Psychological Verbs in al-Baha Arabic

Rana Abdullah Alghamdi

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The candidate confirms that the work submitted is her own and that appropriate credit has been given where reference has been made to the work of others.

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Abstract

This thesis studies psychological verbs in al-bāḥah Arabic (henceforth BA; a dialect used in western Saudi Arabia). Psychological verbs are characterized by having one argument that carries the thematic role of Experiencer and have been the topic of a vast array of research for decades. These verbs have long been considered exceptional because they defy generalizations about structure types and argument linking in grammatical theory. The present work contributes to the ongoing debate on the phenomena of psych verbs with unique data from BA.

This thesis will show that psych verbs do indeed form a special class of verbs in BA but not due to any unique 'psych' property. Rather, it is claimed that BA psych verbs form a complex aspectual group with various components interacting in systematic and predictable patterns resulting in a group of verbs that are not homogenous. Through a battery of tests we show that the diverse behaviour of psych verbs in BA can be explained if we accept a category of inceptive event type, which is punctual and atelic. Moreover, BA psych verbs present robust evidence for exclusive stative interpretations supporting the proposals that argue for a *stative causative* construction. The conclusions drawn in this study are supported by a large-scale acceptability judgment task with native speakers of BA.

Table of Contents

List Of Tables

List Of Figures

Chapter 1 Introduction

Psychological predicates (henceforth: psych verbs) are a particular set of verbs that involve an Experiencer that holds a psychological state and a second argument that triggers, causes, or is somehow related to the psychological state. The latter argument is called a Theme (Belletti and Rizzi, 1988; Grimshaw, 1990), a Target or Subject Matter (Pesetsky, 1995), or a Stimulus (Arad, 1998b) depending on the different properties the researchers discuss regarding this argument. Perhaps the most striking feature of psych verbs is the cross-linguistic morphosyntactic variability they exhibit. A common tripartite classification of psych verbs that is well accepted comes from Belletti and Rizzi's (1988) seminal work where psych verbs are classified into the following groups:

(1) Class I: Subject Experiencer $\textbf{NOM}_{\textbf{EXP}} - \text{ACC}$
      John$_{\textbf{EXP}}$ fears dogs.

(2) Class II: Object Experiencer $\text{NOM} - \textbf{ACC}_{\textbf{EXP}}$
      Dogs frighten **John**$_{\textbf{EXP}}$.

(3) Class III: Object Experiencer $\text{NOM} - \textbf{DAT}_{\textbf{EXP}}$
      This appeals to **John**$_{\textbf{EXP}}$.

In the subject experiencer construction (henceforth: SubjExp) the Experiencer is in the subject position. In the object experiencer construction (henceforth: ObjExp) the Experiencer is either in object position or marked for dative. Verb pairs like *fear-frighten*, in particular, have received intense scrutiny and debate and are the primary construction under study in this thesis. The fact that two verbs that express the same emotion and have the same participants can manifest their arguments in different structural positions has posed a challenge for approaches to argument linking theories that assume a fixed mapping between thematic roles and argument positions in D-structure and is commonly known as the *linking problem*. The SubjExp/ObjExp problem set presents direct counter examples to well established general linking rules proposed by Baker (1997, p. 74) in the *Uniformity of Theta Assignment Hypothesis* (UTAH), and Perlmutter and Postal (1984, p. 97) in the *Universal Alignment Hypothesis* (UAH):

(4) *Uniformity of Theta Assignment Hypothesis (UTAH)*

Identical thematic relationships between items are represented by identical structural relationships between those items at the level of D-structure.

(5) *Universal Alignment Hypothesis (UAH)*

There exist principles of UG which predict the initial relation borne by each argument in a given clause from the meaning of the clause.

The behaviour of Experiencer arguments whereby they map to different structural positions, as illustrated above where the Experiencer can be a subject as seen in (1) or an object as seen in (2), violate the linking rules mentioned in (4) and (5) which predict that identical thematic roles would always map to the same structural positions, i.e. Experiencers should always either map to subject position or object position. The unique linking patterns of SubjExp and ObjExp verbs have inspired decades of research on linguistic interfaces. One clue to the varied argument structure of psych verbs comes from the causative meanings generally acknowledged to be present in ObjExp verbs that are sometimes realized with overt causative morphology in languages like Japanese, Finnish, Hebrew, and Arabic (see Pylkkänen, 2000; Reinhart, 2002; Alotaibi et al., 2013).

The essential role causation plays in accounting for psych verb behaviour is well documented in the majority of literature on psych verb analysis (see e.g. Pesetsky, 1995; Arad, 1998b; Alexiadou and Iordăchioaia, 2014; Hirsch, 2018, among others). However, its status varies depending on the theoretical approach of the researcher. For some, causation is a thematic relation (Pesetsky, 1995; Reinhart, 2001; 2002; 2016), for others it is an aspectual notion (Grimshaw, 1990), and recent developments in the lexical-syntactic interface view causation as a CAUSE subevent in a complex event structure (Levin and Rappaport Hovav 1995, and subsequent work). The latter approach leads to event-based approaches to the analysis of psych verbs which look at the complexity of psych verb event structure. Fundamentally, such approaches argue for the presence of a stative reading for causative ObjExp verbs, i.e. some ObjExp verbs have simple event structure even though they have two subevents, one of which is causative (see e.g. Arad, 1998b; Pylkkänen, 2000; Biały 2020). Causative verbs are stative when the causally related eventualities are both interpreted as states resulting in a complex event decomposable into two 'substates' (Pylkkänen 2000, p. 441).

Such a view is contrary to standard views which conceive of causation as a relation that holds between events (see Dowty, 1979; Lyutikova and Tatevosov, 2014).

In addition to the linking problem discussed above, psych verbs, especially ObjExp verbs, also exhibit unique behaviour that stands in opposition to other verbs that have the same syntactic status, i.e. some ObjExp verbs deviate from canonical causative verb behaviour in certain linguistic constructions. This is commonly known as *psych effects* or *psych properties* and is a cross-linguistically documented phenomena (see Landau (2010) for an overview). Example (6) illustrates one famous psych effect known as the *island effect*.

(6)　a. Who did you tease the sister of?　　　　　　　　　　　Non-psych verb
　　　b. ??Who did your behaviour bother the sister of?　　　　ObjExp verb
　　　　　　　　　　　　　　　　　　　　　　　　　　　　　(Landau, 2010, p. 29)[1]

The example contrasts the Patient object of the non-psych verb *tease* in (6a) with the Experiencer object of the ObjExp verb *bother* in (6b). The example shows that objects of the ObjExp verb class are islands that restrict extraction as opposed to canonical objects where such extractions are possible. Interestingly, psych effects are only observed in the stative reading of ObjExp verbs (Arad 1998b) further supporting an important event structure distinction within psych verbs.

However, despite the large body of research on psych verbs, they are still not fully understood and are highly controversial due to their unique properties. The sheer body of recent typological, theoretical, and experimental literature on psych verbs is testament to the interest the topic generates (Brennan and Pylkkänen, 2010; Alotaibi et al., 2013; Grafmiller, 2013; Martin, 2013; Alexiadou and Iordăchioaia, 2014; Fábregas and Marín, 2015; Kailuweit, 2015; Darby, 2016; Hartshorne et al., 2016; Petersen, 2016; Żychliński, 2016; Willim, 2016; 2021; Doron, 2017; Temme and Verhoeven, 2017; Engelberg, 2018; García-Pardo, 2018; Hirsch, 2018; Machicao y Priemer and Fritz-Huechante, 2018; 2020; Alexiadou and Anagnostopoulou, 2019; Giusti and Iovino, 2019; Temme, 2019; Fritz-Huechante et al., 2020; Rozwadowska and Bondaruk, 2020; Rott et al., 2020).

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[1] Landau (2010) cites the example from Johnson (1992, example 24).

The debated issues surrounding psych verbs can be summed up in the following. One question is whether psych verbs are a class of lexically unique verbs (Landau, 2010) or if their behaviour can be attributed to well established eventualities[2] (Grafmiller, 2013). Related to this is a question concerning the placement of psych verbs within traditional Vendlerian event taxonomies (Vendler, 1957; Dowty, 1979) which prescribe four main classes of verbs: activities, states, accomplishments and achievements. The aspectual nature of psych verbs, especially ObjExp verbs, is under discussion due to the diverse and flexible behaviour they show with regards to features such as causation, telicity, agentivity, and affectedness, which creates aspectual status ambiguity. Their internal subevent structure is also a topic of study since contemporary studies recognize the integral part event structure plays in the semantics-syntax interface (see e.g. Levin and Rappaport Hovav, 1999, 2013; Ramchand, 2008; Levin and Hovav Rappaport, 2011; Martin and Schäfer, 2014, among others).

While SubjExp verbs are taken to be stative verbs with simple event structure by the vast majority of scholars (see Grimshaw, 1990; Iwata, 1995; Arad, 1998b; Landau 2010; Biały 2005, among others), researchers are divided in their opinions on the analysis and description of ObjExp verbs and what their event structure comprises. Despite the vast research on the topic of psych verbs and recent advances in the understanding of their features and properties, we still lack a general agreement on the structure and analysis of these verbs as shown by the conflicting proposals found in current treatments (see Kailuweit, 2015 for a summary).

Temme (2019) identifies two central lines of study when investigating psych verbs. Depending on the aims of the researcher, psych verbs are either the main focus of the study or their special properties are used to gain insight into different linguistic interfaces in theoretical and experimental work. This thesis is mainly concerned with the former line of inquiry in order to gain a deeper understanding of the features and properties of psych verbs in BA.

Before outlining the scope of this thesis, it is necessary to delineate what verbs make up the psych verb class. A working definition of what counts as a psych verb in this thesis is adopted from

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[2] The term *eventuality* comes from Bach (1986) and is used to refer to all event types be they states or events.

Landau (2010, p137) who defines psych verbs as those verbs that involve psychological entailment where an individual, the Experiencer, is in a certain mental state. This thesis will focus on verbs of emotion like *yiḳāf* 'fear', *yiʿšaq* 'adore', *yiʿjib* 'please', and *yiqraf* 'disgust', whereas verbs of perception, like *yišūf* 'see' and *yismaʿ* 'hear', and mental activity verbs, like *yiʿrif* 'know' and *yaʿtaqid* 'think', are largely excluded. Additionally, since BA, like Semitic languages in general, is a root-and-pattern language (see 1.3), the focus will primarily be on those roots that have patterns for both SubjExp and ObjExp verbs to highlight morphosyntactic contrasts between the two structures. To exemplify, in (7a), the Experiencer *Ali*, is mapped to a subject position with the verb *yikrah* 'hate'. In contrast, the ObjExp verb *tikarrih* 'make-hate' in (7b), exhibits overt causative morphology and maps the Experiencer *Ali* to the object position.

(7) a. ʿalī yi-krah   al-madrasah   SubjExp
         Ali IPFV.3SM-hate DET-school.SG
         'Ali hates school.'

     b. maha ti-karrih   ʿalī fī al-madrasah   ObjExp
         Maha IPFV.3SF-hate.CAUS Ali   in DET-school.SG
         'Maha makes Ali hate school.'

1.2 Scope of the research

The objective of this thesis is to investigate BA psych verbs from a comparative perspective in an effort to contribute to the general literature on these predicates. This thesis does not aim to capture all structures and properties associated with psych verbs. Rather, the focus of this work is on exploring the specific aspectual properties and interpretations of these verbs in BA. One thing which makes Arabic interesting and potentially highly informative for theories of argument structure is its morphosyntactic richness. In the course of this study we will see that it is not sufficient to divide BA psych verbs into stative SubjExp and aspectually ambiguous ObjExp verbs because BA stative verbs, and by extension psych verbs, are not a homogenous group. While the heterogenous nature of the stative class of verbs in Arabic has been recognized in previous research (see Mughazy, 2005; Spagnol, 2009; Danks, 2011; Alotaibi, 2019), I am not aware of a study that has presented a systematic analysis of the different psych verbs, in their various morphosyntactic environments in a Saudi dialect. This study aims to fill that gap.

Central to understanding BA psych verb behaviour lies in the differentiation between two types of stative roots,[3] adopted from Maienborn's (2005) work, where one derives canonical states (or what Maienborn refers to as Kimian states), like *ḥab* 'love' and *baġā* 'want', and the other derives inceptive states (Davidsonian states in Maienborn's terms) like *ziʿil* 'angry' and *ḳāf* 'fear'. We argue that the distinction between the two stative roots and their interactions with both (im)perfective and causative morphology is fundamental to the analysis of the event structure of BA psych verbs. The study will show that BA lexical roots contribute grammatically relevant aspectual information that yields systematic and predictable behaviours in the various morphosyntactic levels of representation. We argue BA presents an interesting test case for investigating projectionist vs constructionist approaches to argument and event structure due to the significant relationship found between the various levels of morphosyntax and the event structure profile of psych verbs in BA.

There are four major contributions or hypotheses advanced in this thesis. The first is that BA presents evidence for the existence of an inceptive state class of verb type not accommodated in traditional event typologies (see e.g. Vendler, 1957; Dowty, 1979; Smith, 1997; Olsen, 1997). Inceptive states are argued to be unique instances of stative verbs that encode an initial starting point that refers to the onset of the state denoted by the verb (Chang, 2003; Bar-el, 2005; Kiyota, 2008; Choi, 2015a; 2015b). They are also taken to be punctual atelic verbs (Rozwadowska, 2003; Marín and McNally, 2011; Biały, 2020). In BA, evidence will be shown that inception is encoded lexically via Davidsonian stative roots, and morphsyntactically via perfective morphology. This finding is crucial to explaining BA psych verb data patterns and aspectual properties.

The second finding in this thesis is that BA SubjExp verbs are considered non-dynamic verbs that can be divided into states or events as opposed to the generally accepted stative status of all SubjExp verbs (see e.g. Landau, 2010). To explain the data we observe regarding BA SubjExp verbs, we adopt Maienborn's (2005) event taxonomy (see also Fábregas and Marín, 2013; 2017),

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[3] I use the term root throughout this thesis to refer to the unique idiosyncratic meaning of the lexical item in terms of event structure literature and not in the morphological sense typical of Arabic language studies (see Bahloul, 2008). I take the 'root' of a BA verb to be the Form I form of a singular masculine perfective verb form as it is the most basic form without any prefixes or suffixes (see 1.3).

where dynamicity is separated from eventivity, hence, not all non-dynamic verbs are necessarily states, contrary to standard descriptions of event typologies (see Filip, 2011; 2012). In this alternative view of how we classify events, we find that BA SubjExp verbs are classed as states when they are derived from Kimian roots, and inceptive events when they have Davidsonian roots. This claim is quite radical in its classification of an eventive subgroup of SubjExp verbs.

The distinction between two stative root types in BA leads to the identification of two distinct groups of ObjExp verbs depending on the root type involved in the derivation. One major task in this thesis is to investigate the two subgroups of BA ObjExp verbs to see what unique syntactic or semantic properties they might have. We will find that Davidsonian roots derive stative/eventive ObjExp verbs while Kimian roots derive ObjExp verbs that always yield stative interpretations. The identification of this latter group is the third major contribution of this thesis. BA presents clear and definable evidence for the existence of the controversial class of stative causative verbs identified by Arad (1998b) and Pylkkänen (2000). The most robust evidence for this class is from ObjExp verbs derived from Kimian state roots characterised by their overt causative morphology, their failure in eventive tests, like the progressive and eventive frames, and their incompatibility with agentive contexts. This is not to say that Davidsonian root ObjExp verbs do not derive stative ObjExp verb interpretations. This leads to our fourth major contribution in this thesis.

The last major contribution is the evidence that will show that *all* BA psych verbs in their imperfective forms have simple event structures. The main claim here is that the standard interpretation for ObjExp verbs is a stative reading regardless of whether they were derived from stative roots or eventive roots. This is an extraordinary claim given that ObjExp verbs are causative verbs that are assumed to be complex events (Levin and Rappaport Hovav, 2005; Martin and Schäfer, 2014). Arad (1998b) and Biały (2005; 2020) have argued for the simple event structure of at least some ObjExp verbs, but to have evidence that even Davidsonian root ObjExp verbs have simple event structures is a major challenge to existing findings in the literature. Even more striking is the fact that perfective ObjExp verbs show the complex event structure pattern expected of causative verbs in general. This points to a significant effect of grammatical aspect morphology on event/argument structure in BA.

Finally, a few words are required to address the methodological background for this thesis. This study is largely theoretically orientated in nature but does not subscribe to any one specific theoretical framework. The data used in this thesis is generated by the author (a native BA speaker) to reflect psych expressions one might expect to hear in the dialect. To a large extent, I rely on my own native speaker judgments in the analysis of the various BA constructions investigated throughout this thesis. However, an empirical study is presented in Chapter 5 to support some of the major theoretical hypotheses proposed in the study. A large native speaker acceptability judgment experimental task is conducted gathering data from over 500 speakers of Saudi Arabian dialects. The empirical study confirms that some of conclusions drawn for BA data may be extended to apply to various speakers of Saudi dialects.

This study hopes to enrich the ongoing debate in the literature on the relationship between the morphosyntax of psych verbs and their event/aspectual structure with data from BA.

1.3 Albāḥah Arabic

The Saudi Arabic dialect in this study is used by people in the Albāḥah province in the southwest of Saudi Arabia (see Figure 1.1) of which the author of this thesis is a native speaker. In categorizing Arabic dialects in the Peninsula, dialectal studies rely on regional or sociocultural background (*badawī* 'Bedouin' or *ḥaḍarī* 'sedentary') as criteria (Versteegh, 2014). However, such distinctions are not an accurate reflection of speakers' linguistic behaviour primarily due to modernization, urbanization, dialect contact, and immigration, which have led to dialect levelling and the emergence of a Saudi koine (see e.g. Al-Rojaie, 2021a, 2021b). This study is not concerned with the dialectal features specific to BA and how it may differ from other Saudi dialects. Indeed, the experimental study will show that there is a broad consensus amongst Saudi speakers regarding the acceptability rating of psych verbs. The large-scale acceptability rating study conducted for this thesis suggests that speakers of different dialects from different provinces of Saudi agree on the structure of psych verbs, regardless of their phonological and morphological differences.

Figure 1.1: Map of Saudi Arabia highlighting al-Baha province (Ministry of Interior, 2022).

