

Actuality Entailments in Palestinian Arabic*

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1. Overview

My goal in this paper is to provide empirical motivation from Palestinian Arabic (PA) for relating two phenomena: Actuality Entailments (AEs), and aspect shift (as proposed in Mari and Martin 2007 and Homer 2011). The argument is divided in two parts. First I show PA data that challenge two prominent accounts of AE, Bhatt's (2006) and Hacquard's (2009), but that remain compatible with the aspect-shift proposal. Second, I show PA contexts where stative roots are given telic readings (thus indicating aspect shift), and show that in these same contexts the PA ability modal, which is also stative, gives rise to AEs.

2. Background, Part 1: Actuality Entailments

Actuality Entailments (AEs) are inferences from modal premises to conclusions about actual events. They arise commonly (though not universally) in languages that morphologically distinguish the perfective (PFV) from the imperfective (IMP), and that permit both markers to co-occur with modal verbs/auxiliaries. The first discussion of AEs (Bhatt's 1999) was focused on the behavior of Hindi and Greek *ability* modals, which under PFV-marking entail that the relevant ability was realized, and under IMP-marking do not:¹

(1) Hindi

- a. Iti vimaan ur.aa sak-aa (#lekin us-ne vimaan nahī ur.aa-yaa)
Iti airplane fly able-PFV (but he-erg air-ship NEG fly-PFV)
'Iti could fly the airplane, but he didn't fly the airplane.'
- b. Iti vimaan ur.aa sak-taa thaa (lekin vo vimaan nahī ur.aa-taa thaa)
Iti airplane fly able-IMP be.PAST (but he airplane NEG fly-IMP be.PAST)
'Iti is/was able to fly airplanes but he doesn't/didn't fly airplanes.'

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¹Bhatt reports parallel behavior in other languages, e.g. French and Bulgarian (See Bhatt 1999, p. 177).

(2) Modern Greek

- a. Boresa na tu miliso (#ala ðen tu milisa)
 able.PAST.PFV.1sg NA him talk-PFV.1sg but NEG him talk.pst-PFV
 ‘I could talk to him, but I didn’t’
- b. Borusa na sikoso afto to trapezi ala ðen to sikosa
 able.PAST.IMP.1sg NA lift-PFV.1sg this the table but NEG it lift-PFV
 ‘I could lift this table, but I didn’t’

We start by observing that the PA ability modal root /ʔdr/ behaves similarly (we return to the use of templatic morphology in PA in Section 4):

- (3) a. ∅ ʔidr jrawwiħ, (#bas maa rawwah)
pro able.PFV 3sg.MASC-go.home, but NEG go.home.PAST.PFV
 ‘He was able to go home, but he didn’t’
- b. ∅ kaan biʔdar jrawwiħ, bas maa rawwah
pro PAST able.IMP 3sg.MASC-go.home, but NEG go.home.PAST.PFV
 ‘He was able to go home, but he didn’t’

The AE paradigm was expanded when Hacquard (2006, 2009) and Borgonovo and Cummins (2007) noted that AEs arise not just with ability modals, but more generally with root modals (deontic, circumstantial, etc), of existential as well as universal force. The following French examples are from Hacquard (2009):

- (4) a. Lydia a pu aller chez sa tante (selon les ordres de son père),
 Lydia can.PAST.PFV go home her aunt (per the orders of her father),
 #mais n’y est pas allée
 but didn’t go
- b. Lydia a dû faire la vaisselle (selon les ordres de son père),
 Lydia must.PAST.PFV do the dishes (per the orders of her father),
 #mais ne l’a pas faite
 but didn’t do it

In current Kratzerian tradition modals are taken to assign propositional descriptions to elements of a set of possible worlds. The kinds of worlds that appear in that set (the modal base) determine the flavor of the modal (whether it is epistemic, deontic, etc). For example, if the base consists of worlds that (maximally) verify an assumed collection of laws/regulations, deontic modality results; if they (maximally) verify a collection of expectations/stereotypes, circumstantial modality results. The question presented by the AE data, then, is why under PFV-marking modals should assign their propositional arguments to the *evaluation world* in addition to worlds from the given modal base. In Section 3 I summarize the proposals of Bhatt, Hacquard, and Homer, and turn to PA in Section 4.

