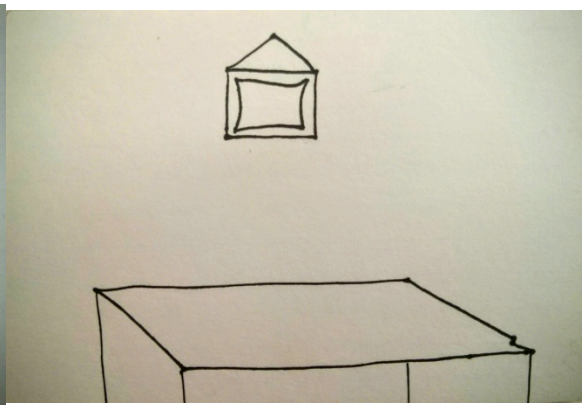
8. Appendix

Pictures with Elicitation Prompts:

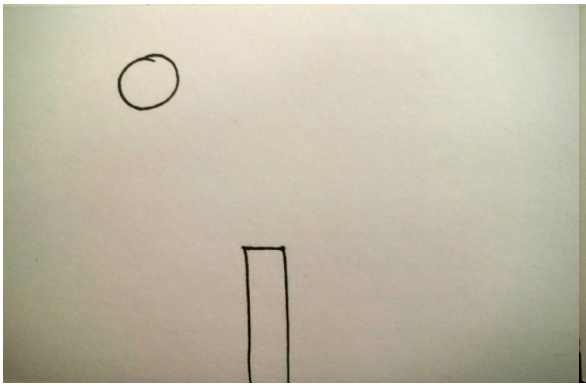
Picture A: Tell me where the light bulb is



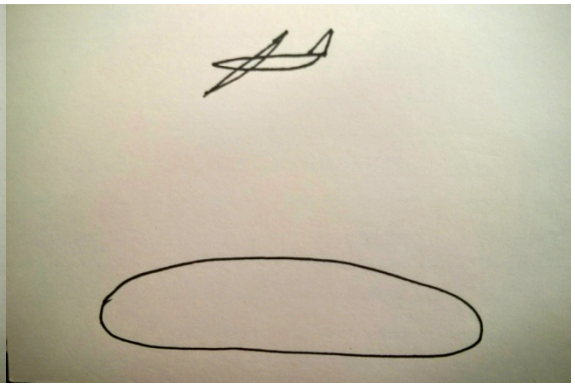
Picture B: Describe where the portrait is