Away from dialectal comparisons, this study is mainly concerned with the verbal forms of BA. The verbal templatic system in Arabic, its forms and rules, is a complex topic that cannot be dealt with in detail in this study. See McCarthy (1981), Brustad (2000), Al-Azraqi (1998, 2005), Ryding (2005), Bahloul (2008), Versteegh (2014) and Alotaibi (2020) for a more comprehensive look at Arabic verbal derivations in Modern Standard Arabic (MSA) and various vernaculars. Only a very brief overview of verbal derivations in Arabic is presented here to serve as a base from which to later understand how one root can derive verbs for different structures, e.g. one root can derive both SubjExp and ObjExp verb forms as seen in (7) above. BA verbal inflections are similar to those in MSA in that they involve a root-and-pattern system. A root, in morphological literature, is considered a bound, abstract, semantically vague morpheme (Shimron, 2003). The root must be conjugated into a verbal template to obtain full meaning and form. These conjugations are not arbitrary in Arabic but are rather productive forms called *awzān* in Arabic grammar. In the Western tradition, these *awzān* are referred to by Roman numerals with Form I being the basic verbal lexeme that carries the general verbal meaning of the root. Alongside Form I, Forms II and IV will be of particular interest to this study since they are causative conjugations of verbs.[4] Form I, as mentioned above, is the basic verbal form and may be considered a lexical causative, e.g. *kasar*

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[4] Arabic verb forms are known for being polysemic. Alongside the causative meaning, Form II verbs may also have, for example, an intensive interpretation for verbs like *yikassir* (to break into pieces) *yijammiʿ* (to collect/accumulate). Many Form IV verbs have meanings similar to Form II like *waqqaf* and *ʾawqaf* 'to halt, stop', or meanings that are close but not the same such as *ʿallam* 'to teach' and *ʾaʿlam* 'to inform' (Ryding 2005, p. 515).

'break.PFV'. Form II is a geminate form where the middle consonant is doubled, e.g. *farraġ* 'empty.PFV'. Form IV is exemplified in *ʾarʿab* 'terrorize.PFV'.

I draw the reader's attention to an important deviation I make in the use of the term *root* in this thesis. In morphological studies, an Arabic language *root* refers to what is described above. It is an abstract bound root consisting of three consonants. However, in this thesis, I adopt the use of *root* in the sense of Pesetsky (1995) and event structure literature which is taken to refer to the idiosyncratic part of the verb's meaning which distinguishes it from other verbs (Rappaport Hovav and Levin, 1998). Since Form I is the base form of Arabic verbs and is the closest indicator of the meaning of the lexical root (Ryding, 2005), alongside the fact that the perfective sigular masculine form of the verb is the most minimal verbal form regarding affixes, then I take such verb forms to describe the idiosyncratic root meaning for BA verbs.[5] For example, I consider the root of the verbs *yu-ḍrub* 'hit.IPFV.3SM', *bi-tu-ḍrub* 'FUT-IPFV.3SF-hit', and *ḍarab-tum* 'hit.PFV-2PL' to be *ḍarab* 'hit.PFV.3SM' and not the morphological root *ḍrb*. Henceforth, when mentioning BA roots, I refer to their perfective singular masculine Form I forms.

The Arabic verbal system is a source of much controversy in the literature with debates ranging from the coding of tense and aspect to the basic word order of a sentence (see Al-Tarouti, 1991; Bahloul, 1994; 2008; Benmamoun, 1999; 2003; Aoun et al., 2009; Hallman, 2015; Mughazy, 2015; Al-Dobaian, 2018; Alotaibi, 2020). Even the role of the root in Semitic languages is debated (Shimron, 2003). Such topics are beyond the scope of the issues under investigation in the present study. Therefore, I will strictly limit the focus here to those verbal forms most relevant to the discussion on BA psych verbs in later chapters. There are three main finite verbal forms in BA discussed in this study: the perfective, imperfective, and imperative (the imperative being closely related in form to the imperfective). The BA perfective verb form marks person, gender, and number agreement in suffixes, see (8).

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[5] See also Ryding (2005, p.47) for a definition of the term *stem* which is identical to what I refer to as *root* here. I adhere to using *root* instead of *stem* in keeping with the general event/argument structure literature this thesis is concerned with.

(8) a. sārah **jalas-at**   fī al-ḥadīqah   ʾams
       Sara   sit.PFV-3SF in DET-garden.SG yesterday
       'Sara sat in the garden yesterday.'

     b. **katab-nā**   al-mulāḥaḍ-āt al-ʾusbūʿ al-māḍī
        write.PFV-1PL DET-note-PL.F DET-week DET-last
        'We wrote the notes last week.'

The imperfective verb form, on the other hand, primarily realizes gender and person agreement in prefixes. However, number is marked in the suffix or prefix for the plural but is only encoded in the prefix for the singular. The examples in (9) illustrate the various agreement forms for the imperfective verb.[6]

(9) a. sārah **ti-jlis**   fī al-ḥadīqah   fī al-ʿaṣr
       Sara   IPFV.3SF-sit in DET-garden.SG in DET-afternoon
       'Sara sits in the garden in the afternoon.'

     b. **yi-ktub-ūn**   al-mulāḥaḍāt fī al-ʾijtmāʿ-āt
        IPFV.3-write-PL DET-note.PL   in DET-meeting-PL
        'They write notes in meetings.'

     c. **ni-ḏākir**   kiṯīr
        IPFV.1PL-study plenty
        'We study a lot.'

The imperative form is used exclusively for the imperative moods. It is formed from the imperfective jussive stem and is usually addressed to a 2nd person (see Ryding, 2005 for details). Some examples are presented in (10).

(10) a. ʾi-qraʾ
        IMP-read.2SM
        'Read!'

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[6] BA also allows for a future tense morphological form via a *bi-* suffix to an imperfective verb, e.g. *bi*-ti-jlis 'FUT-IPFV.3SF-sit'. This form is not used in our study but is worth mentioning here.

   b. ʾi-ksir-hā
     IMP-break.2SM-it
     'Break it!'

Table 1.1 illustrates the verbal template for the three causative forms (Forms I, II, and IV) conjugated in the three main verbal forms discussed above.

Table 1.1: Verbal template for causative forms in BA.

verb.3SGM	Perfective	Imperfective	Imperative
Form I	*kasar* 'broke'	*yi-ksir* 'break'	*ʾi-ksir* 'break'
Form II	*farraġ* 'emptied'	*yi-farriġ* 'empty'	*farriġ* 'empty'
Form IV	*ʾarʿab* 'terrorized'	*yi-rʿib* 'terrorize'	*ʾa-rʿib* 'terrorize'

1.4 Thesis Outline

There are six chapters in this thesis. Chapter 2 provides an overview of key concepts and the theoretical grounding necessary for the discussion of psych verbs. The chapter outlines the data and debates surrounding psych verbs and provides a brief overview of the various approaches suggested in the literature in an effort to explain the *linking problem* and the *ObjExp verb problem*. Crucially, this chapter introduces recent arguments in the literature that argue for a left-boundary inceptive/initial event analysis for psych verbs that differs from the traditional right-boundary telic approaches normally advocated. This former approach is adopted in the analysis of BA psych verbs and is crucial in understanding the patterns of behaviour they exhibit regarding stativity and agency.

Chapter 3 begins with a brief review of the literature on stative verbs in some pertinent Arabic studies where important patterns are observed that highlight the non-homogenous nature of the stative verb class in Arabic. Essentially, there are two types of stative verbs that are dependent on the type of root involved in the derivation. Building on this argument, an outline of BA stative verbs is presented, which is necessary to provide the grounding from which predictions can be made about BA psych verb aspectual properties and behaviour. This is followed by a description

of BA psych verbs and how the distinction between the two stative root types pattern with psych verb structures. The theoretical foundations developed in this chapter serve to inform the choice of diagnostics used in the following chapter.

Chapter 4 presents a series of tests used to detect the unique aspectual properties claimed to be present for BA psych verbs that distinguish them from other verb classes like accomplishments and achievements. Data in this chapter serves to establish that certain aspectual properties are determined at the lexical level in BA and may be altered, to a certain extent, through morphosyntactic processes, though the root determines whether a verb may support contexts with agentive and/or dynamic readings. Further, a proposal is adopted and tested in which psych verbs are taken to have simple event structures.

Chapter 5 presents the results of a large-scale acceptability rating experimental study used to test some of the hypotheses developed in the previous chapters. The study tests for the presence of an inceptive reading for psych verbs in their perfective forms that distinguishes them from accomplishments. It also tests the compatibility of ObjExp verbs derived from the two stative root types with agency and dynamicity. The study provides empirical evidence that causative statives are present in BA and that perfective morphology encodes a left or right-boundary depending on the lexical aspect of the verb involved.

Chapter 6 provides a conclusion and summary of the thesis.

Chapter 2 Psych Verbs in The Literature

Psych verbs have been a topic of much debate and controversy ever since they first came to linguists' notice. To date, there is hardly a consensus on their classification, definition, and treatment (see e.g. Postal, 1971; Belletti and Rizzi, 1988; Pesetsky, 1987, 1995; Grimshaw, 1990; Arad, 1998b; Pylkkänen, 1998). This chapter presents an overview of prominent literature on psych verbs with a focus on the central recurrent debates that will also be considered in the discussions on BA psych verbs.

The set of verbs that realize an Experiencer argument (e.g. *anger*, *please*, *annoy*) is a controversial group mainly for two reasons. The first is the flexible morphosyntactic configurations they exhibit, briefly introduced in Chapter 1, where the psych verb may license its Experiencer argument in different syntactic positions. This problem is known as the *linking problem* and poses challenges for canonical theories of argument mapping which aim to formalize the correspondence between the lexicon, semantics, and syntax (Anagnostopoulou, 1999). The second reason psych verbs have attracted so much attention is due to so-called *psych effects* (or properties) noted in many languages (see Landau, 2010 for review) where ObjExp verbs in their stative interpretations allow grammatical structures and interpretations prohibited for events or vice versa.

Furthermore, there are differing points of view as to whether psych verbs, especially ObjExp verbs, are special at all and whether they require unique accommodation in grammatical systems (see e.g. Grafmiller, 2013; Żychliński, 2016). However, the most promising accounts advocate for the presence of subtypes within psych verbs that call for different analysis since ObjExp verbs are not a homogenous group (Arad, 1998b; Pylkkänen, 1998, 2000). It is generally acknowledged that ObjExp verbs have ambiguous aspectual interpretations that allow both stative and eventive readings. This ambiguity is illustrated in (1) with the verb *frighten*. Example (1a) provides the agentive/eventive interpretation while (1b) exemplifies the stative reading.

(1)   a. The man frightened Sara deliberately/ to make her go away.
       b. The sound frightened Sara (*deliberately/ to make her go away).

The agentive reading in (1a) is indicated by the agentive adverbial *deliberately* and the purpose clause. In such an agentive/eventive reading of *frighten* an agent does something to bring about some change of state in the experiencer. In contrast, the prohibition of the use of *deliberately* or the purpose clause in (1b) indicates the presence of a stative reading. In this stative reading of the verb, there is no change of state in the experiencer, rather the experiencer, *Sara*, is in the psychological state indicated by the verb so long as she perceives the object of emotion, here *the sound* (see 2.3.3.1 for details). Cross-linguistic data further indicates that ObjExp verbs are not a semantically or structurally homogenous class of verbs (Verhoeven, 2010). Such findings have crucial implications for our understanding of argument structure.

This chapter explores the literature on these issues to lay the groundwork for the later investigation of BA psych verbs. Section 2.1 provides the theoretical background necessary for the understanding of the themes discussed throughout this thesis. Section 2.2 introduces some of the unique grammatical properties of psych verbs called 'psych effects', as they are discussed in Landau (2010) and Alotaibi et al., (2013). The linking problem that psych verbs pose for theories of argument structure and how various semantic, syntactic, and event-based approaches try to solve this problem is a discussion presented in Section 2.3. The focus in this thesis is on event structure; therefore the backbone of the discussion in this section and throughout the chapter will be on event structure and the aspectual classifications of psych verbs. Consequently, Section 2.5 further reviews recent proposals made in the literature that call for the formalization of inchoative/inceptive state eventualities that are identified by a subset of psych verbs in various languages. The general argument is that traditional event taxonomies (e.g. Vendler, 1957; Dowty, 1979b; Smith, 1997) do not accommodate the unique aspectual properties of some psych verbs, which present onsets of states that are not telic.

2.1 Theoretical background

When dealing with psych verbs, there are multiple linguistic domains involved, e.g. morphology, syntax, and semantics. One of the core lines of inquiry underpinning this whole work is concerned with the event structure and aspectual nature of psych verbs. In the literature on psych verbs, Vendler's (1957) event types are often cited in the characterization of the aspectual nature of psych

verbs. A significant distinction is often made between stative and eventive interpretations of ObjExp verbs in particular. Another important concept is the presence or absence of a change of state reading in ObjExp verbs, which entails a simple or complex event structure representation. Therefore, it is important to determine which linguistic elements in a psych verb, if any, have structural consequences.

Determining which semantic elements of a predicate have syntactic, structural relevance is a rich area of study (Jackendoff, 1983; 1987; Dowty, 1979; Tenny, 1987; Grimshaw, 1990; Pesetsky, 1995; Olsen, 1997; Van Valin and LaPolla, 1997; Hale and Keyser, 1998; 2005; Reinhart, 2002; Levin and Rappaport Hovav, 2005). The success of deriving syntactic properties of verbs from their meanings depends on the presence of an articulated theory of lexical semantic representation and the mapping between this representation and syntactic structures (Levin and Rappaport Hovav 2005, p. 7). The strategies of researchers who work on defining the relevant grammatical properties of event types can be divided into four main groups depending on whether they approach the issue from a syntactic or semantic point of view. They may also be distinguished in how they account for the derivation of aspectual meaning,[7] whether they take it to be done through meaningful grammatical features or are structurally composed (García-Pardo, 2018).

For those accounts that take the lexicon to be the location of aspectual meaning, some argue that the verbs carry aspectual features inherent in their lexical entry (Smith, 1997; Olsen, 1997), whereas others argue that lexical items carry aspectually relevant structural configurations (Grimshaw, 1990; Pustejovsky, 1991; Hale and Keyser, 1993). Those approaches that are syntactically nuanced are also divided into two types. There are those that take aspectual features to be represented by functional heads with specific aspectual values (Marantz, 1997), and then there are accounts that rely purely on syntax and argue aspectual meaning is calculated via aspectually meaningful syntactic configurations and place no significance on the role of the lexical item (Borer, 1994; Ramchand, 2008).

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[7] Since aspectual meaning is determined by various elements within the sentence, such as the lexical item and object and subject NPs, then aspect is derived or calculable, i.e. built up, either through syntactic configurations or relevant grammatical features (Levin and Rappaport Hovav 2005).

How is grammatically relevant meaning determined? Pesetsky (1995, p.14) provides an example of an irrelevant distinction when comparing verbs of loud speech (e.g. *holler*, *shout*) and verbs of quiet speech (e.g. *whisper*, *murmur*). This distinction is not syntactically relevant in that there is no grammatical process or realization of arguments that is linked to the use of these verbs in particular. This is not the case with verbs of sound emission. Levin and Rappaport Hovav (2005, p.11) explain that all verbs that denote sound emission in English also denote the sound emitter, but only a subset of them allow transtive, causative uses with the emitter as the object and the entity that causes the emission is mapped to subject position. This is a grammatically relevant distinction between two types of sound emission verbs and is illustrated in the following examples where verbs like *rumble* are not allowed causative structures, see (2b), whereas verbs like *clatter* are, see (3b).

(2) a. The truck rumbled.
     b. *Peter rumbled the truck.

(3) a. The teacups clattered.
     b. I clattered the teacups as I loaded the dishwasher.

(Levin and Rappaport Hovav 2005, p.11)

This type of distinction, where lexical semantics has consequences for argument configurations, is captured by what is called, among many other names, lexical semantic representation. Some of the other names used are 'event structure', 'predicate decomposition', 'l-structure/syntax', and 'lexical conceptual structure' (Jackendoff, 1987; Van Valin and LaPolla, 1997; Rappaport Hovav and Levin, 1998; Levin and Hovav Rappaport, 2011).

In this section, I provide a short overview of lexical aspect and what tests distinguish between states and events, followed by an overview of lexical semantic structures as discussed in Levin and Rappaport Hovav (1999, 2011, 2013).

2.1.1 The identification of lexical aspect

In the literature on psych verbs, many attempts have been made to characterize psych verbs within the well-known classes of lexical aspect. Lexical aspect is a semantic property of eventualities

expressed by verbs and identifies what features a verb might have based on its classification. Perhaps the most widely cited aspectual classification is Vendler's (1957) four-type classification of lexical verbs which was later developed and formalized in Dowty's (1979) work.[8] The four types are known as *accomplishment*, *activity*, *achievement*, and *state* eventualities and are exemplified in the following examples.

(4) a. Sara filled the cup.   ACCOMPLISHMENT
      b. I ran.   ACTIVITY
      c. The bomb exploded.   ACHIEVEMENT
      d. He knows Mary.   STATE

In the aspect literature there are different theoretical bases used to define and characterize each of these eventualities. Some rely on feature-based classifications (Olsen 1997; Smith, 1997), some rely on structurally-based definitions (Verkuyl, 1993; Pustejovsky, 1991; 1995), and yet others base their classifications on semantic predicate operators (Dowty, 1979; Rothstein, 2004). Regardless of the mechanisms used to delineate between the various event types, there are three aspectual properties fundamental to lexical aspect across all taxonomies and theoretical frameworks: (i) change of state/dynamicity, (ii) end/limit/telicity/boundary, and (iii) temporal extend/duration (Filip, 2012, pp.727-728).[9] Based on these three properties, Vendler (1957) distinguishes the four main categories of accomplishment, activity, achievement, and state verbs mentioned above (see Table 2.1).

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[8] These four classes have been discussed and subdivided by many scholars but Vendler's classes remain sufficient for the purposes of our study here (see Mourelatos 1978; Dowty 1979; Bach 1986; Parsons 1990; Binnick 1991; Smith 1997).

[9] There is debate in the literature on the correct use of each term and the exact definitions of each aspectual property. The specifics of the debate are beyond our discussion here. See Levin and Rappaport Hovav (2005), Liu (2014), and Depraetere (1995) for details.

Table 2.1: Vendler's (1957) four type classification of lexical aspect.[10]

Lexical Aspect	Durativity	Telicity	Dynamicity	Examples
Activity	+	-	+	*run, paint, watch*
Accomplishment	+	+	+	*sink, create, fill*
Achievement	-	+	+	*notice, explode, arrive*
State	+	-	-	*know, be, love*

Durativity refers to whether an eventuality is instantaneous or has some temporal extent where time is needed for its actualization. For example, *an explosion* is a nearly instantaneous event while *walking* is an event that takes time and is not punctual. Telicity divides eventualities into telic and atelic eventualities. Telic events have some goal or end point beyond which the event cannot continue while atelic events can go on indefinitely. For instance, to *sink a ship* has a natural end when the ship is submerged in water whereas *to swim* is an atelic eventuality in that it can continue without end. Dynamicity refers to whether or not there is some change that occurs due to the event denoted by the verb. Change refers to the transition from one state of affairs to another, e.g. to *fill a cup* is a transition of the cup being not full to being full. Binnick (1991, p.196), follows Freed (1979) and provides the following representation of events using a phonological metaphor.