3. Background, Part 2: Three accounts of Actuality Entailments

3.1 Bhatt (1999/2006): ability modals as implicative predicates

Bhatt took AE-licensing to motivate a departure from the Kratzerian view sketched above, and proposed (instead) a treatment of ability modals as implicative verbs. In formulating this account Bhatt drew on Karttunen and Peters’s (1979) analysis of the English **manage** (see also Karttunen 1971). The analysis takes the verb to (i) make no assertions other than those of its complement VP, and (ii) presuppose that that VP denote a relatively difficult or unlikely activity/state. **Manage** is therefore defined as a partial identity function on VP-denotations, whose domain consists only of properties that satisfy the “difficulty” condition. Analogously, Bhatt proposed, ability modals assert whatever their VP complements assert, but are defined only for VPs that denote effort-requiring activities.

How does this help explain the AE data? If ability modals are implicative, then by their semantics they will directly entail the contents of their VP arguments. Just like **x managed to VP** entails **x VP(ed)**, it follows from Bhatt’s proposal that **x was able-PFV to VP** should entail **x VP(ed)**. There is therefore no longer a puzzle about why AEs arise under PFV-marking. Instead, the puzzle is why AEs do *not* arise under IMP-marking. Here Bhatt suggests that the genericity of IMP, or at least the generic semantics that accompanies it, assigns the content of its complement, the implicative ability, to non-actual worlds (e.g. generic ones). This is supported by the availability of non-actual readings under IMP-marking, even for non-modal verbs. The Greek example in (5) shows this.²

- (5) Afto to robot sikone trapezia ala pote ðen hrisimopiithike
 This the robot lift-IMP-PAST tables but never NEG use-PASS.PFV
 ‘This robot lifted tables but it was never used’

We will later see that in PA there is a third morphosyntactic context—neither perfective nor imperfective—which is not associated with any non-actual semantics on its own. If we extend Bhatt’s account to PA, we expect the ability root to license AEs in this environment also, but it does not.

3.2 Hacquard (2006/2009): Preservation of Event Descriptions

As we noted in Section 2, Hacquard and Borgonovo and Cummins showed that AEs are not limited to ability modals, but are licensed (potentially) by modals of all non-epistemic flavors. If Bhatt is right, then we will want to extend his analysis to all root modals that license AEs. But this brings a problem. One of the interesting innovations in the Kratzerian program is based on the recurring homophony between modals of varying flavors (epistemic, deontic, etc). In English, for example, the auxiliaries **may**, **must**, and **should** have deontic and epistemic uses, and **can** has deontic, circumstantial, and abilitative uses.³ In

²Thanks to Despina Oikonomou for this example.

³Interestingly, **can** has an epistemic reading in English but only when it is negated. Compare ?*John’s light is on so can be home to ✓John’s light is off so he can’t be home.*

principle, this could be captured if each of these modals is assumed to be ambiguous. But as the ambiguity recurs another possibility emerges, namely that the modals do not in fact contain information about modal flavor, but specify only the force with which the modal quantifies over the modal base. The modal base, whose contents determine the flavor, is in turn supplied by external sources, and in keeping with assumptions about compositionality it is represented in the syntax as the internal argument to the relevant modal auxiliary. The problem is this: if an auxiliary like the French **pouvoir** has epistemic as well as root uses, and if in its root uses **pouvoir** licenses AEs under PFV-marking, then following Bhatt we would want to rethink its semantics and treat it as an implicative verb. But by doing so we are compelled to extend that treatment to its epistemic use also. So why would this same implicative predicate not license AEs in its epistemic use, but do so in its root uses?

This, among other considerations, led Hacquard to preserve the core of the Kratzerian account, and continue to treat modals as quantifiers over (potentially) non-actual worlds.⁴ AEs arise not because modals have actual semantics, but because of a principle that relates event descriptions across possible worlds. The principle, along with other syntactic assumptions, helps distinguish PFV- from IMP-modals, and root from epistemic modals.

Hacquard's first syntactic assumption is that aspect heads are interpreted below tense heads and above verbs. An aspect head like PFV introduces an event argument in the evaluation world (at the given temporal interval), and assigns the description provided by the lower VP to that event. When the lower VP contains a modal, e.g. **pouvoir**, the event argument (as expected) is given a non-actual description, one of ability/permission/etc. The reason why AEs arise, according to Hacquard, is because events that have descriptions in accessible worlds, from say w , inherit those same descriptions in w . This is stated in her Preservation of Event Descriptions principle:

(6) **The Preservation of Event Descriptions (PED)**

For all worlds w_1, w_2 , if e occurs in w_1 and in w_2 , and e is a P -event in w_1 , then *ceteris paribus*, e is a P -event in w_2 as well.