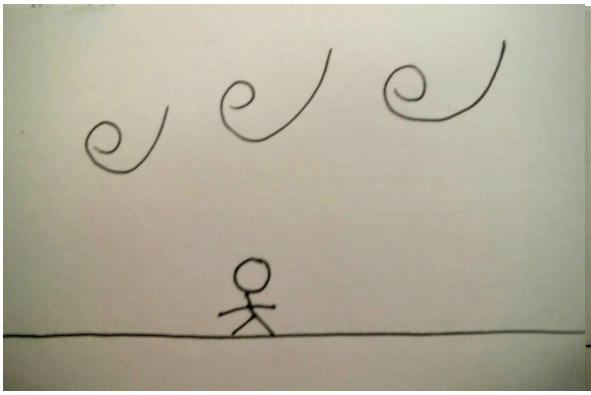
Picture C: Tell me what the ball does



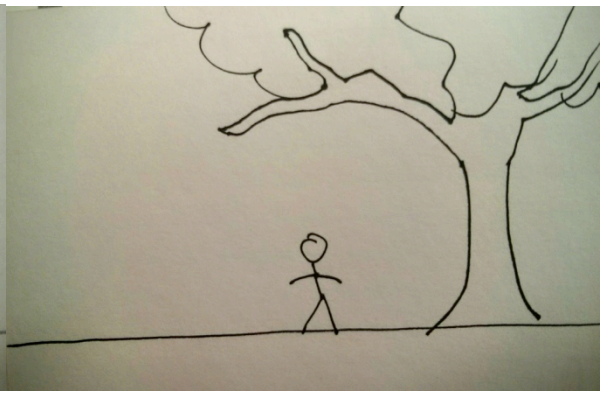
Picture D: Describe how the plane flies



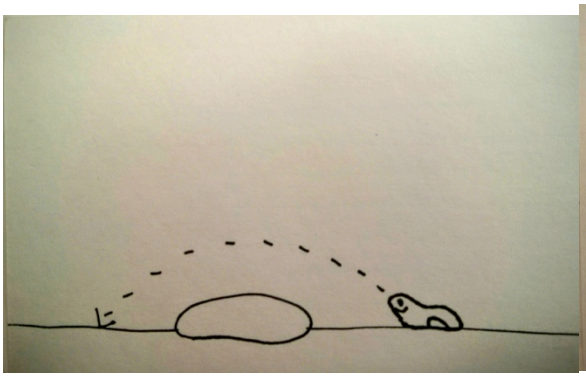
Picture E: What is the wind doing?

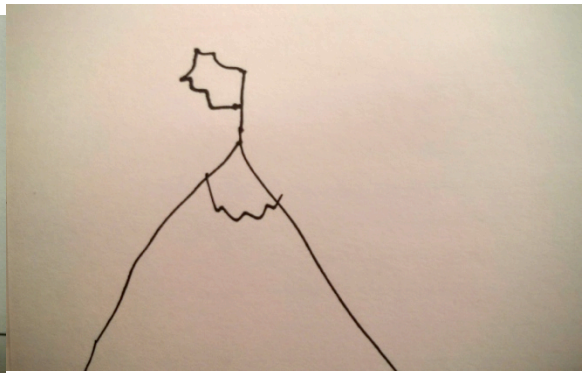


Picture F: Tell me where the tree branch is

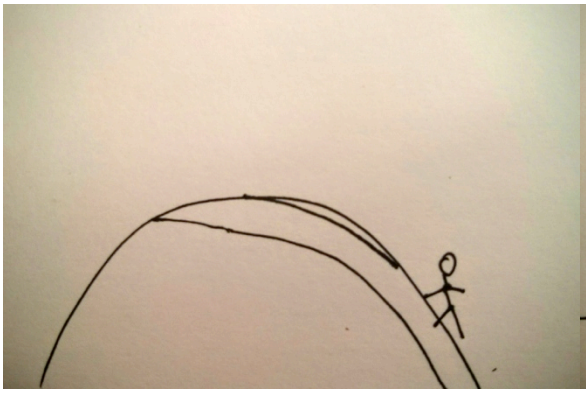


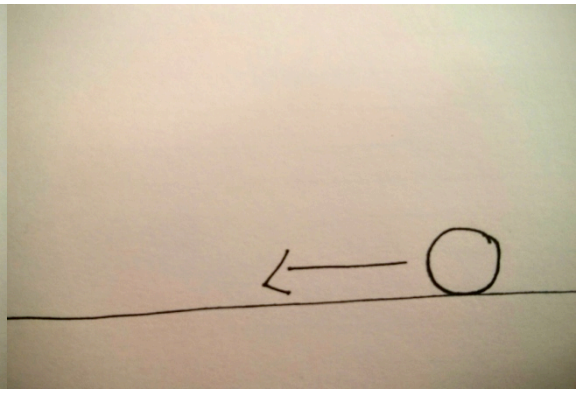
Picture G: When is the frog above the rock?**Picture H:** Tell me where the flag is.