(5) onset   nucleus   coda

        |————|————|————|————|————|
              initial   middle   final

    inception   termination   culmination

Binnick and Freed distinguish an *onset*, a *nucleus*, and a *coda* phase within the event. The onset is a phase when the eventuality is starting but not yet in progress. The nucleus is when the eventuality is ongoing. The coda refers to the terminative or culminative phase of the eventuality. Accordingly,

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[10] The majority of the debates in the semantic study of lexical aspect surround the aspectual classes themselves; the correct definition of the aspectual designations, the correct features of each, and exactly within which class a verb should be assigned (Hirsch 2018). The details of such issues are not relevant to the focus of this current study. Therefore, an extensive review of the reasoning behind the division of the four aspectual classes and the diagnostics of their properties is beyond the scope of this work (see Dowty 1979; Smith 1997; Levin & Rapaport Hovav 2005; Filip 2011; 2012 for discussions on these topics).

an event like *Pat is writing a letter*, refers to a process or nucleus phase indicated by the progressive, and a culmination phase or end point that is perceived to be whenever the letter is complete (Binnick, 1991, p.207). Other eventualties like *the painting is peeling* or *David owns a painting* refer only to a nucleus phase and lack both an onset and a coda, i.e. there is no reference to either the beginning or end of the eventuality (Binnick, 1991, p.207).

Most important to this study is the distinction between the right-boundary encompassing the coda or telic phase and the left-boundary referring to the onset or inception of the eventuality. Telic events, like accomplishments and achievements, are right-boundary events that have a terminative or culminative boundary. However, left-boundary events are argued to be onsets of atelic eventualities that have unique aspectual properties not accounted for in traditional event taxonomies (see 2.5 for discussions). Recent work is introduced where arguments are made for the classification of some psych verbs as left-boundary events.

This group of inceptive verbs can be found within the set of verbs usually considered as stative verbs, like *anger*, *disgust*, and *worry*. Therefore, the stative class of verbs, often described as "aspectually simple and unproblematic" (Dowty, 1979, p. 71), is of particular interest in this thesis. Filip (2011, p.1197) observes that Dowty's (1979) difficulties in fitting states into appropriate aspectual classes reveals that their semantic and ontological status is puzzling. In the literature, one finds a two-way distinction between two types of states using various aspectual diagnostics to separate between them. The distinction is referred to as *momentary states* vs. *interval states* by Dowty (1979), *individual-level* vs. *stage-level* states by Carlson (1977), and *Davidsonian states* vs. *Kimian states* by Maienborn (2005).[11] Importantly, the interval state/stage-level state/Davidsonian state type is a non-dynamic verb that passes tests that typically diagnose events, like compatibility with manner adverbials and with progressive constructions. This distinction supports the notion that dynamicity needs to be severed from eventivity (Maienborn, 2019).

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[11] First introduced by Carlson (1977), one of the major predicate divisions made in the literature is between stage-level predicates and individual-level predicates. Stage-level predicates predicate over stages and are considered transitory, temporary qualities (e.g. *be sad*, *tired*). Individual-level predicates predicate over individuals and are taken to be more permanent qualities (e.g. *be tall*, *intelligent*). This distinction is often juxtaposed with a Kimian vs. Davidsonian event dichotomy, extensively discussed by Maienborn (2005; 2008; 2019). Many tests are used to delineate the two types of eventualities, which mostly rely on adverbial modification asymmetries. We discuss these oppositions in more detail in Section 3.1.4.

Dynamicity, or change, is the most fundamental aspectually relevant concept according to Dowty (1979, p.167). It distinguishes between dynamic events, that entail some change be it telic or not, and states which entail no change. However, Fábregas and Marín (2013; 2017) have also called for a distinction to be made between dynamicity and eventivity. They reach the conclusion that not all events are dynamic as traditionally argued, since they were able to identify a class of Spanish verbs whose empirical properties make them incompatible with traditional event classes because they share properties of both activities and states. The view that some verbs are non-dynamic, aligning them with states and yet passing event tests, is vital to our characterization of the aspectual nature of BA psych verbs, as will be discussed in the next chapters, where Maienborn's stative distinction is adopted, and BA data is explored.

How to define the boundaries of aspectual verb classes when there is clear and evidenced overlap in the aspectual properties of each class has been a matter of controversy ever since Vendler (1957) presented his seminal work. Furthermore, Vendler's attempt 'to classify surface verbs once and for all … is somewhat misguided' (Dowty, 1979, p.62). This is due to the general consensus in later studies that aspectual class projections cannot be determined by the basic (underived) verb but is compositionally formed in the VP (verb phrase) and even the IP (sentence level) (see Verkuyl, 1972; Mourelatos, 1978; Dowty, 1979; Ramchand, 1997; Levin and Rapaport Hovav, 2005; Filip, 2011, 2012 for a more detailed discussion). Yet, the importance of the lexical aspect of the verb in contributing grammatically relevant aspects of meaning cannot be minimized because of the way in which verbs interact with the morphological and syntactic structure of natural languages (Dowty, 1979, p. 185), and due to the fact that the compositional changes to lexical aspect follows systematic patterns (see Filip, 2011, p. 1192 for examples). In this study, we show that the lexical aspect of the verbal root (more accurately, the stative root type) is crucial in determining the possible syntactic configurations of the psych verb in BA and their aspectual status. This dependency cross-cuts all SubjExp and ObjExp verbs and is affected by grammatical aspect in predictable patterns. This is discussed in Chapter 3, and specific diagnostics for characterizing aspectual classes in BA are discussed in Chapter 4.

The three properties of duration, telicity, and dynamicity are closely related, and all three properties contribute to aspectual interpretation. For example, both activities and accomplishments are believed to involve 'processes going on in time' as opposed to statives, which are 'predicated of a subject for a given time with truth or falsity', and achievements, which do not have duration and are punctual (Vendler, 1957, p.146). This distinction leads Vendler to use the progressive test to distinguish activities and accomplishments from states and achievements.[12] Statives disallow the progressive because they lack dynamicity and achievements do not allow it because they are punctual and the progressive is inherently durative, as demonstrated in (6).

(6)   a. *She is liking the weather.
      b. *John is noticing the problem.

Telicity is traditionally tested through modification by temporal adverbials (Filip, 2012). Verbs that have a natural end point, i.e. are telic, are compatible with *in-* adverbial modification in English as shown in (7a), where the time measured refers to the time within which the event culminates. Conversely, verbs that can go on indefinitely, i.e. atelic verbs, are compatible with *for-* adverbials, see (7b), which measure the temporal duration of the eventuality, i.e. how long it lasts.

(7)   a. John recovered in an hour / *for an hour.   TELIC
      b. John swam *in an hour / for an hour.   ATELIC
                                                 (Filip, 2012, p. 722)

It is important to be aware of the presence of another set of interpretations for these adverbials. The *in-*adverbials can refer to the time measured until the onset of an atelic eventuality, as in (8a), whereas the *for-*adverbial may refer to the duration of the result state of the eventuality after it has ended, as in (8b) (Vendler, 1957b; Filip, 2012; Alexiadou and Iordăchioaia, 2014).

(8)   a. I run in 2 hours.
      b. He repeatedly won for 2 years.

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[12] The progressive test is not definitive and has been shown to allow all event types such as *he is winning the race/dying/leaving* (Mourelatos 1978, p. 193), see also Rothstein (2004). See Grafmiller (2013) for a recent discussion on the progressive test with English psych verbs.

Vendler (1957, p. 147) considers the interpretations of the temporal adverbials as illustrated in (8) to be irrelevant to the primary objective of the test, which is to diagnose the inherent aspectual class of the verb. Nevertheless, this does not discount temporal adverbials as a relevant test for detecting aspectual properties of eventualities. Previous research into lexical aspect has produced numerous valuable diagnostics for determining the aspectual class of verbs and verbal structures. Although these tests are well-established, it is sometimes not clear exactly what diagnostic criteria each test is used for, as witnessed with temporal adverbial modification above (Filip, 2011). Since the majority of tests were developed for English data (Dowty, 1979, p. 55) they may not be applicable to other languages, or they might not assess the same aspectual properties. It thus became a task in this thesis to identify which tests may be reliably used to detect various aspectual features under investigation for BA psych verbs. The following section 2.1.2 presents those tests traditionally used to differentiate between stative and eventive eventualities, this being the most salient distinction in our study of BA psych verbs. Tests that aim to diagnose aspectual properties like telicity and durativity are reserved for detailed discussions in Chapter 4.

2.1.2 State vs event tests

Many of the reported peculiarities that are associated with ObjExp verbs are observed in their stative or non-agentive interpretations. Hence, testing for the presence of an event or an agent is frequently used on the analysis of psych verbs to determine their event or state status. Traditional tests that distinguish between states and events rely on the fundamental properties of states as being non-dynamic and non-agentive (Dowty, 1979). Therefore, stative verbs are expected to fail those event tests that detect the presence of an agent or dynamic structures. These are the same tests used in the psych verb literature to determine the aspectual status of SubjExp and ObjExp verbs. The following is a list of those tests that will later be used with BA data (see Chapter 3 and 4).

2.1.2.1 The progressive

Progressive constructions typically distinguish states and achievements from other event types (Vendler 1957; Rothstein, 2004; among others). Consider the following examples from Rothstein (2004, p. 11):

(9) a. *John is believing in the afterlife/loving Mary.   STATE
    b. *Mary is recognizing John/losing her pen.   ACHIEVEMENT
    c. Mary is running/ walking.   ACTIVITY
    d. John is reading a book.   ACCOMPLISHMENT

Stative verbs are inherently non-dynamic and do not involve stages and thus do not progress, hence the progressive is barred. Achievements prohibit the progressive due to their punctual natures (Mittwoch, 2019).

There are groups of counterexamples to such generalizations. Interval states (or stage-level states) allow the progressive as in *the book is lying on the table* (Dowty, 1979, p. 176). Additionally, some achievements, those with preliminary stages,[13] occur freely with the progressive as in *he is dying* (Mittwoch, 2019, p. 46). Rothstein (2004) argues that progressive achievements are a type of aspectual shift where the achievement is coerced into an accomplishment meaning (see also Smith, 1997). Additionally, Moens and Steedman (1988, p. 17) argue that the progressive results in an iterative reading when combined with punctual verbs such as *Harry was hiccupping*. I leave aside such particulars and take the progressive test at face value; I assume that this test distinguishes states and punctual events from other event types. This will prove useful in our analysis of inceptive states and inceptive psych verbs in Chapter 3 and 4.

The incompatibility of the progressive construction with stative verbs in particular in Arabic has been observed in several studies. AlZahrani (2016, p. 50) finds that Hijazi Arabic (a Saudi Arabian dialect) does not support the progressive constructions with stative verbs, so it is not possible to have an expression like **qāʿid yiʿrif* 'he is knowing'. See Mughazy (2005), Ismail (2015), Camilleri and Sadler (2017), Eifan (2017), Alotaibi (2019), and Altamimi (2021) for similar findings in various Arabic dialects. In an experimental study on the acceptability of progressive constructions with states vs non-states in Najdi Arabic (also a Saudi dialect), Aloula (2021) finds that states are significantly less acceptable than non-stative verbs in progressive constructions.

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[13] Some achievements, like *win*, have what Smith (1997, p. 31) terms a preliminary stage. To win a race one must first run it. When the progressive is acceptable with achievements, it is the preliminary stage that is inferred as occurring in the progressive not the change of state itself.

Some of the stimuli used in her study are presented in (10) (transliteration and asterisk between brackets my own)[14].

(10) a. [*]qāʿid ʾuʾmin   bi-haḏā al-mabdaʾ   STATE
      PROG   IPFV.1SG-believe with-this DET-principle.SG
      'I am believing this principle.'

   b. [*]qāʿid a-ndam   ʿalā haḏā al-ʾiḵtiyār
      PROG   IPFV.1SG-regret on this DET-decision
      'I am regretting this decision.'

(11) a. qāʿid yi-lbas   ACCOMPLISHMENT
      PROG IPFV.3SM-wear.clothes
      'He is getting dressed' Lit: 'He is wearing his clothes.'

   b. qāʿid ʾa-mšī   fī a-nnādī   ACTIVITY
      PROG IPFV.1SG-walk in DET-gym
      'I am walking in the gym.'

          (Aloula, 2021, p. 103)

The example in (10a) is of a mental state verb and (10b) is a SubjExp psychological state verb. Both state verbs reject a progressive construction as opposed to the eventive verbs in (11) which are shown to be compatible with progressive contexts. Interestingly, her achievement group received the least acceptability rating among all the event groups. While Aloula compared the acceptability ratings of event verbs to states, the event groups themselves were not compared to each other for possible significant differences. Furthermore, Aloula does not discuss possible iterative readings or preliminary stage process interpretations that would result in acceptable progressive achievements. Consider the following achievement stimuli from her study (Aloula, 2021, p. 103) (transliteration my own):

(12) a. qāʿid   ʾa-ḵsar   hā-l-mubārāh   ACHIEVEMENT
      PROG.3SM IPFV.1SG-lose this-DET-match
      'I am losing this match.'

---

[14] These examples are taken from Aloula's (2021) stimuli list. The unacceptability of these sentences is inferred from discussions and not explicitly marked as such in her work.

b. [?][15] qāʿid-ah ʾa-wṣal li-l-ḥaflah
  PROG-3SF IPFV.3SG-arrive to-DET-party
  'I am arriving at the party.'

It is my judgment that (12a) has a preliminary stage that allows for the progressive. To win or lose a match you must play it, therefore in (12a) it is the prelude to losing that is interpreted as in progress, not the event of *lose* itself (see Smith, 1997; Rothstein, 2004). The sentence in (12b), on the other hand, is odd in my judgment. The achievement verb itself does not tolerate the progressive or an iterative interpretation, nor is a preliminary stage inferred as being in progress. In this study, I do not focus on the acceptable use of the progressive with achievement verbs as a result of aspectual shift (see Rothstein 2004). I take it that states and achievements cannot be understood to progress. States cannot progress because they are inherently non-dynamic, and achievements do not progress because they are punctual.

As mentioned prior, the progressive test is taken as a successful test that distinguishes states and punctual events from other event types in Arabic. This is an important test frequently used in psych verb literature to diagnose the aspectual characterization of psych verbs where if compatible, they are classified as events (Biały, 2005; Verhoeven, 2010; Grafmiller, 2013; Hirsch, 2018). The one limitation of this test in its use with Arabic data is that it is only compatible with the imperfective form since the progressive marker cannot be used with perfective forms of verbs in Arabic. To compensate, we use Jackendoff's (1983) event frame test in order to test for events in perfective forms of verbs.

2.1.2.2 Event frame test

One linguistic test that is used to differentiate between states and events is the possibility of occurring after 'what happened/occurred/took place was (that) …' (Jackendoff, 1983, p. 170). Consider the following examples from Jackendoff (1983, p. 171):

 (13) a. *What happened was that Max was in Africa.
    b. *What happened was that the rug lay on the floor.

---

[15] The questionable acceptability of this sentence is my own addition. Aloula (2021) does not explicitly comment on the acceptability of this sentence. It is inferred from her discussion that she deems it acceptable.

c. What happened was that Bill flew around the pole.
d. What happened was that the rock fell off the table.

This test is successful because 'events happen while states do not' according to Jackendoff (1983, p. 170). This test is used to identify eventive readings of psych verbs (see Verhoeven, 2010; Darby, 2016). It will also be used to verify the event or state status of perfective forms of verbs in BA in Chapter 3.

2.1.2.3 Agency tests

It is widely accepted that agentivity is characterized as a cluster of primitive conceptual properties (Dowty, 1991; Van Valin and Wilkins, 1996; Yamamoto, 2006). Animacy, sentience, volition, control, and causing a change are some of the properties associated with being an Agent argument in linguistics. Consequently, volition and/or intentional involvement is a prerequisite for agency because it involves control of a situation (Dowty, 1991; Van Valin and LaPolla, 1997; Verhoeven, 2010). Many stative verbs are known to resist appearing in structures that have an agent (Dowty, 1979; Levin and Rappaport Hovav, 2005). With respect to psych verbs, studies have shown that they differ from prototypical transitive verbs regarding the agentive status of their subject argument (see Landau, 2010 for evidence from diverse languages). In particular, it is observed that some ObjExp verbs are non-agentive while others alternate between agentive and non-agentive readings (Arad, 1998b). Importantly, many of the psych effects attributed to ObjExp verbs are only evident in their non-agentive readings (see Section 2.2 for a brief discussion).

The agentivity tests provided in Dowty (1979, p.55) are also applicable to Arabic data. Since states typically lack agents, structures that require a volitional subject are ungrammatical. The imperative in (14) and the agentive adverbials *deliberately* and *carefully* in (15) are all unacceptable with stative verbs.

(14) a. *Know the answer!
     b. Run!
     c. Build a house!

(15) a. *John deliberately knew the answer.
　　 b. John ran carefully.
　　 c. John carefully built a house.

(Dowty, 1979, p. 55)

These diagnostics that test compatibility with agentive contexts are used in many studies to detect the presence of an agent in psych verb constructions that would indicate the presence of an event (see e.g. Arad, 1998b; Verhoeven, 2010; Grafmiller, 2013). Incompatibility with agentive contexts is taken as an indication of stative constructions. The one criticism against the compatibility with agentive contexts test is that many achievement verbs are anomalous with them as well, as exemplified in the following.

(16) a. *John deliberately found his watch.　　 (Smith, 1997, p. 31)
　　 b. *John carefully reached Boston.　　 (Dowty, 1979, p. 59)

The fact that states and achievements are generally non-agentive (Mittwoch, 2019, p.49) is important is for our analysis of the punctual inceptive state class and standard states in BA in Chapter 3.

As to the compatibility of Arabic verbs with agentive contexts, Abdul-Raof (1998) observes that only dynamic verbs may occur with imperative constructions and agentive adverbials in MSA. The following examples are fashioned after Abdul-Raof (1998, pp. 158-159) (transliteration my own) which show how stative verbs (17a) are incompatible with imperative derivations in MSA as opposed to dynamic verbs (17b) which allow them.[16]

(17) a. *šukk　　　　 / ʾiʿrif
　　　 doubt.IMP.2SM / know.IMP.2SM
　　　 'Doubt!'
　　　 'Know!'

---

[16] See Ryding (2005) for a review of imperative structures in MSA.

b. ʾiḏhab-ī   / ʾiqfiz
   go.IMP-2SF / jump.IMP.2SM
   'Go!'
   'Jump!'

Stative verbs are also distinguished from dynamic verbs using agentive adverbials in MSA. Where stative verbs are incompatible with ʿamdan 'deliberately', see (18a), dynamic verbs readily allow them, see (18b) (examples are taken from Abdul-Raof (1998, p. 158); transliteration my own).

(18) a. *yu-šbihu   zayd-un ʾaḥmad-a ʿamdan
        IPFV.3SM-resemble Zeid.NOM Ahmed.ACC deliberately
        'Zeid resembles Ahmed deliberately.'

     b. yu-qallidu   ʿaliy-un sālim-an ʿamdan
        IPFV.3SM-imitate Ali.NOM Salim.ACC deliberately
        'Ali imitates Salim deliberately.'

These tests prove useful in distinguishing between stative and dynamic verbs in Arabic and are used in following chapters to test the compatibility of BA stative verbs (see 3.1.2) and psych verbs (see 4.4.2) with agentive constructions.