The PED is stipulative, as Hacquard acknowledges, but it provides an interesting way of dealing with the lack of AEs for (i) epistemic modals, and (ii) IMP-marked modals. It has often been pointed out that epistemic modals, unlike root modals, are obligatorily interpreted wide-scope.⁵ This means that, when read epistemically, a modal that might otherwise license AEs is interpreted *above* the event argument introduced by e.g. PFV, placing the relevant event (and its description) in non-actual, epistemically-accessible worlds, and leaving nothing for the PED to imply about events in the evaluation world. This is why AEs are blocked for epistemic modals. More relevant to us is how AEs are blocked for IMP-marked modals. The proposal here is similar to Bhatt's: IMP is independently known to license generic inferences, so its semantics introduces events in non-actual worlds. When IMP appears on a modal auxiliary, the non-actual events are each assigned a modal description, but because these events are introduced in other possible worlds, no inferences arise about them (or their counterparts) in the evaluation world. Consequently no AEs arise.

⁴For more detailed arguments see Hacquard (2009) and her recent review of AEs in Hacquard (2014).

⁵See e.g. von Stechow and Iatridou (2003) and Hacquard (2011), and Swanson (2010) for counterexamples.

The PA challenge to Hacquard, which we turn to in Section 4.3, is the same as the challenge to Bhatt's: PA has morphosyntactic context that has no modal meaning of its own, resembling (in this respect) PFV-marking. Following Hacquard (or Bhatt) we expect the environment to generate AEs when it hosts the ability root, but we find that it does not.

3.3 Mari and Martin (2007) and Homer (2011): Aspect shift

The aspect-shift account of AEs relies on two ingredients: the stativity of modals, and the incompatibility between PFV and statives. The latter ingredient is motivated by the telic readings that result from combining statives, which are otherwise atelic, together with the perfective. To both Mari and Martin (M&M) and Homer these readings come about because of a process of shift that turns stative denotations to telic ones. In some cases the resulting denotation is inchoative (also known as “ingressive”), which holds of events that mark the beginning of the relevant state. In French this reading is made especially salient with the use of the modifier **soudain** “suddenly”, as in (7).

- (7) J a soudain été en colère ce matin. Il n'a pas cessé de l' être depuis
 J suddenly be.PFV angry this morning. He has not stopped of it being since
 'Suddenly, J became angry this morning. He has been angry nonstop ever since'

Other stative-to-eventive shifts produce what Bary (2009) calls the “complexive” reading. A complexive interpretation of a stative holds of *e* iff *e* is the maximal eventuality in which the state holds. This means that, by holding of *e*, the predicate cannot possibly hold of any sub-part of *e*, thus satisfying boundedness/telicity. In French this reading of PFV-statives is encouraged with the use of modifiers like **à plusieurs reprises** (“on several occasions”):

- (8) Aujourd'hui J a été assis à plusieurs reprises
 Today J has been sitting on several occasions

Homer observes that, despite the robustness of AEs in French, they seem to be cancelled in just those contexts that encourage other stative-to-eventive shifts. When the PFV-form of **pouvoir** is accompanied by the modifier **soudain**, the inchoative reading results and AEs are no longer obligatory (9), and when accompanied by **à plusieurs reprises**, the complexive reading becomes more salient, and AEs are also cancelled (10):

- (9) J a soudain pu soulever un frigo, ✓ mais ne l'a pas fait
 J suddenly able.PFV lift a fridge, but didn't do it
 'J suddenly acquired the ability to lift a fridge, but didn't'
- (10) À plusieurs reprises J a pu soulever un frigo, ✓ mais ne l'a pas fait
 on several occasions J able.PFV lift a fridge, but didn't do it
 'On several occasions J had the ability to lift the fridge, but didn't'

So if AE readings of PFV-**pouvoir** compete with other shifted readings, like the inchoative and the complexive, then AEs may themselves result from a similar aspect-shift process. Homer implements this idea by introducing an operator ACT, which shifts modals by conjoining their non-actual assertion with the assertion of the VP they embed. The specifics of

this implementation, though important, need not concern us here. The PA data I turn to in Section 4.4 will feature contexts (other than PFV) where stative roots take a shifted (inchoative) reading, and show that the ability modal licenses AEs in those very same contexts.