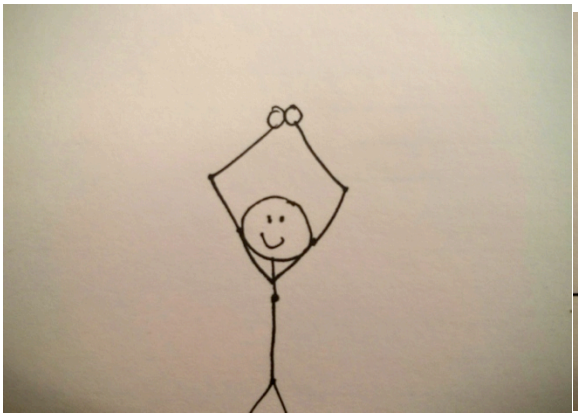


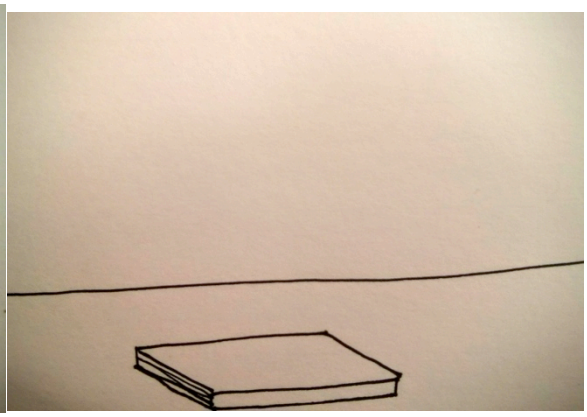
Picture I: Tell me what that person is doing **Picture J:** What is the ball doing?



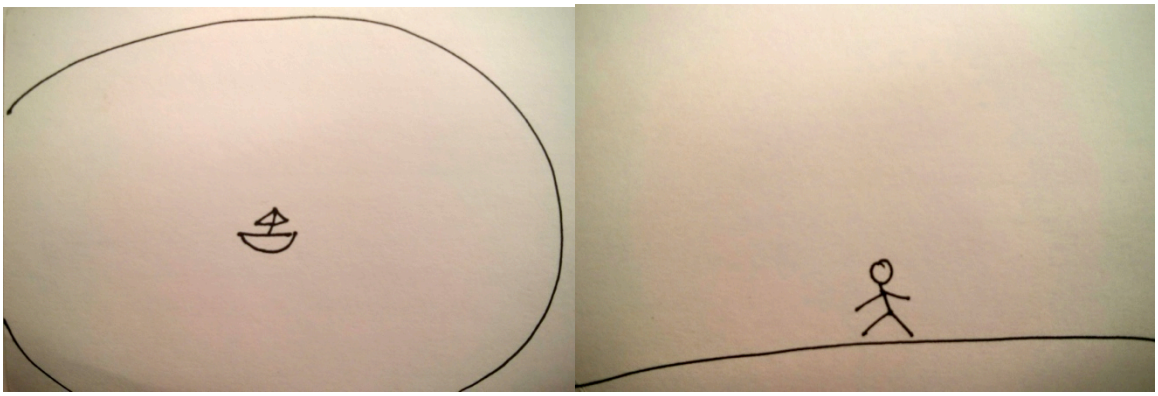
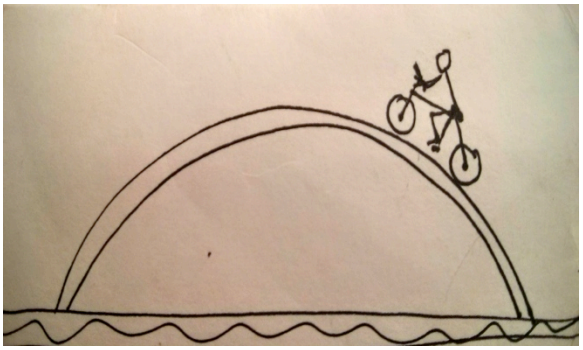


Picture K: Where are this person's hands? **Picture L:** Describe where the book is





Picture M: You're in a plane and see this ship. **Picture N:** Where is the sky?



Picture O: Describe where the bridge is. What is the person doing?