2.1.3 Event structure

It was previously mentioned that there is a strong association between lexical-semantic properties of verbs and their syntactic structures. Generally, theories of argument structure can be divided into projectionist (lexicalist) or constructionist theories. Proponents of the projectionist view (Levin and Rappaport Hovav, 1995; Müller, 2018) assume that argument structure is determined by the lexical semantics of the verb. In this view, it is argued that there are vital elements within the verb that determine why the arguments are the way they are in a structure with respect to their number, hierarchy, and case. Constructionist approaches (see e.g. Borer, 1994; Marantz, 1997) are radically different in that they assume lexical roots are devoid of any grammatically relevant information. Rather, they combine with functional categories in the syntax to form event meanings. Crucially, in this view, argument structure is not determined by the lexical root but from functional heads. See Rothmayr (2009), AlRashed (2012) and Ramchand (2008; 2013) for summaries on the

various approaches within theories of argument structure and their development. This thesis will provide evidence that the lexical root contains grammatically relevant information in BA. For this reason, the following review focuses on the semantic decomposition, or event structure, of psych verbs from the projectionist perspective.

Leaving aside the exact formulations, a key concept in lexical semantic structure literature is that the syntactic configuration a verb projects is directly derived from its predicate argument structure, or event structure, which indicates how many arguments a verb may take, and provides some information about how arguments are mapped to the syntactic structure (e.g. internal vs external arguments) (Levin and Hovav Rappaport, 2011). Event structure representations are therefore crucial to argument structure. Rappaport Hovav and Levin (1998, p.108) provide the event structure representation illustrated in (19) for the Vendlerian classes that are assumed to account for all event types. The major distinction is between simple events consisting of a single subevent and complex causative events that have two subevents, as shown below.

(19) a. Simple event structure:

[x ACT $_{<MANNER>}$]	ACTIVITY
[BECOME [x $<STATE>$]]	ACHIEVEMENT
[x $<STATE>$ (y)]	STATE

b. Complex event structure:

[[x ACT$_{<MANNER>}$] CAUSE [BECOME [y $<STATE>$]]]	ACCOMPLISHMENT
[x CAUSE [BECOME [y $<STATE>$]]]	ACCOMPLISHMENT

In these representations, the primitive predicates ACT, BECOME, CAUSE,[17] are structural components that appear in the lexical event representations of different verbs that share the same semantic properties while the component in $<STATE>$ represents the idiosyncratic meaning of the verb.[18] The variables x and y indicate the distinct argument positions of the verb.

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[17] The BECOME operator introduces a change of state, and CAUSE indicates causation (Dowty, 1979, p. 122). Dowty (1979) also identifies a DO operator that signifies the presence of an agent. Rothmayr (2009) uses all three operators in her lexical semantic representation of German ObjExp verbs (see 2.3.3.4).

[18] The idiosyncratic component of lexical decomposition representation refers to the meaning that is unique to the individual lexeme. Pesetsky (1995) refers to this as the root which is the taken to be the basic element in the lexicon (see also Arad, 2002). I adopt the term in the next chapters and refer to different stative roots in BA that carry a distinct meaning of the verb. This notion of *root* is not to be confused with the morphological reference of *root* in

The essential idea is that verbs of the same event class will share the same lexical event structure. Therefore, causative verbs are represented by CAUSE, which is part of the lexical representation of verbs like *break*, *melt* and *kill* (used transitively) but is also part of the representation of causative psych verbs, i.e. ObjExp verbs, like *frighten*, as shown in (20b). Additionally, SubjExp verbs are taken to be standard stative verbs and thus pattern like all states with the structure presented in (20a) (Biały, 2005).

(20) a. John fears dogs.
     fear: [x *<FEAR>* (y)]

    b. Sara frightens John.
     frighten: [*e* CAUSE [BECOME [y *<FRIGHTENED>*]]
     (*e* denotes a causing subevent)

<div align="right">(fashioned after Biały (2005) and DiDesidero (1999))</div>

The usefulness of lexical event representations is seen clearly in distinguishing between verbs like *fear* and *frighten*. The verb *fear* expresses a state and is a simple event represented with STATE, whereas *frighten* is a complex event comprised of two subevents, one is an external causing subevent represented by CAUSE and the other is a resulting or change of state subevent represented by BECOME. However, the verb *frighten* also carries a stative meaning, which does not license an externally caused change of state, represented by [y *< FRIGHTENED>*], that is embedded within the larger structure shown in (20b) above. It is the possibility of this latter reading, a simple event reading for a bi-eventive lexical structure that is a crucial distinction and features in discussions on psych verb representations (e.g. Arad 1998b; DiDesidero 1999; Levin 1999; Biały 2005; 2020) (see also 2.3.3 for further discussion).

To explain, Levin and Rappaport Hovav (1999, p. 202) argue that argument realization reflects event complexity and propose the following principle which governs the mapping of arguments to syntax.

Arabic language studies which refer to an abstract, bound morpheme (e.g. Bahloul, 2008). See also discussion in 1.3.

(21) Argument-Per-Subevent Condition:
There must be at least one distinct argument XP expressed in the syntax per subevent in the event structure.

Since states and activities are associated with simple event structures with one subevent, then there is only one obligatory argument known as a *structural* participant that needs to be expressed in the syntax. Any additional argument, called a *content* participant, if present, shows flexibility in its realization.[19] Consider the example of the activity verb *scrub* in (22) and its event structure representation.

(22) *scrub*: [x ACT $_{<SCRUB>}$] or [x ACT $_{<SCRUB>}$ (y̲)]
    a. She scrubbed.
    b. She scrubbed the floor.
    c. Cinderella scrubbed her hands raw. (Levin, 1999, p. 241)

Only one structural participant NP is needed for the event ACT in the above examples to statisfy the Argument-Per-Subevent Condition. The structural argument in (22) is the subject NP. The freedom with respect to the expression of the non-structural argument of simple events can be seen above where the arguments range from zero realization as seen in (22a), to direct object NPs as shown in (22b), to the non-subcategorized objects seen in (22c). The additional NP participants in the structure not paired with event structure positions are considered content participants that may be represented in the event structure template between parenthasis and underlined as the *y* argument in event structure representation.

In contrast, complex event structures have at least two subevents and must therefore express two structural arguments that must be linked to syntactic XP positions for structural integrity. To illustrate, consider the examples in (23) for the externally caused change of state verb *break* and its representative event structure (from Rappaport Hovav and Levin 1998, pp. 116-117).

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[19] Rappaport Hovav and Levin (1998, p. 111) make a distinction between two types of participants in event structure: those participants licensed by both the root and event structure template which are called structure participants, and those licensed by the root alone which are called constant participants. See also Grimshaw (2005).

(23) *break*: [[x ACT _{<small>MANNER</small>}] CAUSE [BECOME {y *<BROKEN>*}]]]
     a. Tracy broke the dishes.
     b. *Tracy broke.

The verb *break* is a bi-eventive verb with a causing subevent and a resulting subevent represented by both CAUSE and BECOME respectively. Since there are two subevents, then there must also be two structural participants obligatorily expressed in the structure, as illustrated in (23a). The direct object of *break* cannot be omitted, as shown in (23b). According to Rappaport Hovav and Levin (1998), the contrast between the obligatoriness and flexibility in the expression of the direct object of verbs like *break* and *scrub* arises from the differences between the event structures. However, Levin (1999) argues that the presence of two arguments in an argument structure is not evidence of a complex event structure. This brings us back to the discussion of simple event readings for causative verbs like the ObjExp verb *frighten* shown in (20) above.

According to Levin and Rappaport Hovav (1999), the difference between simple and complex event structures of causally related events is temporally grounded. Simple event structures are temporally homogenous, meaning that the subevents are temporally coextensive and unfold at the same time. Thus, in a stative reading of *frighten* in (20b), John experiences fear whenever he perceives Sara. The fearing subevent cannot hold independently of the perceiving one. Conversely, a complex event structure consists of two independent subevents that occupy two separate temporal frames. A complex event reading of *frighten* is one where Sara does something that leads to John undergoing a change of state from not being afraid to being afraid. Both subevents happen consecutively and unfold separately at two distinct temporal scales.

In event structure accounts of psych verbs (see Arad, 1998b; Pylkkänen, 1998; 2000; 2009), the claim is that some ObjExp verbs have stative interpretations where even though causation is present, sometimes overtly marked as is the case for Finnish, a complex structure is not supported. The central idea is that both subevents, the causing (or triggering) subevent and the state subevent, are temporally dependent. Whenever the causing subevent happens, the state holds. Thus, a distinction between a simple stative event structure and a complex event structure for ObjExp verbs features in recent treatments of psych verbs, see e.g. Rozwadowska and Bondaruk (2020). The challenge psych verbs present for the study of lexical semantic structure is to formulate

representations that can account for both a complex event structure and a simple event structure reading for verbs that have causative meanings.

The task is not as easy as it seems. The problem is with the associations made with the semantic primitives used in lexical representation. For example, the predicate CAUSE tends to be associated with the resultative predicate BECOME, consequently, all causative events are taken to represent a transition from one state to another. While externally caused change of state readings are attested for ObjExp verbs (see e.g. Arad 1998b; Rothmayr 2009), Biały (2020) and Rozwadowska (2020) recently argue that ObjExp verbs are not associated with the semantics of change and thus the BECOME operator is not licenced in lexical semantic representations.[20] A further complication with BECOME has to do with its association with telicity. Filip (2012, p. 734) postulates the BECOME abstract predicate to be the "core of telicity in the logical structure of verbs". The implication here is that all change of state predicates are considered telic events that terminate in a result state. This becomes an issue when ObjExp verbs, that are purportedly change of state predicates, fail telicity tests. Psych verbs in BA (see Chapters 4 and 5), Polish (Rozwadowska, 2003; Willim, 2016; Biały, 2020), and Spanish (Marín and McNally, 2011; Fábregas and Marín, 2015) present a challenge to accounts of event structure which link causation with a telic change of state event structure template.[21]

This concludes the brief overview of relevant concepts that will be discussed throughout this thesis. The next section turns to briefly reviewing the unique syntactic behaviour exhibited by psych verbs known as psych effects.

2.2 Psych effects

Landau (2010) presents an exhaustive cross-linguistic survey of psych effects observed in many typologically different languages.[22] Psych effects are those patterns of syntactic behaviour in which a psych predicate stands in opposition to other predicates of the same class. In such

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[20] See 2.3.3.3 for more details on Biały's (2020) arguments.
[21] See 2.5.2 for further discussions on the atelicity of Spanish and Polish ObjExp verbs.
[22] See Landau (2010, p.75-77) for a summary of his proposal and his collection of psych properties gathered from different languages.

investigations, subject Experiencer arguments stand in opposition to canonical external arguments, such as Agents and Causers, and experiencer objects are compared to prototypical object arguments, such as Patients and Themes (Temme, 2019). Psych effects have mostly been reported for the ObjExp subclass of psych verbs which is generally recognized as the most problematic type due to its non-conformant syntactic behaviour and its ambiguous aspectual structure (discussed below in 2.3). Interestingly, such unique psych effects have been known to disappear in agentive or non-stative readings; there is disagreement on which distinction is more relevant (Grafmiller, 2013). In the following discussion, we review some of the unique psych effects observed in some languages and present the arguments from Alotaibi et al., (2013), who argue that such effects are not present in the varieties of Arabic they explored.

Psych verbs are famously known to present exceptional binding properties in the form of what is called backward binding (Belletti and Rizzi, 1988; Pesetsky, 1987).[23] Such constructions challenge the c-command requirement for binding whereby an anaphor contained within the subject is bound by an antecedent which appears lower in the clause (Pesetsky, 1995). ObjExp verbs have been known to license backward binding as opposed to canonical transitive verbs which do not, as demonstrated in (24).

(24) a. His$_i$ health worries every patient$_i$.
    b. *His$_i$ doctor visited every patient$_i$.

(Reinhart, 2002, p. 271)

Alotaibi et al., (2013) observe that Maltese (henceforth MA), allows backward binding in both ObjExp verbs, shown in (25a), and non-psych transitive verbs, as shown in (25b). Therefore, backward binding does not appear to be a unique psych verb effect in MA.

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[23] See Cançado and Franchi (1999) and Arad (1998b) for arguments against the uniqueness of backward binding as a special feature of psych verb internal arguments. See also Temme and Verhoeven (2017) for empirical evidence of backward binding effects in German.

(25) a. Dal-kliem   dwar-u   nnifs-u$_i$ dejjaq   (MA)
       DEM.SGM.DEF-words.SGM about-3SG.ACC breath-3SM.ACC bother.PV.3SGM
       lil   Pawlu$_i$/dejjq-u$_i$ '1   Pawlu
       ACC paul   / bother.PV.3SGM-3SGM.ACC, ACC paul
       'These words about himself bothered Paul.'

     b. ħolma   dwar-u   nnifs-u$_i$ qajjm-et   '1
       dream.SGF about-3SG.ACC breath-3SG.ACC make.wake.PV-3SGF ACC
       Pawlu$_i$ b'ħasda
       paul   with.shock
       'A dream about himself woke Paul all of a sudden.'

                                              (Alotaibi et al., 2013, p. 13)

Another psych effect is noted in Hebrew, a cousin Semitic language, where there is an obligatory presence of a resumptive pronoun in ObjExp constructions with stative interpretations as demonstrated in (26b) (Arad, 1998b; Landau, 2010). Normally, in non-psych direct object relativization, the use of the resumptive pronoun is optional, see (26a). With an agentive subject, i.e. in agentive readings, the normal pattern is restored and deletion of the resumptive pronoun is allowed, as shown in (26c) (Arad, 1998b).

 (26) a. ha yalda she Nina ohevet (ota)   (Hebrew)
        the girl   that Nina loves   (her)

     b. ha yalda she ha musica me'acbenet *(ota)
        the girl   that the music   annoys   her

     c. ha yalda she Nina icbena   ∅
        the girl   that Nina annoyed

                                             (Arad, 1998b, p. 100)

Alotaibi et al., (2013) note that a pattern similar to Hebrew is present in MA where an object relative clause would normally involve a gap as seen in (27b), but experiencer objects of psych verbs require an obligatory resumptive pronoun as seen in (27a).

(27) a. kallim-t   lit-ṭifil   li   wijjḫ-et-ū   rās-ū
     spoke.PFV-1SG ACC.DEF-boy COMP make.hurt.PFV-3SM.ACC head-3SM.ACC
     'I spoke to the boy whose head was hurting yesterday.'

   b. kallim-t   lit-ṭifil   li   raʾ-t-*u   ʾum-ī   ilbīraḥ
     spoke.PFV-1SG ACC.DEF-boy COMP saw.PFV-3SF-*3SM.ACC mother-1SG.ACC yesterday
     'I spoke to the boy who my mother saw yesterday.'

                                                      (Alotaibi et al., 2013, p. 13)

The final psych effect structure mentioned here is the restricted binding of full reflexives in stative or non-agentive ObjExp constructions, called forward binding by Landau (2010). The examples in (28) (fashioned after Landau, 2010, p. 109; translation my own) illustrate what Landau argues is the universal marginal acceptability of full reflexive binding in stative ObjExp verbs (Landau, 2010, p. 108).

(28) a. *?Gianni preoccupa se stesso   (Italian), (Belletti and Rizzi, 1998, p. 297)
        Gianni worries   himself
        'Gianni worries himself.'

   b. *Marie intrigeerde zichzelf   (Dutch), (Grimshaw, 1990, p. 184)
      Mary   intrigues   herself
      'Mary intrigues herself.'

   c. ?Politicians depress/worry themselves.   (Grimshaw, 1990, p. 158)

Contrary to Landau's (2010, p. 108) claim that such restrictions on forward binding for psych verbs are universal, Alotaibi et al., (2013) provide the counter examples below where Arabic ObjExp verbs have stative readings and involve local binding.

(29) a. muḥammad bi-yi-tʿib   nafs-u   (EA)
        Muhammad BI-3-tire.IMP.SGM self-3SM.ACC
        'Muhammad tires himself.'

b. In-dejjq-u$_i$ lil xulxin$_i$ / lilna nfus-na$_i$ xi   kulltant   (MA)
   I-bother.IMP-PL ACC each.other / us   breath-1PL.ACC some time
   'We bother each other/ ourselves sometimes.'

(Alotaibi et al., 2013, p. 15)

An observation I have here is that Landau stipulates that such restrictions appear only in stative readings of ObjExp verbs. Examples such as *John and Mary accidentally startled each other in the dark* (Landau, 2010, p. 109) are perfectly acceptable in an eventive reading. The EA example Alotaibi et al., provide exhibits the *bi*-imperfective morphological form which is argued by Mughazy (2005) to represent stage-level recurrent states, i.e. they should allow more eventive behaviour than bare imperfective stative verbs. A question would then be how a bare imperfective stative ObjExp verb (which is a robust state) binds full reflexives in direct object positions in EA. I leave this matter for further research as I cannot speculate about the EA dialect.

It would appear that various Arabic vernaculars, presented in the work of Alotaibi et al., (2013), do not present any of the unique psych effects attested in different languages. This finding has implications for the typology of ObjExp verb classes which suggests that psych verbs are not a structurally and semantically homogenous class of verbs across languages. I return to psych effects in Section 3.2.2.1 where the same structures reviewed above are examined with respect to BA data.

The next section presents an overview of dominant approaches to the linking problem posed by psych verbs.

2.3 The Linking Problem

Baker (1997, p. 73) defines the linking problem as "the problem of discovering regularities in how the participants of the event are expressed in surface grammatical forms". Most theorists assume that this mapping between arguments and syntactic positions is dictated by the UTAH and UAH principles (see (4) and (5) in Chapter 1) which assume a one-to-one correspondence between semantic roles and syntactic structures (see Baker, 1997 for discussions). To illustrate, for every verb in English that assigns both an agent and patient (or

theme), the agent of the event denoted by the verb is expressed in subject position while the theme of the event is in object position as shown in (30a). There are no verbs that allow the inverse mapping seen in (30b) where the patient maps to subject position.

(30) a. John hit/built/found/pushed/bought/cleaned/broke/described the table.
    b. *The table hit/built/found/pushed/bought/cleaned/broke/described John.

<div align="right">(Baker, 1997, p. 76)</div>

The controversy surrounding psych verbs is that they challenge linking rules because seemingly synonymous verbs like *fear/frighten* exhibit varied morphosyntactic behaviour and map their Experiencer argument to various syntactic positions as is well known. With verbs like *fear*, the Experiencer is in subject position, and with *frighten* the Experiencer is in object position, see examples in (31). Most verbs do not behave this way and have a fixed pattern when mapping their arguments as mentioned above (see Baker 1997 for further discussion).[24] The mapping freedom of psych verbs is exemplified in the following examples (repeated here from Chapter 1) where the Experiencer is mapped to subject positions (31a), object positions (31b), or in oblique configurations (31c) (fashioned after Belletti and Rizzi, 1988).

(31) a. Subject Experiencer (SubjExp; class I)   **NOM$_\text{EXP}$** − ACC
         John$_\text{EXP}$ fears/hates/loves dogs.

    b. Object Experiencer (ObjExp; class II)   NOM − **ACC $_\text{EXP}$**
         Dogs frighten/annoy/disgust **John$_\text{EXP}$**.