4. Palestinian Arabic

As promised in the introduction, the argument presented in this section consists of two main parts. In the first, we focus on three morphological templates: the perfective (PFV), the imperfective (IMP), and the nominal/participial (NOM). The relevance of the first two was shown already in Section 2: in PFV, the PA ability root /ʔdr/ licenses AEs, while in IMP it does not. The key datapoint has to do with the third template, NOM, where /ʔdr/ does not lead to AEs. This fact will be argued to challenge Bhatt’s and Hacquard’s accounts. As we will see, NOM does not allow non-actual readings for other PA roots (generic or otherwise), and we therefore do not expect it to add a layer of modality when it hosts the ability root. So if /ʔdr/ is implicative (as on Bhatt’s account), its verbal argument should be evaluated in the actual world, and should therefore lead to AEs, contrary to fact. The challenge to Hacquard’s account is similar: if NOM adds no modality of its own, we expect no difference between its AE-licensing and that of PFV; in both cases the ability root, when evaluated in w , assigns descriptions to worlds accessible from w . By the PED those descriptions should hold in w as well, and AEs result (incorrectly).

The predictions of the aspect-shift view depend on the aspectual properties of NOM. We will see that the form naturally hosts stative roots, and that no shift (and hence no AEs) are expected when /ʔdr/ appears in it. In the second part of the argument it will be shown that statives undergo shift in forms other than the perfective: the progressive, the habitual, and the future. In these templates (and in the perfective), the stative roots we look at take on a (shifted) inchoative reading. So, if statives undergo aspect-shift in these environments, we expect them to give rise to AEs when they host the ability root /ʔdr/, and indeed they do.

4.1 PA Tri-consonantal roots and non-concatenative morphology

Like in other semitic languages, derivational morphology in PA is predominantly non-concatenative. Roots are typically made up of three consonants, and words are formed by distributing the root’s three consonants within lexically-defined “templates”. The past perfective verb template, for example, is /XvYvZ/, so given a tri-consonantal root XYZ the past perfective verb is formed by placing two short vowels between the three consonants, as in /ktb/ → /katab/ ‘wrote’. The templates used in this section are the following:

- (11) a. The past perfective (PFV): /XvYvZ/
 b. The imperfective (IMP): /bXYvZ/
 c. The nominal/participial (NOM): /XaaYiZ/⁶

⁶NOM also provides nominal agentive forms from verbal roots, as in the well-known case of /kaatb/ “writer” from the root /ktb/. This reading plays no role in the data we consider (see also footnote 8).

Before we continue, I want to note four features of the imperfective and the nominal templates. First, unlike PFV, neither IMP nor NOM specifies tense. Past IMP/NOM is expressed by adding the past tense marker /kaan/ before IMP/NOM. In the absence of overt tense morphology both forms are interpreted in the present. Second, IMP in the present is three-ways ambiguous: it can take the progressive, the generic, or the habitual reading. In the past (in the presence of /kaan/) IMP is only two-ways ambiguous, allowing the progressive and the generic readings, but not the habitual (we return to past habituais in Section 4.4). Third, in both the present and the past, IMP may follow a morpheme (/ʕam/) that forces the progressive reading. These notes are summarized in (12).

- (12) a. IMP/NOM: present
 kaan IMP/NOM: past
 b. IMP: ✓progressive, ✓generic, ✓habitual
 kaan IMP: ✓progressive, ✓generic, *habitual
 c. ʕam IMP: ✓progressive, *generic, *habitual

The fourth and final note is that progressive readings (readings where the relevant eventuality is understood to be ongoing) are available with /ʕam/+IMP for some roots, not for all of them. When a root does not take the progressive reading in /ʕam/+IMP, it takes that reading in NOM. This last note is discussed in more detail in the next section, where the difference between PROG and NOM is used to separate stative roots from eventive roots.

4.2 A brief look at stativity in PA

In the literature on lexical aspect English statives are most commonly identified with two tests: unacceptability in the progressive, and acceptability in the simple present (without forcing habitual/generic readings). The judgements are neither completely crisp nor uniform, but to make the exposition clear we choose verbs for which intuitions are sharp: *know*, *adore*, and *owe*. These verbs, as (13)-(15) show, are odd in the progressive and acceptable in the simple present. This is the signature of stativity in English.