---

[24] Other argument alterations that present challenges to theories of argument linking include the following examples from Ramchand (2013, p. 276):

(i) Dative alteration:
    a. John gave the book to Mary
    b. John gave Mary the book

(ii) Locative alteration:
    a. John smothered the toast with marmite
    b. John smothered marmite on the toast

In (i), the goal can either be expressed as a *to*-PP alongside a theme (i a), or both participants can be expressed as DPs, as in (i b). In (ii), the location can either be the direct object while the other participant is expressed as a *with*-PP (ii a) or a location PP (ii b). See Levin and Rappaport Hovav (2005) and Ramchand (2013) for further examples and discussions.

    c. Dative Experiencer (DatExp; class III)[25]   NOM – **DAT**EXP
        This appeals to **John**EXP.

Cross-linguistically, SubjExp verbs are considered uncontroversial transitive stative verbs and DatExp verbs are taken to be transitive unaccusative verbs with stative interpretations (Landau, 2010). Both psych verb constructions map their arguments to expected structural positions. In the SubjExp example in (31a), the Experiencer, like the agent role in (30), is assigned to an external argument position (specifier of vP) and mapped to subject position. The DatExp in (31c), also displays mapping patterns found in unaccusative structures, where the Theme is mapped to subject position and any other participant, here the Experiencer, is mapped to a location or path argument expressed by a PP.

ObjExp verbs, on the other hand, have been the topic of debate and controversy for two main reasons: (i) they pose problems for theories of argument linking because of the varied syntactic projections of seemingly similar arguments (Experiencer, Stimulus), and (ii) they are an invaluable source of investigation into the syntax-semantics interface due to the complex aspectual phenomena they exhibit. When reviewing the literature dealing with the problematic ObjExp verb subclass, it can be seen that studies are divided into two basic types, syntactic and semantic. Syntactic based accounts essentially either treat the Stimulus/Theme/Causer as a non-canonical subject, or the Experiencer as a non-canonical object. Therefore, we find treatments in the literature that propose an unaccusative analysis for ObjExp verbs (Belletti and Rizzi, 1988; Drijkoningen, 2000; Bennis, 2004; Kupula, 2010), or treatments that propose some form of experiencer raising theory (Landau, 2010; Petersen, 2016; García-Pardo, 2018). More semantically nuanced studies analyse psych verbs based on a lexical/semantic decomposition which identifies aspectual and event structure distinctions within psych verb structures (see e.g. Pylkkänen, 1997; 1999; Arad, 1998b; Pesetsky, 1995; Biały, 2005). The latter approach is most relevant to the way BA psych verbs are investigated in the later chapters. The following discussion provides a brief summary of the various approaches addressing the linking problem.

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[25] In common with other literature, I refer to class III ObjExp verbs as dative experiencer verbs or class III ObjExp verbs given their Experiencers are marked for dative case in those languages that have it, or are embedded under prepositions (Rákosi, 2006; Landau, 2010; Alotaibi *et al.*, 2013).

2.3.1 Syntactic approaches

There are two primary syntactic approaches to psych verb analysis, the unaccusative analysis and the oblique analysis. The unaccusative approach is best recognized as a movement account which treats ObjExp verbs as unaccusative structures, i.e. both Experiencer and Theme/Stimulus/Causer are generated as underlying internal arguments (objects). This approach is attributed to Belletti and Rizzi (1988), and proponents of this analysis follow some form of their original proposal, so I present their work in sum. The tripartite classification of psych verbs presented in (31) of experiencer verbs was originally noted in Belletti and Rizzi's (1988) seminal paper and has been attested cross-linguistically in a variety of typologically distinct languages and is present in Arabic as observed in Alotaibi et al., (2013) (see Landau, 2010 for a cross-linguistic review). Belletti and Rizzi (1988) divide Italian verbs into three classes: (a) nominative Experiencer and accusative Theme, (b) nominative Theme and accusative Experiencer, (c) nominative Theme and Dative experiencer. These three classes are demonstrated in the examples given by Belletti and Rizzi (1988, p. 291) in (32) below.

(32) a. *Gianni teme questo*   CLASS I   [NOMINATIVE EXPERIENCER]
   Gianni fears this

   b. *Questo preoccupa Gianni*   CLASS II   [ACCUSATIVE EXPERIENCER]
   this   worries   Gianni

   c. *A Gianni piace questo*   CLASS III   [DATIVE EXPERIENCER (DAT-NOM)]
   to Gianni pleases this

   d. *Questo piace a Gianni*   [DATIVE EXPERIENCER (NOM-DAT)]
    this   pleases Gianni

Belletti and Rizzi assume a unified theta grid of Experiencer and Theme and provide a closely argued case for what Baker (1997) terms relativized UTAH (see Chapter 1). They assume that both arguments of the SubjExp and ObjExp classes of psych verbs originate internally within the VP and the difference in surface structure (S-structure) results from the argument movement of the Theme in ObjExp verbs to external (i.e. subject) position. This means that at the level of D-structure both SubjExp and ObjExp verbs have the same representations, with the verb directly

Theta marking the Theme argument. Thus, UTAH is satisfied (see (4) in Chapter 1). In this approach, the unified theta grid of [Experiencer, Theme], shown in (33), combines with the projection rule in (34) to create the S-structure. SubjExp verbs have external arguments as indicated by underscoring the Experiencer argument in the thematic grid and ObjExp verbs have inherent case as shown in the Case-grid.

(33) a. *temere*:   θ-grid   [Experiencer, Theme]
                      Case-grid   [–   –   ]

     b. *preoccupare*:   θ-grid   [Experiencer, Theme]
                      Case-grid   [ACC   –   ]

     c. *piacere*:   θ-grid   [Experiencer, Theme]
                      Case-grid   [DAT   –   ]

<div align="right">(Belletti and Rizzi, 1988: 344)</div>

(34) Linking Principle: Given a θ-grid [Experiencer, Theme], the Experiencer is projected to a higher position than the Theme.

<div align="right">(Belletti and Rizzi, 1988: 344)</div>

According to this analysis, with verbs of the *temere* class (Class I), the Experiencer is a deep subject and moves to external argument position according to the linking principle they provide in (34). The Experiencer is assigned an external theta role and the internal argument is assigned structural case which results in a regular transitive structure. The relevant syntactic representation for this class is given in (35a). As for the *preoccupare* and *piacere* class of verbs (Class II, Class III), they are analysed as unaccusative predicates where both arguments are realized internally. Hence, the Theme argument is originated inside VP as a sister to V, whereas the Experiencer is linked to inherent accusative or dative case and remains higher up in the tree but still inside the VP as shown in (35b). In this analysis, the external argument position (i.e. the subject position) is empty at D-structure and may host the Theme argument that is moved to subject position at S-structure. In short, their theory assumes that in all three classes, the verb directly theta marks the Theme, and the Verb + Theme compositionally theta mark the Experiencer.

(35) a.

```
            S
          /   \
       NP      VP
      Gianni   /  \
             V    NP
            teme  questo
```

b.

```
            S
          /   \
       NP      VP
       ec     /   \
            V'      NP
           /  \    Gianni / a Gianni
          V    NP
      preoccupa questo
        piace
```
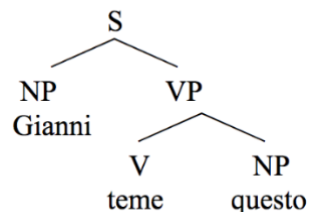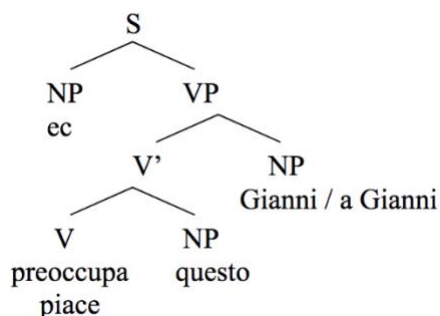
Perhaps the most robust evidence they use to motivate their analysis is backward binding (see 2.2 and 3.2.2.1), whereby an anaphor contained within the subject is bound by an antecedent which appears lower in the clause. However, many subsequent works have challenged this account and the robustness of backward binding as a psych property (see e.g. Pesetsky, 1995; Arad, 1998b; Cançado, and Franchi, 1999). The one enduring result from Belletti and Rizzi's (1988) work is that DatExp verbs are still generally accepted to be unaccusative structures (Grimshaw, 1990; Pesetsky, 1995; Arad, 1998a, 1998b, 2002; Reinhart, 2001). See Pesetsky (1995) for a detailed critique of the unaccusative approach presented by Belletti and Rizzi (1988).

Landau (2010) postulates a different syntactic account where experiencers are treated as mental locations, thus correlating psych verb structures with other locative structures. Crucially, he assumes that all non-agentive non-nominative experiencers are case marked obliques. Even if they appear to be accusatives, they are always embedded under a null preposition, termed $Ø_Ψ$. Landau (2010) argues that there is a crucial aspectual and agentive distinction within ObjExp verbs: that while all Class III (DatExp) verbs are stative and cannot be used agentively, see (36a), Class II ObjExp verbs are ambiguous between stative/eventive readings, see (36b).

(36) a. Bob (*deliberately) mattered to his boss.

b. John embarrassed Maggie (on purpose/ unintentionally).

(Landau, 2010, p. 6)

The lack of an agentive reading with the Class III verb *mattered* in (36a) is indicated by the prohibition on the use of the agentive adverbial *deliberately*. The Class II verb *embarrassed* in (36b) is ambiguous between an agentive reading that allows the agentive adverbial *on purpose*, and a stative reading where John is a stimulus and not an agent that does anything intentional to bring about a change in Maggie. Agentive readings of ObjExp verbs are on par with canonical change of state verbs, i.e. they are accomplishments. Non-agentive, or stative, ObjExp verbs are either achievements or states that 'do not undergo a change of state in the aspectually relevant sense' (Landau, 2010, p. 131).

Landau (2010) follows Pesetsky (1995) and assumes that eventive ObjExp verbs are transitive, projecting both a light *v* and an external argument, the causer. The structural representation for eventive ObjExp verbs is presented in (37).

(37) a. Class II ObjExp verbs (Landau, 2010, p. 8)
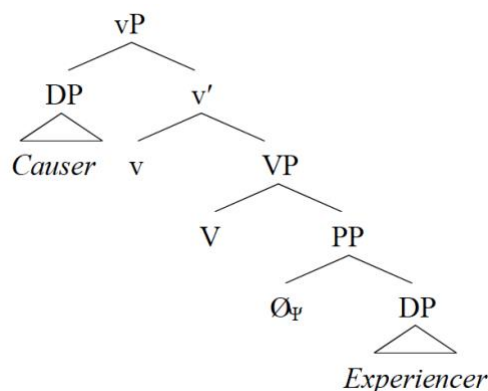
In contrast, stative class II and class III ObjExp verbs select an Experiencer argument and a Target or Subject Matter arguments (henceforth T/SM).[26] He follows standard assumptions that they are unaccusative and have no external arguments (Belletti and Rizzi, 1988; Pesetsky, 1995; Arad,

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[26] The Target/Subject Matter (T/SM) argument was introduced by Pesetsky (1995) (see 2.3.2 for outline). The claim is that stative psych verbs never license a Cause argument, therefore stative psych verbs license an Experiencer argument and a T/SM argument.

1998b; Reinhart, 2001). The following syntactic representations illustrate Landau's account for stative class II ObjExp verbs and class III ObjExp verbs.

(38) a. Stative Class II ObjExp verbs (Hirsch, 2018, p. 50) [27]

```
            VP
         /      \
      PP          V'
     /  \        /  \
   Øψ    DP    V     DP
         △           △
       Exper.       T/SM
```

b. Class III ObjExp Verbs (Landau, 2010, p. 8)

```
            VP
         /      \
      PP          V
     /  \        /  \
  P_DAT  DP    V     DP
         △           △
       Exper.       T/SM
```
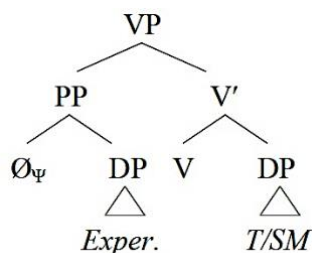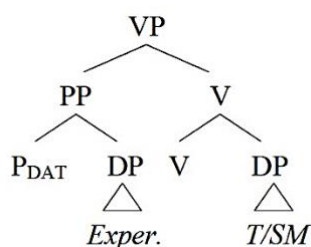
Landau's (2010) approach was recently extended to account for stative ObjExp verbs in Spanish by García-Pardo (2018). However, it has faced criticism from Alotaibi et al., (2013), who argue that Arabic ObjExp verbs behave like canonical direct objects and do not pattern like obliques. I will leave this matter here because it is beyond the focus of my thesis.

2.3.2 Thematic approaches

Thematic approaches are semantically nuanced studies that appeal to lexical and aspectual features in an attempt to solve the linking problem. Such approaches investigate the semantic properties of experiencer verb configurations and try to explain why the Experiencer maps to alternate subject and object positions via identifying grammatically relevant sematic properties.

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[27] This representation is taken from Hirsch (2018, p.50), who derives the above structural representation for stative class II ObjExp verbs from Landau's (2010) discussions. Landau never explicitly illustrates a structural representation for stative class II ObjExp verbs.

One of the key findings made by researchers early on is that ObjExp verbs are causative while SubjExp verbs are not (Grimshaw, 1990; Pustejovsky, 1991; 1995; Pesetsky, 1995; Filip 1996). In the following, I present some of the traditional views that rely primarily on causativity and thematic roles to explain the varied argument mapping of psych verbs.

Grimshaw (1990) notes that the arguments of SubjExp and ObjExp verbs have the same thematic roles of [Experiencer, Theme], however, in ObjExp verbs the Theme is a cause and always appears in subject position. In her analysis, Grimshaw determines two hierarchies for the prominence relations of predicates. The first is a thematic hierarchy, see (39a), and the other is a causal structure, seen in (39b).

(39) a. (Agent (Experiencer (Goal/Source/Location (Theme))))
     b. (Cause (other (…)))

The specification of information from the two hierarchies is determined by the lexical semantic representation of the predicate and each hierarchy imposes its own dominance relation. For example, in a sentence like *the girl broke the window* (Grimshaw, 1990, p. 24), the predicate *break* determines *the girl* as an Agent and *the window* as a Patient in the thematic hierarchy. On the causal hierarchy, the Cause is also *the girl* and thus the subject argument is most prominent in both hierarchies (being both a Cause and Agent), resulting in a canonical transitive causative sentence. The problem with ObjExp verbs is that there is a mismatch in the prominence relations between both hierarchies that is only evident in stative readings of ObjExp verbs, where the subject argument encodes the aspectual primitive Cause but is not an Agent, rather it is assigned a much lower ranking of Theme in the thematic hierarchy. The conflict is exemplified in (40) where the subject is most prominent in the causal hierarchy but not in the thematic hierarchy.

(40) a. The building frightened the tourists.

     b. *frighten*: (x   (y))

             Exp   Theme

                ╳

          Cause   …
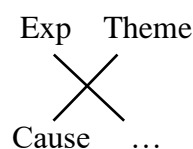
(Grimshaw, 1990, p. 25)

Pesetsky (1995) also argues for a finer grained semantic approach that notes that there is a grammatically relevant distinction to be made between the arguments of experiencer verbs. He contends that the arguments that are referred to as Theme by Belletti and Rizzi (1988) and Grimshaw (1990) are actually semantically distinct. For example, *the television set* in (41a), is what he terms the Target or Subject Matter of Emotion (T/SM), where John experiences worry due to something about the television set, for example worrying about it falling. In (41b) on the other hand, *the television set* is a Causer where the television set causes John to experience worry even if it does not have anything to do with the television set itself, e.g. John could be a detective and worry why a blind man would need television (Pesetsky, 1995).

(41) a. John worried about the television set.
　　　b. The television set worried John.

　　　　　　　　　　　　　　　　　　　　　　　　(Pesetsky, 1995, p. 57)

Of course, the distinguishing thematic roles here between both structures are the T/SM argument, which is always in object position of SubjExp verbs, and the Causer argument, which is consistently in subject position of ObjExp verbs. According to Pesetsky, the Causer must be causally connected to the emotion described by the verb and borne by the Experiencer. The T/SM is evaluated by the Experiencer as part of Nissenbaum's (1985) 'emotional episode'. Thus, in (42a) the experiencer evaluates the direct object, whereas in (42b) the predicate merely causally links the subject to the emotion denoted by that predicate.

(42) a. Bill was satisfied/ content/ with the Chinese dinner.
　　　b. The Chinese dinner satisfied/ contented Bill.

　　　　　　　　　　　　　　　　　　　　　　　　(Pesetsky, 1995, p. 57)

Following this understanding, Pesetsky argues that the linking of psych verb arguments to particular grammatical relations is completely predictable. The assignment of arguments follows the hierarchies in (43) where the highest argument is mapped to the highest D-structure position in the clause.

(43) 　Causer > Experiencer > Target/Subject Matter　　　　　(Pesetsky, 1995, p. 59)

The representation for the examples given in (41) for *worry* are as shown in (44a) and (44b) respectively. For SubjExp verbs, with an Experiencer and a Target, the Experiencer will link to a higher position than the Target. For the ObjExp class of verbs that have a Causer and Experiencer argument, the Causer will link to the subject position while the Experiencer will link to the direct object position (Pesetsky, 1995).

(44) a. [vp[v' V Target/Subject Matter] Experiencer]
      b. [vp[v' V Experiencer] Causer]

(Pesetsky, 1995, p. 59)

One problem that emerges with this classification is what Pesetsky refers to as the T/SM restriction (1995, p.60). If the Causer and Target or Subject Matter are distinct thematic roles, then why can they not appear together? The following examples from Pesetsky (1995) demonstrate this problem. In (45a) for example, the Causer *the article*, the Experiencer *Bill*, and the T/SM *the government* cannot occur in the same structure. The same problem is present in (45b).

(45) a. *The article in the Times angered Bill at the government.
      b. *The Chinese dinner satisfied Bill with his trip to Beijing.

(Pesetsky, 1995, p. 60)

Pesetsky provides a solution by developing a 'cascade' syntactic analysis that relies on the presence of a zero (null) causative morpheme. I do not discuss his complex solution here as it is beyond the scope of the investigation on BA psych verbs. Moreover, Landau (2010, p. 69) questions if the T/SM restriction applies to psych verbs alone and speculates that many independent factors are responsible for such patterns.

In sum, the most enduring conclusions of the semantic approaches to the linking problem of psych verbs are as follows. ObjExp verbs are a heterogenous class and have differences in aspectual denotations. Also, the claim that ObjExp are complex causative eventualities (Grimshaw, 1990; Pesetsky, 1995) remains largely unchallenged as observed by Kailuweit (2015). Another influential observation made by Pesetsky (1995) pertains to the aspectual nature of different ObjExp verbs where they vary between punctual eventive (e.g. *startle, surprise*) and obligatory

stative (e.g. *depress, worry*) interpretations. This leads directly to our next exploration on the event-based approaches to psych verb treatments.