- (13) a. *John is knowing all the state capitals
 b. John knows all the state capitals
 (14) a. *John is adoring the Tetons
 b. John adores the Tetons
 (15) a. *John is owing me thirty cents
 b. John owes me thirty cents

Other verbs, like *run*, *listen*, and *land*, show the opposite behavior: they are acceptable in the progressive, and are strange in the simple present (unless read generically/habitually). We will call these *eventives*.

- (16) a. John is running around the park
 b. *John runs around the park

- (17) a. John is listening to a Debussy prelude
 b. *John listens to a Debussy prelude
- (18) a. The plane is landing as we speak
 b. *The plane lands as we speak

We now turn to a similar dichotomy in PA roots, based also on two diagnostics: (i) behavior in the progressive (PROG), and (ii) behavior in the nominal/participial (NOM). Unlike in our short discussion of English statives, we will not be concerned with the *acceptability* of a given PA root in NOM or PROG; instead we focus on the meaning that a root takes when it is hosted by either of the two forms.

In the first category we have roots that do not take the English-like progressive reading in PROG, but do so in NOM. In PROG these roots are either odd, or produce a (telic) non-progressive reading (we return to this in Section 4.4). The examples below use three representative roots: /nʃm/ “*sleep*”, /ʔʕd/ “*seat*”, and /skt/ “*silence*”.

- (19) a. Ø ʕam binaam/biʔʕd/biskot
pro sleep/seat/silence.PROG
 *he is sleeping/sitting/quiet
- b. Ø naajim/ʔaaʕd/sakit
pro sleep/seat/silence.NOM
 ✓he is sleeping/sitting/quiet⁷

Roots in the second category behave in the opposite way: they are acceptable in PROG and produce the English-like progressive reading, and in NOM they are either odd or produce an entirely different interpretation.⁸ Our representatives here are the roots /rkd/ “*run*”, /ʕzf/ “*play* (a musical instrument)”, and /rsm/ “*draw*”.

- (20) a. Ø ʕam birkoḍ/biʕzif/birsom
pro run/play/draw.PROG
 ✓he is running/playing/drawing
- b. Ø raakid/ʕaazif/raasim
pro sleep/seat/silence.NOM
 *he is running/playing/drawing

Within this binary division we find that the ability root falls in the first group, since in NOM it takes the reading that the relevant ability is (unboundedly) ongoing, and in PROG it does not. If these tests diagnose stativity in PA, then /ʔdr/ is a stative root.

- (21) a. *Ø (kaan) ʕam biʔdar yiʕtri el beet
pro (PAST) able.PROG buy the house
 (intended) ‘he (was) able to buy the house’

⁷ There is an alternative analysis of these data that I return to in footnote 10.

⁸The readings of NOM-forms in these cases include evidential readings (Bronwyn Bjorkman and Hadil Karawani p.c.), and resultative readings (Boneh 2010).

- b. *∅ (kaan) ʔaadir yiftri el beet
pro (PAST) able.PROG buy the house
 ‘he (was) able to buy the house’

4.3 Genericity and NOM in PA: revisiting Bhatt and Hacquard

The PA data in (19)-(20) bear some resemblance to those that distinguish statives from eventives in English: NOM to PROG in PA is, loosely speaking, what the English simple present is to the progressive. But this is not to say that NOM and the simple present have the same interpretation/distribution in their respective languages. In fact there is at least one crucial respect in which the two forms differ: while the English simple present allows generic interpretations, the PA NOM does not. Here is an example:

- (22) The lion sleeps 20 hours a day
 (23) *il asad naajim ʔifriin saaʔa bi l-joom
 the lion sleep.NOM twenty hour in-the-day

Note that there is nothing about the root /njm/ “sleep” that disallows genericity. The intended reading of (23) is available when the root appears in the imperfective:⁹

- (24) √il asad bnaam ʔifriin saaʔa bi l-joom
 the lion sleep.IMP twenty hour in-the-day

As another illustration, consider the contrast between (25), which allows the non-actual generic reading, and (26), which does not.

- (25) haada ir robot bjuwʔaf u biʔʔud
 this the robot sit.IMP and stand.IMP
 ‘this robot sits and stands’ (*generic: no actual exemplifying events needed*)
 (26) haada ir robot waaʔif u ʔaaʔid
 this the robot sit.NOM and stand.NOM
 ‘this robot is sitting and standing’ (*generic unavailable; sentence is contradictory*)

The oddness of (23) and the non-genericity of (26) show that NOM does not introduce modality on its own, and in this respect it is like PFV and unlike IMP. So, if the ability root /ʔdr/ is treated as an implicative predicate, whose modal-like meaning arises only in environments that are independently modal (like IMP), then AEs should appear in NOM just as they do in PFV. But in fact, NOM-marked /ʔdr/ does not license AEs, suggesting that the root has modal semantics of its own. Bhatt’s account is therefore not applicable to PA.

- (27) ∅ kaan ʔaadir yaaxod el baas, √bas aʔad el qiʔaar
pro PAST able.NOM take the bus, but took.PFV the train
 ‘He was able to take the bus, but he took the train.’

⁹Recall the note in Section 4.1 that IMP allows generic as well as progressive and habitual readings.

For Hacquard, the relevance of (27) is similar, but it depends on whether the PED applies to NOM constructions. If it does, then we expect AEs to arise for NOM-marked ability just like it does for PFV-marked ability: neither NOM nor PFV has modal semantics, so when NOM/PFV-marked /ʔdr/ is evaluated in w , it will assign descriptions to worlds that are accessible from w , and by the PED those descriptions should hold of w as well, thus giving rise to AEs. But perhaps the predictions of the PED are not that simple in cases like (27). There are after all many examples where PFV-marking does not give rise to AEs, e.g. cases where ability/permission are expressed not with a modal auxiliary but with phrases that mean ‘have the ability/have permission’. Hacquard reports that cases like these, even with PFV-marking, do not license AEs:

- (28) Jane a eu la possibilité de prendre le train, mais elle ne l’a pas pris
 Jane had-PFV the possibility to take the train, but she didn’t take it

It isn’t completely clear why AEs should be blocked in (28), but it is possible that whatever blocks them also blocks AEs in (27); the expressions of modality in both constructions are arguably nominal, and something about nominal modality obviates AE-licensing. While this is a logical possibility, it remains puzzling that there should be such a difference between auxiliaries and nominals, especially in a language like PA where both forms are derived from same tri-literal root. I leave this issue for future work.

4.4 Stative shifting outside of PFV, and more AEs

Our final dataset is based on the PA progressive (PROG), perfective (PFV), and two additional templates: the future (FUT) and the habitual (HAB). These forms are interesting because when they host stative roots they seem to consistently produce an inchoative/ingressive reading. Recall, first, that stative roots are those that do not take the progressive reading in PROG, but do so in NOM. We repeat the examples used in Section 4.2 for the roots /njm/ ‘sleep’, /ʔʔd/ ‘sit’, and /skt/ ‘silence’:

- (19) a. Ø ʔam binaam/biʔʔʔd/biskʔt
pro sleep/seat/silence.PROG
 *he is sleeping/sitting/quiet
 b. Ø naajim/ʔaaʔʔd/saakit
pro sleep/seat/silence.NOM
 ✓ he is sleeping/sitting/quiet

As indicated in the example, the PROG statives in (19a) are not ill-formed; they simply do not have the same unbounded meanings as their NOM counterparts. The PROG forms of the roots /njm/, /ʔʔd/, and /skt/ mean (respectively) ‘falling asleep’, ‘seating oneself’, and ‘coming to silent/shutting up’. Each of these is a telic meaning whose endpoint marks the beginning of a state (of being asleep, seated, and silent). This is the inchoative reading that statives take when hosted by PROG.¹⁰

¹⁰ In footnote 7 I mentioned an alternative analysis of these data, which is due to Boneh (2010). The idea is that the roots are not in fact stative. Their *lexical* meanings are *falling asleep*, *seating oneself*, and *falling*

Interestingly, the inchoative reading results when these same roots appear in PFV (29), HAB (30), and FUT (31):