2.3.3 Event based approaches

In this section, a review is given of those proposals that attempt to approach the linking problem by inspecting the event structure of psych verbs. It is this approach that is adapted for investigating BA psych verbs. Therefore a foundation is needed from which assumptions and considerations are made throughout the rest of this thesis. As mentioned prior, ObjExp verbs are the most problematic subclass of psych verbs due to their complex event structure and unique mapping of arguments. This group of verbs is further complicated by the purported psych effects noted to be only present in stative interpretations of ObjExp verbs (see Landau, 2010; see also discussion in 2.2). The problem is further compounded with recent experimental studies that do not show clear resolutions to any of the theoretical debates surrounding psych verbs (Verhoeven, 2008; 2010; 2014; 2015; Brennan and Pylkkänen, 2010; Grafmiller, 2013; Hartshorne et al., 2016; Temme and Verhoeven, 2017; Engelberg, 2018; Hirsch, 2018; Temme, 2019; Fritz-Huechante et al., 2020; Rott et al., 2020). The large amount of research done on the problematic ObjExp subclass has resulted in the general recognition of a two-way division within this subclass of psych verbs according to the properties of agency (agentive vs. non-agentive) and dynamicity (stative vs. non-stative).

Grafmiller (2013) notes that all recent studies on the topic of psych verbs point to a grammatically relevant aspectual distinction between the subclasses of psych verbs. Therefore, the next section presents a few of the most notable treatments that explore the event structure of psych verbs.

2.3.3.1 Arad (1998b; 1999b; 2002)

Arad (2002) follows a Distributed Morphology framework and assumes that word formation is built out of roots and features. Roots are category neutral and do not contain functional material. A root then combines with category features bundled into morphemes or syntactic heads to gain meaning. For example, Arad posits a verbal head 'little *v*' and claims it bundles semantic contents (assigning agentive readings) and transitive properties (case checking). A single root can then

combine with any of three little *v* semantic "flavours" to attain different semantic meanings for a verb: stative, causative, or inchoative. The three little *v* types are presented in (46).

(46) a. √root + V_a = stative.
    b. √root + V_b = causative.
    c. √root + V_c = inchoative.

                                                     (Arad, 2002, p. 18)

This is the central idea through which Arad accounts for the alternate interpretations ObjExp verbs may have where they may be taken as canonical transitive change of state causative verbs or have stative interpretations without causing a change of state in the experiencer. Arad (1998a; 1998b; 1999a; 1999b; 2002) notes three possible ObjExp interpretations: agentive, eventive, and stative. The distinction between the three readings has to do with the presence of an Agent and a change of state in the Experiencer. The agentive reading can be seen with the verb *frightened* in (47) where an agent is present who acts intentionally to bring about a change of state in the experiencer. The purpose clause and the modifier *deliberately* provide an unambiguous agentive reading for the animate subject as demonstrated. According to Arad (1998b), the psych effects noted for so many languages (discussed briefly above in 2.2), are never available for agentive ObjExp verbs since the predicate here acts as a normal transitive agentive predicate.

(47) Nina frightened Laura deliberately/ to make her go away.   (Arad 1998b: 162)

The eventive reading is achieved when an unintentional change of state is caused in the experiencer, i.e. there is a change of state in the experiencer without an intentional agent. Such a reading can be unambiguously obtained with the use of adverbials like *unintentionally* or non-human/inanimate subjects as the examples from Arad (1998b: 164) in (48) show. Eventive ObjExp verbs show some psych effects depending on the language as noted by Arad.

(48) a. Nina frightened Laura unintentionally/ accidentally.
    b. The explosion/ the noise/ the thunderstorm frightened Laura.

The final reading is the stative one for ObjExp verbs, which does not have an agent nor is there a change of state in the experiencer. Arad argues that with stative psych verbs "neither the triggering of the mental state by the stimulus nor the perception of the stimulus by the experiencer is volitional, or under their control" (1998b: 164) for which she discusses the examples quoted in (49). The state Nina finds herself in remains as long as the stimulus is present (not necessarily physically) or perceived.

(49) a. The explosion/ the noise/ the thunderstorm frightened Laura.
     b. John/ John's haircut annoys Nina.
     c. This problem concerned Nina.

The necessary co-occurrence of the stimulus and the mental state makes the stimulus an inherent part of the event of mental state, i.e. stative ObjExp verbs in Arad's view are internally caused events. In contrast, on the agentive reading in (47) above, the agent/causer has "done their job" as soon as the change of state is achieved and the new state holds independently of them. Thus it is not a part of the event of mental state (1998b: 164), i.e. agentive ObjExp verbs are externally caused change of state verbs.

In short, Arad observes that some lexical verbs, like *concern* and *worry,* only facilitate a stative reading whereas others, like *surprise*, only encode eventive readings, and yet some others like *frighten* will have ambiguous stative/eventive/agentive readings. Crucially, on the stative reading of ObjExp verbs, the stimulus must accompany the mental state for it hold, without it, the state does not exist. Arad compares the stative vs. non-stative readings of ObjExp verbs to the difference between *throw* and *drag*. *Throw* is like the non-stative ObjExp in that once the external force is exerted, the motion of the thrown object is independent of the predicate's force. Conversely, for a predicate like *drag*, the external force has to accompany the dragged object for motion to occur: once the force stops, the motion stops (Arad 1998b, p. 166). The following schematic representation for stative ObjExp verbs (50a), and non-stative ObjExp verbs (50b) is fashioned after Arad (1998b, p. 166). In this view, there is a triggering of a state in the experiencer but no change of state in the interpretations of stative ObjExp verbs, whereas a non-stative ObjExp verbs have a change of state that is present after the stimulus is no longer in effect.

(50) a. Stative ObjExp verbs (e.g. *concern, disgust, worry*)

      perception of stimulus: |_____|

      mental state: |........................|

   b. Non-stative ObjExp verbs (e.g. *anger, frighten, surprise*)

    stimulus   mental state

    ----------------|..........................(indefinite)

Arad (1998a; 1998b; 2002) also agrees with Grimshaw (1990) and Pesetsky (1995) that all ObjExp verbs have causation whether they are stative or non-stative verbs. This has proven to be true for many languages and is particularity evident in languages that exhibit overt causative morphology like Finnish, Greek, and Romanian (Nelson, 2000; Pylkkänen, 2000; 2009; Alexiadou and Iordăchioaia, 2014). However, Arad (1998b; 2002) follows Pylkkänen (1997; 1999) and argues that the semantic nature of the causative element is agentive in agentive ObjExp verbs and a stimulus in stative ObjExp verbs. Therefore, the root √fright used in the examples (47) to (49) forms both a stative and agentive reading that is determined by the verbal head (the little *v* flavour) it combines with. Consequently, the syntactic realization of the agentive ObjExp √fright, seen in (51), is similar to standard transitive active verbs headed by little *v*. The argument of the specifier of *v* is structurally determined to be the agent.

(51) Agentive ObjExp verb (Arad, 2002, p. 24)
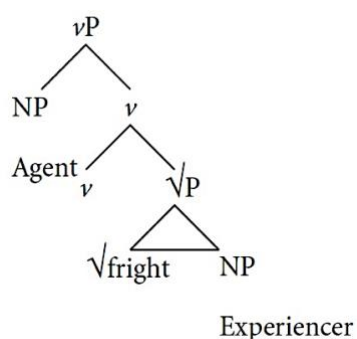
A stative interpretation of √fright is configured under a "stative verbal head" Arad calls v_2 (2002, p. 24). This syntactic representation encodes a stative causative interpretation, as shown in (52), unlike the standard little *v* which is active. Also, the argument in v_2 specifier position is a stative causer.

(52) Stative ObjExp verb (Arad, 2002, p. 25)
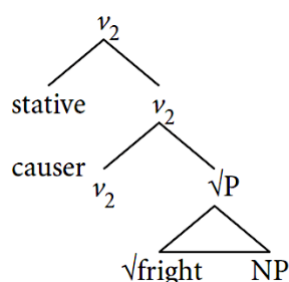
For Arad (2002) both agentive and stative ObjExp verbs assign an external argument (i.e. they are transitive) that is mapped to the specifier of either an active or stative *v*. In other words, Arad assumes both stative and active little *v* are verbalizing transitive heads (by introducing an external argument) and only differ in their semantic content (assigning stative or eventive interpretations).

As for SubjExp verbs, Arad suggests that for many languages both SubjExp verbs and ObjExp verbs are formed from the same *root* which combines with different verbal morphemes to yield verbs of different types, see the example in (53) for the Hebrew root √rgz. The different verbal morphemes in Hebrew combine with the root √rgz to form the SubjExp verb seen in (53a), the ObjExp verb in (53b), and the inchoative in (53c).

(53) (√rgz)   (Hebrew)
    a. *ragaz* (be angry)
    b. hi*rgiz* (anger)
    c. hit*ragez* (get angry)

                                                                 (Arad, 2002, p. 34)

Arad argues that, like all verbal heads, the verbal morpheme that creates SubjExp verbs has the semantic features of stative and non-causative. Hence, this head yields a stative event that introduces an external argument that is stative and non-causative in all languages (Arad 2002, p. 35). However, each language assigns its own syntactic realization of the stative head, i.e. argument structure, transitivity, and case marking are assigned in various ways cross-linguistically (see Arad, 2002, pp. 35-36 for discussion).

In sum, Arad (1998a; 1998b; 1999a; 1999b; 2002) argues against Belletti and Rizzi's (1988) movement account and proposes a non-movement analysis which relies on different flavours of little *v* to account for the different interpretations of ObjExp verbs.

2.3.3.2 Pylkkänen (1997;1999; 2000; 2009)

For Finnish, Pylkkänen (2000) argues that psych verbs have a bipartite distribution pattern based on the parameters of causation and stativity. All SubjExp verbs are non-causative and are taken to be individual-level states. Some SubjExp verbs allow episodic mental state interpretations which allow causative derivations and thus may formulate ObjExp verbs which are taken to be stage-level states. Hence, all ObjExp verbs are derived from SubjExp roots via morphological causativization (Pylkkänen, 1997; Nelson, 1999; 2000). ObjExp verbs have two types of aspectual readings. One is an eventive reading denoting standard transitive verbs, i.e. accomplishments, and the other is stative.

Pylkkänen challenges the idea that states are semantic primitives (e.g. Dowty, 1979), given that many Finnish ObjExp verbs are aspectually stative and still exhibit the complex structure of a causative predicate. The following examples illustrates how a Finnish ObjExp verb (54b) is derived from SubjExp (54a) via a process of morphological causativization. Both sentences are stative as indicated by the partitive case on the direct object, which is only licensed by atelic predicates (telic predicates license accusative case).

(54) a. Mikko   inho-a   hyttysi-ä.   (Finnish)
        Mikko.NOM findDisgusting-3SG mosquitos-PAR
        'Mikko finds mosquitos disgusting.'

    b. Hyttyset   inho-tta-vat   Mikko-a.
        mosquitos.NOM findDisgusting-CAUS-3PL Mikko-PAR
        'Mosquitos disgust Mikko.'

                                (Pylkkänen, 2000, p. 418)

According to Pylkkänen, stative ObjExp verbs, i.e. stative causatives, are episodic predicates, which implies that the Experiencer is in the mental state denoted by the verb so long as it perceives

a stimulus. In other words, given a causative state, two subevents are understood to co-occur on the same temporal plane, one state is causally connected to the other. In this way, both sub-events of a stative causative predicate are co-temporal in the sense that the result state subevent relies on the causing subevent to hold. What is expected with causative predicates of the accomplishment type consisting of two subevents (an activity and a result state), is for the two subevents to unfold independently where the subject does an activity that causes the coming about of the mental state denoted by predicate, i.e. there is a change of state. The following schema in (55) (taken from Biały (2005, p. 36) who fashions it after Pylkkänen (1998)) is reminiscent of Arad's (1998b) stative ObjExp verb schema in (50b) above. In the same manner, the stimulus must accompany the mental state in order for it to hold as shown in (55b). The semantics of simple SubjExp verbs is provided in (55a).

(55) a. Stative SubjExp verbs (individual-level predicates, non-causative) (e.g. *fear, love*)
     mental state: --------------------------

   b. Stative ObjExp verbs (stage-level predicates, causative) (e.g. *concern, perplex*)
     perception of stimulus: |------------------------|
                                 ↓↓ *causation* ↓↓
     mental state: |------------------------|

In her account, Pylkkänen suggests two different treatments for ObjExp verbs based on her observation that there are two kinds of causatives involved. Non-stative ObjExp verbs are treated like canonical accomplishment verbs which license an external argument as suggested in Pesetsky (1995) and Arad (1998a; 1998b). However, she follows Belletti and Rizzi (1988) and suggests an unaccusative raising analysis given that causative statives do not license an external argument (they do not increase valence) and their subjects are derived (based on evidence from inability to form verbal passives). The syntactic realization of stative ObjExp verbs as suggested by Pylkkänen is provided in (56). Causative stative predicates have a CAUSE head but not an external argument introducing a head *v*.

(56) Stative causative (Pylkkänen, 2000, p. 440)

```
                    VP
                   /  \
              CAUSE    vP
                      /  \
                     x    v'
                         /  \
                    Exper.   VP
                            /  \
                   mental state  y
```
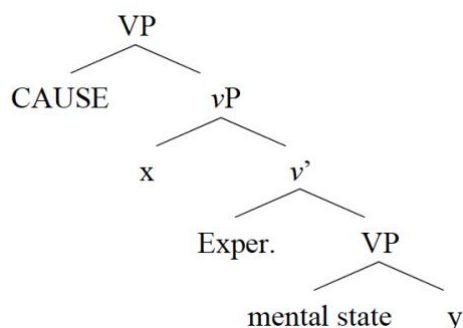
The most significant take-away from Pylkkänen's work is that she argues for the separation of CAUSE from aspect on the basis of the presence of evidence for stative interpretations for causative verbs that have overt causative morphology. Not allowing the progressive construction nor the habitual reading are just some of the tests used to prove the lack of eventive reading for Finnish ObjExp verbs. In short, Pylkkänen concludes that causation does not entail eventhood.

2.3.3.3 Biały (2005; 2020)

Biały (2005) builds on the work presented in Pesetsky (1995), Arad (1998a; 1998b) and Pylkkänen (1997). He relates their ideas to the approach developed by Levin and Rappaport Hovav (1999) for derived accomplishments and takes event structure and the simple/complex event distinction to be the proper domain in which to account for the stative/non-stative distinction between Polish ObjExp verbs (see 2.1.3). Essentially, Biały (2005; 2020) argues that internally caused verbs are represented by simple event structure, while externally caused verbs are represented by complex event structures. The following is a brief review of these claims since similar (although not identical) event structure patterns are found in BA (see 4.5).

Biały's (2005) findings are in line with previous studies where he finds that all SubjExp verbs are taken to be stative verbs that he argues are represented by simple event structures whereas ObjExp verbs are divided into stative and non-stative ObjExp verbs that may have either simple or complex event structures respectively. This distinction is born from a distinction between recurrent, e.g. *denerwować* 'anger', and non-recurrent, e.g. *martwić* 'worry' ObjExp verbs in Polish (Biały, 2020, p. 76). Basically, recurrent ObjExp verbs are equivalent to stage-level states and have non-stative

readings while non-recurrent verbs are equivalent to individual-level states and only allow stative readings in ObjExp verb constructions.[28] The following event structure representations are suggested by Biały (2005) for non-stative ObjExp verbs (57a) and stative ObjExp verbs (57b).

(57) a. [e CAUSE [BECOME [y *<STATE>*]]]
      b. [e CAUSE [y *<STATE>*]], where e is an event

Since ObjExp verbs are taken to be causative, then it is not surprising to see the CAUSE operator in the above representations. What is notable is the absence of the BECOME operator in the stative ObjExp verb representation in (57b) indicating the absence of transition or change of state, hence there is only one event, a causing event. Consequently, as stipulated in the Argument Per Subevent Condition (Levin and Rappaport Hovav, 1999) (see 2.1.3), a simple event reading arises. Hence, both subevents must be coindexed, i.e. they occur at the same time (also see 2.1.3). Conversely, in the non-stative ObjExp verb representation in (57a) both CAUSE and BECOME are present, which indicates the presence of a complex event equivalent to the event structure representation of verbs in the accomplishment class. Complex event structure representations consist of two subevents, a causing event that leads to a transtion or a change of state preceded by BECOME that develop separately on two independent temporal scales. Leaving aside the details of his proposal, Biały (2005) takes internally caused events to have simple stative event structure while externally caused verbs are complex events of the accomplishment class. So far, his findings fall in line with previous work presented above (see e.g. Arad 1998b; Pylkkänen 1999; 2000).

However, in later work, Biały (2020) revises his earlier claims and makes the radical argument that *all* Polish psych verbs in all their divisions, be they SubjExp or ObjExp, perfective or imperfective, recurrent or non-recurrent, have simple stative event structures. Crucially, he argues that all Polish ObjExp verbs, have simple event structures characterised by having one event participant (or one structural argument for the verb) in their canonical psych interpretations. Recall that transitive verbs may have simple event structures where the second argument is not a canonical direct object but may have flexible expression due to not being a structural argument of the lexical

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[28] See also Biały (2020), where the same distinction is made using the terms episodic/non-episodic. I use the terms recurrent/non-recurrent in keeping with the same terms and notions found in Mughazy (2005) and Alotaibi (2019), which are discussed in Chapter 2.

event structure of the verb (see 2.1.3). Biały (2020) uses diagnostics that test the flexibility of the second argument with respect to its distribution. Consider the examples in (58) (from Biały, 2020, pp. 93-94), where the transitive ObjExp verb in (58a) is shown to allow a generic interpretation as seen in (58b). Additionally, the omission of the second argument of a transitive ObjExp verb is allowed as shown in (58c).[29]

(58) a. Sztuka nowoczesna   fascynuje   Janka.
     art   modern.NOM fascinate.PRS.IPFV Janek.ACC
     'Modern art fascinates Janek.'

   b. Sztuka nowoczesna fascynuje   widzów.
     art   modern.NOM fascinate.PRS.IPFV viewers.ACC
     'Modern art fascinates viewers.' [Generic]

   c. Zachowanie   Janka   martwi.
     behaviour.NOM Janek.GEN worry.PRS.IPFV
     "Janek's behaviour is worrying.'

This flexibility in the expession of the second argument of transitive verbs, supports the simple event structure analysis of Polish ObjExp verbs. Therefore, ObjExp verbs, due to their simple event structure and lack of change of state semantics are not compatible with BECOME (result state) or CAUSE operators (Biały, 2020, p. 76). This proposal is at odds with his previous claim that ObjExp verbs can be divided into simple (stative) and complex (accomplishment) events, see (57a) and (57b) above.

Biały (2020) maintains the claim that Polish ObjExp verbs are non-homogenous and can be divided into recurrent and non-recurrent verb types which are related to the nature of the emotion they lexicalize. The distinction is ontological in nature and has no bearing on their lexical aspect qualification. What characterizes recurrent ObjExp verbs is that they can undergo coercion into a change of state, or accomplishmnet reading, provided the trigger can be interpreted as an agent (Biały, 2020, p. 99). Non-recurrent ObjExp verbs cannot present such an aspectual shift. In sum, Biały's (2020) account argues that psych verbs present a unique case of stativity which can be

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[29] The application of this diagnostic with respect to BA data is discussed in 4.5.

associated with causation. They do not qualify as accomplishments because they have a simple event structure, and they cannot be achievements because they do not involve BECOME.

I return to Biały (2020) in (2.5.4) where a review is provided of recent arguments for the inceptive classification of psych verbs.