- (29) (lamma juft-o) naam/ʔaʕad/sakat
 (when saw.1sg-him) sleep/sit/quiet.PAST.PFV.3sg
 ‘(when I saw him) he fell asleep/sat down/shut up (*he was sleeping/sitting/quiet)’
- (30) (lamma kunt aʕuufo) kaan jnaam/jiʔʕud/jiskut
 (when PAST.1sg see.HAB.1sg-him) PAST sleep/sit/silence.HAB.3sg
 ‘whenever I saw him, he would fall asleep/sit/shut up (*be sleeping/sitting/quiet)’
- (31) (kamaan ʕams daʔaajiʔ) raħ jnaam/jiʔʕud/jiskut
 (more five minutes) FUT sleep/sit/silence.3sg
 ‘In five minutes, he will fall asleep/sit/shut up (*he will be sleeping/sitting/quiet)’

The generalization seems to be that, in PFV, PROG, HAB, and FUT, stative roots are uniformly interpreted as bounded inchoative/ingressive predicates. An account of the details is beyond the scope of this discussion, but the story would likely have to rely on some way of changing the unboundedness of stative predicates, and creating in its place a(n eventive) predicate that holds of state beginnings.¹¹ If a shift-based analysis along these lines is right, and if we adopt M&M’s and Homer’s account of AEs, we expect to see evidence of state-to-event coercion for the (stative) ability root /ʔdr/, not just in PFV but also in PROG, FUT, and HAB. And since the result of this shift (in the case of /ʔdr/) is thought to produce AEs in PFV, we expect AEs to likewise appear when /ʔdr/ is hosted by PROG, HAB, and FUT. The following examples confirm this expectation.¹²

- (32) bil awwal ma kaan faahim el asʔileh. hallaʔ ʕam yiʔdar yʕalles
 at first NEG PAST understand.NOM the questions. now able.PROG finish
 el waajeb. #bas maa raħ yʕalles
 the homework. but NEG FUT finish
 ‘At first he didn’t understand the questions. Now he is about to finish the HW’
- (33) lamma kaan b ʕamman, kaan (kul ween u ween) yiʔdar yzuur el-batra. #bas
 when PAST in Amman, PAST (occasionally) able.HAB visit Petra. but
 maa raah
 NEG go.PFV
 ‘When he was in Amman, he was able to visit Petra, but he didn’t’

silent. If so, then clearly no aspect-shift is needed in deriving what I called the inchoative readings under PROG. What we would have to explain is why they have the stative-like readings in NOM. Boneh suggests that in these cases, the NOM forms take participial result-state readings, which are the states of being asleep (resulting from having fallen asleep), being seated, and being quiet. This may well be true, but Boneh still identifies roots that do not lend themselves to this sort of analysis, like /ʕrf/ “know” and /hbb/ and “love”. The NOM forms of these roots are perfectly acceptable (just like the data above), and the PROG forms are either strange or take inchoative readings. I became aware of Boneh’s analysis late in preparing this paper, and since her findings do not quite disrupt the overall picture, I chose to leave the “stative” examples unchanged.

¹¹For details on aspect-shift see e.g. Rothstein (2004), and for a recent review see de Swart (2011).

¹²Of these three examples the progressive is the least felicitous, but my judgements and those of others indicate that the only reading the sentence has is one where ability is accompanied by actual realization.

- (34) lamma yonʔol ʕala ʕamman, rah yiʔdar yzuur el baħr el majjit. #bas
 when move.MASC to Amman, able.FUT visit the sea the dead. but
 maa rah jruuh
 NEG go.FUT
 ‘When he moves to Amman, he’ll be able to visit the Dead Sea, but he won’t go’

5. Conclusion

The findings reported in this paper are largely correlational, building on related generalizations about aspect-shift and AEs that were discussed in M&M and Homer. In those works, modifiers associated with particular shifted readings of statives were found to cause similar shifts for modals, suggesting that AEs result from one of several ways of coercing statives under the perfective. The PA data are different: they consist of multiple tense/aspect configurations that cause certain statives to take inchoative interpretations, and cause the ability modal to give rise AEs, suggesting yet again that where there is aspect-shift, there are AEs. At this point I must note that the AEs observed for the PA HAB, FUT, etc are not by themselves problematic for e.g. Hacquard’s account; if the semantics of each of these constructions involves the introduction of an actual event, then the PED will produce AEs in HAB and FUT just like it does in PFV. The PA challenge to Hacquard’s analysis depends crucially on the findings in Section 4.3, where it was shown that NOM lacks non-actual semantics, and yet hosts the ability root /ʔdr/ without giving rise to AEs.

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