2.3.3.4 Rothmayr (2009)

Rothmayr (2009) follows Dowty (1979), Pesetsky (1995), and Arad (1998b), and argues that all ObjExp verbs contain a CAUSE operator. Her analysis relies on semantic primitives (DO, BECOME, CAUSE; see discussion in 2.1.3) that encode the different readings of ObjExp verbs in the lexical-semantic structure. She assumes that event structure is directly read off of syntactic structure, thus the verbal layers reflect the number of subevents associated with a predicate (Rothmayr, 2009, p. 123). The following presents her analysis for each of the three ObjExp verb readings noted by Arad (1998b): the agentive, the eventive, and the stative, as well as her SubjExp verb representation.

The first type of ObjExp verb is one that is unaccusative, i.e. has a stative reading, as shown in the example in (59a) with a sentential subject. Notice, Rothmayr's event structure representation of stative ObjExp verbs in (59b) lacks the presence of a BECOME and DO operator indicating the lack of both a change of state and an agent respectively.

(59) a. Daß die Irmi im   Lotto gewonnen hat, ärgert   den Poldi.
        That the Irmi in the lottery won   has annoys the Poldi
        'It annoys Poldi that Irmi had won in the lottery.'

   b. λyλxλs CAUSE (X, ANNOYED(y)) (s) (*Irmi-wins-in-lottery*) (*Poldi*)
      =λs CAUSE (*Irmi-wins-in-lottery*, ANNOYED(*Poldi*)) (s)
                                                        (Rothmayr, 2009, p. 65)

In the stative reading, the state holds for as long as the stimulus is perceived. There is no agent nor is there a change of state, so neither DO nor BECOME are present in the semantic and syntactic

representation of the ObjExp predicate in this example. The syntactic realization for (59a) above is as follows:

(60) Stative ObjExp verb (Rothmayr, 2009, p. 67)
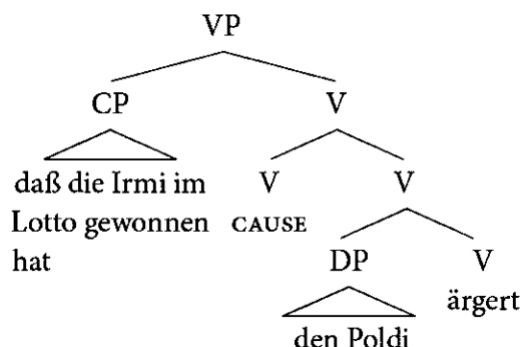
Some ObjExp verbs may express emotion that appears instantaneously, and are assimilated to the achievement class, while others express emotions that may grow over time, and are classed as accomplishments (Pesetsky, 1995; Rothmayr, 2009). In the case of ObjExp verbs that express a gradual onset, e.g. the German predicate *deprimieren* 'depress' seen in (61a), Rothmayr argues that they require the BECOME operator in their lexical-semantic representation, as seen in (61b), which expresses a change of state in the experiencer. If this operator is present, the predicate can no longer be a state, resulting in an agent-less eventive reading. The following illustrates an example of *deprimieren* 'depress' and its lexical structure representation.

(61) a. Die Umstände   deprimieren den Poldi.
          The circumstances depress   the Poldi.
          'The circumstances depress Poldi.'

     b. λs CAUSE(*circumstances*, BECOME (DEPRESSED(*Poldi*)))(s)

                                                        (Rothmayr, 2009, p. 65)

The above lexical structure projects the following syntactic representation for eventive ObjExp verbs:

(62) Eventive ObjExp verbs (Rothmayr, 2009, p. 67)
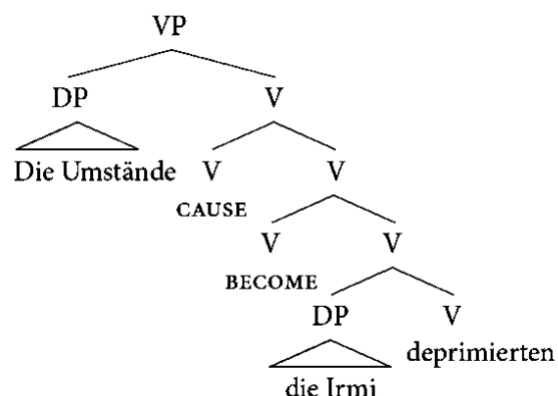
The final reading for ObjExp verb is the agentive interpretation when there is a deliberate attempt to bring about some state of affairs. In such predicates, the DO operator is required in the lexical sematic representation of the verb to encode an agent. The BECOME operator is also needed to indicate the change of state the agent causes. An example of an agentive ObjExp is shown in (63a) with the suggested lexical semantic structure representation in (63b) utilizing DO and BECOME.

 (63) a. Die Irmi ärgert den Poldi.
          The Irmi annoys the Poldi.
          'Irmi is annoying Poldi.'

      b. λy λx λs do(x, CAUSE(x, BECOME (ANNOYED(y)))) (s)(*Irmi*) (*Poldi*) =
         = λs DO(*Irmi*, CAUSE(*Irmi*, BECOME (ANNOYED(*Poldi*)))) (s)

                                                             (Rothmayr, 2009, p. 65)

The syntactic representation of the agentive ObjExp predicate from (63a) is as follows:

(64) Agentive ObjExp verbs (Rothmayr, 2009, p. 66)

```
                    vP
          ┌─────────┴─────────┐
         DP                   v'
        ╱──╲            ┌──────┴──────┐
      die Irmi          v            VP
                       DO ┌───────────┴────────┐
                       (PP)                     V
                      ╱────╲            ┌────────┴────────┐
                (mit einem Lied)        V                 V
                                      CAUSE        ┌───────┴───────┐
                                                   V               V
                                                BECOME      ┌───────┴───────┐
                                                           DP               V
                                                          ╱──╲            ärgert
                                                        den Poldi
```
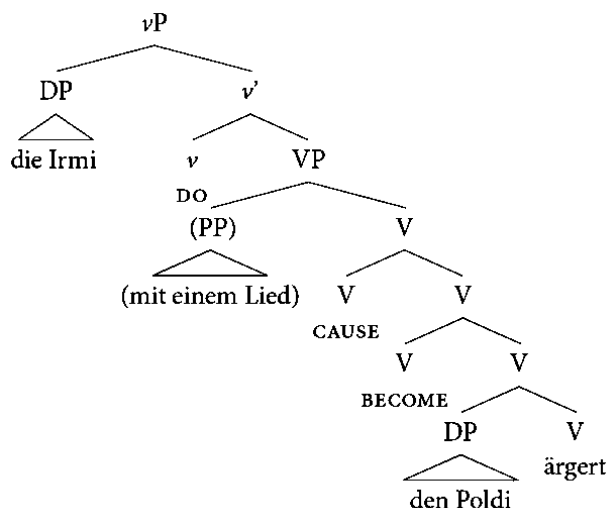
Rothmayr (2009) again follows the dominant view that the semantic and syntactic representation of SubjExp verbs is simple, consisting of a single predicate only. She argues that SubjExp verbs are prime examples of non-agentive stative predicates that contain an external argument (Rothmayr 2009, p. 205). The following semantic and syntactic representations are for the SubjExp verb *liebt* 'love'. Notice the absence of the CAUSE, DO, BECOME operators in (65b) which indicate a non-causative, agent-less, non-transitioning event structure.

(65) a. Die Irmi liebt dieses Buch.
   The Irmi loves this book.
   'Irmi loves this book.'

  b. $\lambda y\ \lambda x\ \lambda s$ LOVE(x, y) (s) (*Irmi*) (*book*) =
   = λs LOVE(*Irmi*, *book*) (s)

               (Rothmayr, 2009, p. 122)

(66) SubjExp verb (Rothmayr, 2009, p. 123)

```
                        VP
              ┌──────────┴──────────┐
             DP                     V'
          ┌───┴───┐           ┌──────┴──────┐
         die Irmi            DP              V
                          ┌───┴───┐        liebt
                        dieses Buch
```
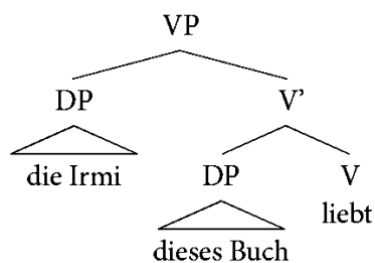
In short, Rothmayr does not deviate from the dominant treatments of psych verbs but rather combines the proposals made in Pesetsky (1995), Arad (1998b), and Biały (2005) to present a comprehensive semantic, syntactic structural representation of psych verbs.[30] Her conclusions are that stative verbs do not present a uniform class of verbs but rather, "there exists a variety of different stative verbs, all having their distinct lexical-semantic representation" (Rothmayr, 2009, p. 203). Stative verbs may have a CAUSE operator (relating two stative sub-eventualities) but never a DO or BECOME which are reserved for eventive predicates.

One of the most significant aspects of Rothmayr's study is her adoption of Maienborn's (2011) distinction between Kimian and Davidsonian states (see Section 3.1.4 for discussion), which I also adopt for BA stative verbs (see Chapters 3 and 4). While Kimian states are robust statives and lack eventive logical structure, Davidsonian states are on par with events and may have eventive or agentive readings. In her study, Rothmayr relies on Maienborn's (2005) event tests to distinguish between Kimian state and Davidsonian state readings for psych verbs. She concludes that all SubjExp verbs are Kimian states while ObjExp verbs may have either Davidsonian or Kimian state readings depending on structure.[31] Thus, she provides further evidence that causative stative predicates are possible. I return to a further exploration of Kimian and Davidsonian states in the next chapters as it is a crucial distinction in explaining psych verb patterns in BA.

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[30] Rothmayr (2009) does not mention Biały (2005) but his proposal for a simple vs. complex event analysis of ObjExp verbs based on work by Rappaport Hovav and Levin (1998) feeds into Rothmayr's semantic structure representations of simple (without BECOME operator) and complex (with BECOME operator) events.

[31] Rothmayr's (2009) use of Maineborn's (2005) diagnostics regarding German psych verb data is discussed in 4.1 in comparison to BA data.

2.3.3.5 Grafmiller (2013)

Grafmiller (2013) presents a study based on corpus and experimental data where he reaches a conclusion radically different from the previous approaches reviewed above. The most salient argument Grafmiller posits is that the grammatical peculiarities of English psych verbs arise not from any differences in lexically specified semantic or syntactic structures, but rather, they arise due to the way emotional situations are conceptualized in given contexts (Grafmiller, 2013, p. 262). He claims that *all* psych verbs show gradient active, passive, and/or agentive constructions based on pragmatic and contextual factors. He argues that English psych verbs have external Stimulus arguments (see also Pesetsky, 1995) as well as internal Experiencer arguments that behave like canonical direct objects rather than oblique arguments, contrary to Landau (2010) (see 2.3.1). His major claim is that the diverse behaviour observed for ObjExp verbs is not due to any grammatically significant difference within psych verbs but are a result of the "tendency for a given verb to be construed as a mental state caused by an external stimulus, or as an attitude directed toward some object" (Grafmiller, 2013, p. 262).

Grafmiller questions approaches which try to show grammatically relevant syntactic or semantic distinctions between subclasses of psych verbs, particularly within the controversial ObjExp verb class, since the findings of his qualitative and quantitative data analyses seem to support the view that any English ObjExp verb can show gradient behaviour regarding passivation and agency (see also Żychliński, 2016). In sum, Grafmiller argues that psych verbs do not present a unique class of verbs that require special consideration in grammatical systems. Rather, psych verbs are neither syntactically nor semantically different than other transitive verbs.

2.4 Interim summary

The previous sections provided the theoretical foundations most relevant for the exploration of BA psych verbs in the next chapters. Prominent approaches to the linking problem were reviewed which showed that all accounts are able to solve the linking problem in some way, but explaining the diverse behaviour of psych verbs, especially ObjExp verbs, proves more challenging. However, aside from Grafmiller (2013), the consensus appears to be that ObjExp verbs are not a

homogenous group of verbs. The different researchers have approached the data from different theoretical stances; some focus on thematic structure (see e.g. Grimshaw, 1990), some on syntactic structure (see e.g. Landau, 2010), and some on aspect or event structure (see e.g. Rothmayr 2009). However, the primary source of data in all the previous studies mentioned above comes from European languages. This study provides an original contribution in its attempt to account for psych verb aspect and event structure in a dialect of Arabic (BA).

Such a study is important since not all languages are found to exhibit unique behaviour in their psych verbs. Verhoeven (2010) provides empirical data from an experimental study of different languages that the stative/agentive ambiguity found in ObjExp verbs is not universal but is subject to typological variation. She found languages split into two types: Type 1 languages, like Greek and German, have some ObjExp verbs that are always stative and others that are ambiguous, while Type 2 languages, like Chinese, Turkish, and Yucatek Maya have uniform ObjExp verbs which behave like typical transitive verbs in always allowing agentive readings. In Type 2 languages, ObjExp verbs are not grammatically significant because they do not deviate in their behaviour from other transitive verbs. The empirical evidence Verhoeven provides for the presence of Type 2 languages that do not exhibit unique patterns for ObjExp verbs falls in line with Grafmiller's (2013) claim that psych verbs are not grammatically unique and behave like typical transitive activity verbs. Due to these observations, one major research question for this thesis is whether BA psych verbs pattern like Type 1 or Type 2 languages.

What I would like to highlight here and what is important for the later exploration of the possible diversity of BA psych verbs is the aspectual classification of ObjExp verbs provided by the different authors reviewed so far. Generally, ObjExp verbs are acknowledged to be causative. Levin and Rappaport Hovav (2005, p. 15) explicitly state that "frighten verbs are causative – whether or not they are stative". However, the causativity of ObjExp verbs is not necessarily associated with agency. Landau (2010, p. 129) notes, that there is a shift from an agentive to a non-agentive reading of ObjExp verbs that is often accompanied by an aspectual shift from a non-stative to a stative reading. Table 2.2 provides a summary of the aspectual characterization the various authors reviewed above provide for ObjExp verbs based on whether the interpretation of the ObjExp verb is causative and agentive, or only causative. The list is certainly not exhaustive

and is only representative of the varied classifications present in the literature, see Kailuweit (2015) for review.

Table 2.2: Aspectual classification of ObjExp verbs according to Vendler's aspectual classes (adapted from Kailuweit, 2015, p. 315).

	Agentive	Causative	Accomplishment	Achievement	State	Activity
Grimshaw (1990)		Yes	✓			
Arad (1998a; 1998b)	No	Yes			✓	
Arad (1998a; 1998b)	Yes	Yes	✓			
Pylkkänen (1998; 2000)	No	Yes			✓	
Pylkkänen (1998; 2000)	Yes	Yes	✓			
Landau (2010)	Yes		✓			
Landau (2010)	No			✓	✓	
Biały (2005)	No	Yes			✓	
Biały (2005)	Yes	Yes	✓			
Rothmayr (2009)	No	Yes			✓	
Rothmayr (2009)	Yes	Yes	✓	✓		
Grafmiller (2013)	Yes/No	Yes				✓
Biały (2020)	No	Yes			✓	
Biały (2020)	Yes	Yes	✓			

What is clear from the table above is that the proposals for the proper classification of ObjExp verbs within Vendler/Dowty event taxonomies are conflicting and judgments are made either for the entirety of the ObjExp verb class (Van Voorst 1992; Grafmiller 2013) or subgroups within (Arad, 1998b; Biały, 2005). Crucially, almost all the approaches adopt the Vendler-Dowty event typology (see 2.1.1) and argue that in their agentive/eventive readings, ObjExp verbs are either accomplishments or achievements, i.e. they are right-boundary events.[32] The problem here is best

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[32] Recall, right-boundary eventualities, identified by accomplishments and achievements, are taken to reference the right-boundary (or coda) of an event as represented in (3) and are thus telic. Conversely, left-boundary eventualities are inceptive eventualities that reference the onset of an eventuality and are argued to be atelic (Marín and McNally, 2011). See 2.5.

illustrated in Rothmayr's (2009) lexical structure representation for eventive and agentive ObjExp verbs which contain the BECOME operator (see 2.3.3.4) that is linked to a change of state and precedes a result state (see Dowty, 1979; Filip, 2011; see also 2.1.3). In such a lexical representation, a non-stative ObjExp verb terminates into a result state, i.e. it is telic. The issue is that recent studies show that psych verbs are not linked to the semantics of change, and they fail telicity tests (see e.g. Rozwadowska, 2020). While the previous studies, reviewed above, argue that non-stative ObjExp verbs are comparable to right-boundary events, like accomplishments or achievements, other studies claim that non-stative psych verbs are unique instances of left-boundary eventualities that refer to an onset of a state (see e.g. Rozwadowska, 2003; Marín and McNally, 2011).

The topic of the next section outlines the literature on left-boundary eventualities, or inceptive states, and how they account for the behaviour of psych verbs in Polish and Spanish.

2.5 Psych verbs as left-boundary eventualities

In the previous section we have seen how the dominant aspectual classifications of psych verbs in the literature categorize psych verbs as two types: either a psych verb is interpreted as an unbounded atelic state, or it is associated with a dynamic event denoting a change of state which encodes telicity, identified as accomplishments or achievements. The change of state reading is inherent in the formal representations of eventive psych verbs where a BECOME operator precedes a resulting state that terminates a complex event. This operator was shown in Rothmayr's (2009) analysis of psych verbs in 2.3.3.4, as well as in the highly influential lexical representation of event structure developed by Rappaport Hovav and Levin (1998) (and adopted by Biały (2005) in his analysis of Polish psych verbs) which was presented in 2.1.3 above and is repeated below. Achievements have the lexical event structure presented in (67a), whereas accomplishments have the representation shown in (67b). In both event types, there is a BECOME predicate that represents a final state that comes about after a change of state.

(67) a. [BECOME [x *<STATE>*]]
    b. [x CAUSE [BECOME [y *<STATE>*]]]

New research in recent years has opened a new avenue of exploration that challenges the assimilation of non-stative psych verbs to any right-boundary event type like accomplishments or achievements. Rozwadowska (2003; 2006; 2012) argues that psych verbs (or at least a subset of them) present simple, non-dynamic inceptive eventualities. Crucially, Rozwadowska (2012), alongside Marín and McNally (2011), Bar-el (2005), and others, argue that inceptives are a type of eventuality that represent a punctual initiation of a state that is not telic. These aspectual properties are unique and cannot be accommodated in traditional Vendlerian event taxonomies. Referring to Table 2.1 where Vendler's event categories and their aspectual features are depicted, we find there is no event type represented that carries the aspectual features of [-durative], [-telic], and [-dynamic].

In contrast to end-point oriented approaches to event typologies, recent work documents languages where initial events, or inceptives (often called inchoative states) are either lexically inherent or grammatically encoded and must be included in the basic inventory of events alongside accomplishments, achievements, states, and activities.[33] Moreover, this event type refers to the left-boundary or initial point of an eventuality that needs to be distinguished from end-point or right-boundary event types. This new classification of a novel event type enriches the typology of events and explains, at least for some languages, the unique properties observed for psych verbs, for example their patterns regarding temporal adverbials which are discussed as the discussion progresses.

The sum of the arguments found in the literature and presented in the following sections are as follows. There are two types of states (and by extension, two types of psych verbs) recognized in the literature that have different temporal properties and display different behaviour in various linguistic contexts. One is a canonical stative verb, and the other refers to the beginning of the state denoted by the verb (i.e. an initial or left-boundary). The latter type has received different names

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[33] Although the notion of initial or left-boundary events is certainly not new in the literature, as Smith (1997, p.22) suggests 'the initial end points of events are natural, since they represent change from a state of rest'. However, the specific features brought forth from empirical data and new insights from typologically different languages certainly provides a novel approach to inceptive or left-boundary events as a grammatically relevant category that deserves its own autonomous position among Vendler's widely adopted eventualities.

in the literature: stage-level state (Chang, 2003), inchoative state (Bar-el, 2005; Choi, 2015a; 2015b; Marín and McNally, 2011; Machicao y Priemer and Fritz-Huechante, 2018), left-boundary state (Machicao y Priemer and Fritz-Huechante, 2020), and inceptive state (Rozwadowska, 2020). The importance of the incorporation of a left-boundary event in the typology of eventualities helps to differentiate predicates that only refer to an onset of a state like *get angry* from those that refer to a process that entails a culmination like *melt*.

In the following, I outline the literature on initial states observed in various languages and how different authors build on the stative dichotomy to account for the diversity of psych verbs in different languages. Section 2.5.1 discusses how the terminology used in traditional aspectual literature discussing the initial stages of states leads to semantic assumptions that are not borne out by the behaviour of the verbs in question. Section 2.5.2 presents a brief overview of the literature on the distinction between two types of stative verbs, one refers to an initial state, and the other a canonical unbounded state found in typologically different languages. This is followed by specific discussions on the initial boundary nature of psych verbs in Spanish (2.5.3) and Polish (2.5.4).

2.5.1 Clarification on terminology used for beginnings of eventualities

There are three main terms used in the aspectual literature that refer to the beginnings of events: *inchoative, ingressive,* and *inceptive*. Smith (1997, p. 22) defines inchoatives as "the coming about of a state, without an agent" and she defines inceptives as "the entry into an event". Smith uses the term inceptive in the context of activity and accomplishment verbs. The inceptive, according to Smith, indirectly represents activities, as shown in (68), and accomplishments, illustrated in (69), via explicit super-lexical verbs,[34] like *began* as shown in (68a) and (69a), punctual adverbials (68b), or there may be an implicit inceptive reading (69b). Inceptive interpretations of activities, as seen in (68), focus on the beginning of the event, whereas the inceptive readings of accomplishments, seen in (69), focus on the entry into the process stage of an accomplishment event.

 (68) a. Mary began to run.

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[34] Super-lexical verbs are those verbs that "focus a particular aspect of a situation rather than specifying its content" as defined by Smith (1997, p. 24).

b. Suddenly Mary ran. An hour later she was still running.

<div align="right">(Smith, 1997, p. 25)</div>

(69) a. They began to walk to school.
     b. They walked to school at noon.

<div align="right">(Smith, 1997, p. 29)</div>

Stative verbs may also appear in initial stage contexts. However, Smith (1997, p. 49) uses the term inchoative when a stative verb appears in the context of the beginning of a state. The initial stage of a state is often focused using a dynamic adverbial like *suddenly*, as in (70a), or a *when*-clause, as shown in (70b).

(70) a. Suddenly Mary knew the truth.
     b. John was dumbfounded when Harry threw the glass.

<div align="right">(Smith, 1997, p. 49)</div>

In (70b), Smith notes that there is an inchoative reading of the stative predicate in the main clause. John only became dumbfounded when the glass was thrown; he was not in a dumbfounded state prior to that. Importantly, the inchoative refers to a change of not being in a state to being in the state denoted by the verb, i.e. inchoatives are changes of states.

In two very similar contexts that differ only in the aspectual nature of the verb, Smith (1997) uses two terms to reference the beginnings of eventualities. The term *inceptive* is associated with the beginning of events, and the term *inchoative* is associated with the beginning of states. Moreover, Dickey (2000, pp. 8-9) quotes Isačenko (1962, pp. 385-418) in his use of the term *ingressive* to refer to the beginnings of situations in Russian Aktionsart and provides the following examples of ingressive eventualities (notice both states and non-states are exemplified here): *zagovorit* 'begin to speak', *vozljubit* 'begin to love', *pocuvstvovat* 'begin to feel'. However, Smith (1997, p. 42) uses the term ingressive to refer to the preliminary stages of an achievement, e.g. *the bomb exploded slowly*. Moreover, Olsen (1997, p. 50) uses the term ingressive to indicate a dynamic entrance into a state denoted by the verb. As seen from the previous discussion, the first problem that arises when dealing with initial stages of events has to do with inconsistency in how the different terms are used in the literature.

Another complication is found in the correlation that is prevalent in the literature between boundary events and telic interpretations. As Smith (1997, p. 49) explicitly states, "the endpoints of all situations are telic events: they bring about a change of state, either into a situation or out of it" (see also Dickey, 2000; Iatridou et al., 2003; Malaia, 2014; Cuervo, 2015). The assumption of course for boundary events is that they are change of state events that are telic and would license a BECOME operator in their lexical representations. Indeed, anti-causative constructions are called inchoatives where CAUSE is removed in the lexical semantic representations but BECOME remains indicating that a causer is suppressed in the structure but a change is still present (see Haspelmath, 1993; Al-Dobaian, 2002; Martin and Schäfer, 2014; Alqadi, 2015; Cuervo, 2015).

This view that inchoative events are changes of state means that they are complex events that denote a BECOME operator in their semantics. Rothmayr (2009, p. 122) argues that inchoative verbs are the result state of a previous process and encode a BECOME operator in their event structure. She recognizes the presence of a stative and inchoative alternation in some SubjExp psych verbs in several languages. For example, an inchoative alternant for the German stative verb *kennen* 'know' is either *erkennen* 'spot, realize' or *kennen lernen* 'get to know' (Rothmayr 2009, p. 118). The same pattern is found in Latin where *cognovit* 'I know' has the inchoative alternate *cognosco* 'I get to know' (Rothmayr 2009, p. 118). The important distinction she makes that concerns us here is that 'true' SubjExp verbs are not the result of some previous process, i.e. they never allow inchoative readings. In contrast, verbs like *kennen* 'know' behave more like perception verbs and are not 'true' SubjExp psych verbs. Thus, inchoative verbs (or boundary events) are always correlated with a change of state and by extension, they always carry a BECOME predicate.

So intimate is the association between the notion of change (i.e. BECOME) and inchoativity in the literature that early accounts of the beginnings of states called *inchoative states* encoded BECOME as part of their semantic representations even while they argued for the atelic nature that distinguishes them from telic accomplishments and achievements (Bar-el, 2005; Kiyota 2008). In later proposals, BECOME is not encoded in the event structure of inchoative states at all based on the argument that beginnings of states do not refer to semantics of change (Marín and McNally, 2011; Rozwadowska, 2020).

The sum of the preceding discussion is that there is some confusion on the precise terminology that is used for initial boundary eventualities. Furthermore, the term inchoative is closely associated with a change of state and, consequently, a BECOME operator. Such a link proves to be at odds with the aspectual properties and semantics of initial boundary events, where it is argued that initial boundary events are not telic, nor do they encode a change of state, and must be distinguished from right-boundary events. The following section briefly explores the literature on the heterogenous nature of states where distinctions are made between canonical unbounded states and states that refer to the beginnings or left boundaries.

2.5.2 Beginnings of states

Bar-el (2005) explicitly argues for an aspectual classification of predicates based on the presence or absence of initial or final points in predicate representations. The focus here is on her arguments for the importance of initial points in Sḵwx̱wú7mesh (a.k.a Squamish) predicates. Bar-el argues that stage-level states (see footnote 11) have both inchoative and stative readings, while individual-level states have simple stative readings.

(71) a. na **t'ayaḵ'** lha Mary
      RL angry   DET Mary
      (i) 'Mary got angry.'
      (ii) 'Mary is angry.'

   b. na **hiyi** ta   mix̱alh
      RL big DET black.bear
      'The bear is big.'

                                                    (Bar-el, 2005, p. 375)

Focusing on inchoative states, Bar-el argues that in Sḵwx̱wú7mesh, inchoative states (e.g. *get angry*, *get cloudy*) form complex instances of initial boundary events consisting of two subevents. The critical distinction between initial boundary events and final boundary events is based on where the BECOME predicate appears in the event structure, that is, whether it appears in the initial subevent (e_1) or a final subevent (e_2). The following examples illustrate Bar-el's (2005, p. 8) suggested structures for initial and final events:

(72) a. Initial point: $\lambda e.\exists e_1 \exists e_2[e =^S (e_1 \cup e_2) \land (\textbf{BECOME(P)})(e_1) \land (DO(P))(e_2)]$

    b. Final point: $\lambda e.\exists e_1 \exists e_2[e =^S (e_1 \cup e_2) \land (DO(P)(e_1) \land (\textbf{BECOME}(Q))(e_2)]$

The representation in (72a) states that there is an event that consists of two subevents: the first subevent contains a BECOME operator indicating transition, and the second subevent contains DO indicating dynamicity. The representation in (72b) states the opposite where there is an event that encodes dynamicity with DO in the initial subevent, and the second subevent encodes the final BECOME event.

Bar-el (2005) adapts Rothstein's (2004) neo-Davidsonian theory of event representation and formulates the representation for inchoative states presented in (73a) based on her own arguments for an initial BECOME subevent for initial events. Although Bar-el does not explicitly discuss homogenous states, her adaption of Rothstein's template implies the acceptance of the representation provided in (73b) for homogenous states. This representation is adopted by Kiyota (2008, p. 47) for the distinction between the two stative verb types in both Sənčáθən (the Saanich dialect of Straits Salish) and Japanese. Choi (2015b, p. 21) also adopts this representation for a distinction between inchoative states and pure states in Korean.

(73) a. Inchoative states: $\lambda e.\exists e_1 \exists e_2[e =^S (e_1 \cup e_2) \land (BECOME(P))(e_1) \land P(e_2)]$

    b. Homogenous states: $\lambda e.P(e)$

Importantly, the representation above accounts for the fact that homogenous states have no initial points or end points, whereas inchoative states have an initial point but do not entail culmination and thus lack an end point (Bar-el, 2005; Kiyota, 2008). A crucial argument here is the notion that inchoative states are not telic. One test used to illustrate the unavailability of end points for inchoative states is the expansion test.[35] In (74), a perfective inchoative state can be conjoined with an imperfective clause asserting the continuation of the same event denoted by the perfective verb without contradiction. The meaning in (74) is that I was mad the entire time about the same thing.

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[35] The expansion test is an event continuation test which diagnoses the presence of a final point. It involves conjoining a clause containing a perfective predicate with a clause asserting that the event may have continued. See Bar-el (2005) and Smith (1997) for more details; see also 4.2.2.2 for applications of this test to BA data.

Given that inchoative states can continue without becoming infelicitous, Bar-el argues that inchoative states do not have culminations and thus no final end points (2005, p. 95).[36]

(74) chen t'aya<u>k</u>' ti natlh I na7-xw chen wa t'a-t'aya<u>k</u>' (Skwxwu7mesh)
1SG.SG angry DET morning CONJ RL-still 1B.SG IMPERF REDUP-angry
'I got mad this morning and I'm still mad.'

(Bar-el, 2005, p. 94)

Very similar arguments are made for Chinese in differentiating between two types of states. Chang (2003) distinguishes between individual-level states and stage-level states with respect to their behaviour with the aspectual marker *le*. Chang's argument is that individual-level states present permanent properties and do not have initial or end points, i.e. they are canonical unbounded (or homogenous) states. He also argues that stage-level states correlate with inchoative states and contain initial boundaries. In the same way, Huang et al., (2000) classify Chinese states into *inchoative states* and *homogenous states* (stage-level and individual-level states respectively) based on the different behaviour they exhibit.

Two types of states are attested in Korean as well. Choi (2015a; 2015b) uses various diagnostics to differentiate between what he terms *pure states* (i.e. unbounded states) and *inchoative states*. By way of example, one of the diagnostics used to distinguish between pure states and inchoative states is their split behaviour with respect to punctual adverbials as observed by Bar-el (2005). Punctual adverbials give three different readings depending on the aspectual property of the matrix predicate: inceptive (initial), medial (overlapping), and culminating (telic) readings. In combination with inchoative states, a punctual adverbial results in an inceptive interpretation in Korean.

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[36] The argument that inchoatives allow continuation is also presented in Smith (1997, p. 34) who claims that "inchoatives often allow the inference that the resultant state continues, unless there is information to the contrary". The following examples are presented by Smith (1997, p. 34) where she states that the result state is understood to hold indefinitely.

(i) a. Mary got angry.
    b. John became tired.
    c. Bill learned Greek.

(75) Juno-nun [ku sosik-ul   tul-ess-ul ttay]   hwana-ss-ta.   (Korean)
     Juno-TOP that news-ACC hear-PFCT-when angry-PFCT-DEC
     'Juno was angry when he heard that news.' [inchoative state]
     a. ✓ 'Juno was not angry before, but he became angry because of the news.'
     b. ✕ 'Juno was already angry when he heard the news.'

                                                               (Choi, 2015b, p. 20)

In (75), the inchoative state *hwana* 'angry' co-occurs with a punctual adverbial and can only receive an inceptive reading. At the time indicated by the punctual adverbial the state described by the predicate begins simultaneously. Conversely, pure states do not show the same pattern of behaviour. In the following example, see (76), the pure state *aphu* 'sick' is acceptable under a medial context meaning the state was already held prior to the time indicated by the punctual adverbial.

(76) Juno-nun [nay-ka cenhwahay-ss-ul ttay] aphu-ess-ta.   (Korean)
     Juno-TOP I-NOM call-PFCT-when   sick-PFCT-DEC
     'Juno was sick when I called him.' [pure state]
     a. ✓ 'Juno was already sick when I called him.'
     b. ✕ 'Juno was not sick before, but he got sick when I called him.'

                                                               (Choi, 2015b, p. 21)

Importantly, Choi (2015b) notes that the pure state does not indicate a change of state from *not being sick* to *being sick* as shown in the above example. The unavailability of an inceptive interpretation for pure states when co-occurring with punctual adverbials indicates that Korean pure states, unlike inchoative states, describe states without referencing an initial transition (i.e. onset) into that state. In other words, Choi (2015a; 2015b) follows Bar-el (2005) and argues that inchoative states describe a state with an inherent transition into that state represented by a zero affixation of a BECOME operator. Pure states, on the other hand, describe homogenous atelic states that do not involve an inherent transition or change. Choi (2015b) follows Bar-el (2005) and Kiyota (2008) in arguing that pure states have a simple event structure in that they contain only a state (e), whereas inchoative states contain a BECOME subevent (e_1) followed by a result state (e_2) which is durative.

In sum, the studies reviewed above from typologically diverse languages converge on the notion that a subclass of initial boundary states need to be distinguished from canonical unbounded states. Interestingly, a couple of authors have linked inchoative state readings to the stage-level state type (see Chang, 2003; Bar-el, 2005). This connection between the two state types and their aspectual interpretations (inchoative vs unbounded state) will prove vital in our exploration of BA states and psych verbs in the coming chapters. The review above has also shown that inchoative states, as well as inchoative events in general (see 2.5.1), are represented with the BECOME operator in their semantic structure.

As mentioned prior, BECOME is an operator that indicates an event of change, that is, a transition from one state ¬ø, to another state ø (see Dowty, 1979; Bar-el, 2005; Filip, 2011, 2012; Choi, 2015a; 2015b). To say that BECOME is present in a structure is to assume that the event is telic (Filip, 2011). However, the studies above have repeatedly, and contradictorily, argued that inchoative states do not involve culmination and hence do not have a telic point. To solve this dilemma, later studies that expand the stative dichotomy to account for the diversity of psych verbs do not use the BECOME operator in their representations of inchoative states (see e.g. Marín and McNally, 2011).[37]

In the psych domain, the distinction between inchoative and unbounded states is extended to Korean SubjExp verbs where Machicao y Priemer and Fritz-Huechante (2018, p. 162) distinguish between pure state SubjExp verbs consisting of adjectives and verbs such as *mwusepta* 'scary', and inchoative state SubjExp verbs like *ccacungnata* 'get irritated'. Various other studies extend the classification to ObjExp verbs as well. The following section focuses on those studies most relevant to the later investigation of a BA state verb dichotomy, and by extension, psych verb diversity.

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[37] Due to the ambiguity associated with the term inchoativity, given that the dominant literature associates it with change of state and, in turn, telicity, I will refer to the subclass of initial boundary states as inceptive states in the following chapters to distance initial events from the semantics of change and telicity. For the time being, I maintain the labels used by each author in their respective discussions.

2.5.3 Spanish inchoative psych verbs

Marín and McNally (2011) present an analysis of Spanish reflexive psych verbs (SRPVs) that makes a convincing argument for a distinction between the notions of telicity and inchoativity. Essentially, Marín and McNally argue that SRPVs are inchoative states that refer to the initial points of an eventuality without referring to a transition, or a change of state. According to this view, inchoativity is logically distinct from change of state predicates that entail telicity. Recall that the dominant arguments in the literature claim that all boundary events are telic (see e.g. Smith, 1997) and that all change of state predicates, identified by accomplishments and achievements, are telic (see e.g. Dowty, 1979).

Marín and McNally recall Dowty's (1979) definition of the BECOME operator, where reference is made not only to the initial interval at which a proposition ø is true, but it also includes reference to the final interval where ¬ø is true. Due to this, BECOME, as it is defined by Dowty and widely accepted, represents a transition, and models a change of state. However, Marín and McNally argue that it is possible to imagine a predicate that lexically specifies the initial onset of a state without reference to the preceding interval where the state did not hold. For such a predicate, it would be possible to infer that some change has taken place that brought about the new state. Such a predicate would likely qualify as an inchoative with a BECOME operator, but it would not qualify as a change of state since no transition took place. In other words, that the state indicated by the inchoative predicate did not hold prior to that initial point is a matter of inference. Such a view is a departure from the dominant views on inchoativity.

Marín and McNally (2011, p. 472) provide the following English example to illustrate their point.

 (77) Marta was upset when I told her she couldn't go away for the weekend.

Here, the stative predicate *to be upset* is used instead of *becomes upset* even though the most natural understanding is an inchoative interpretation in which the onset of Marta's upset coincides with hearing the news that she could not go away for the weekend. The authors argue that the predicate in this sentence does not refer to a change of state event though it might seem to. From the sentence we can only infer that a change in state has occurred upon hearing the news. This

predicate is a good example of Marín and McNally's definition of an inchoative; it is a predicate that does not entail a change of state but necessarily includes the onset of some eventuality.

This leads Marín and McNally to question if some languages lexically require some predicates to refer to the onset of a state without referring to the change producing that state. The authors argue SRPVs provide precisely this type of predicate.[38] SRPVs are a useful case study because they have often been described as telic achievement predicates due to their reflexive morphology. Marín and McNally explain that this morphology is associated with inchoativity which in turn is linked to the telic achievement class of verbs (Marín and McNally, 2011, p. 468). Thus, SRPVs are generally treated as telic achievement predicates. However, Marín and McNally claim that their study confirms that inchoativity is logically distinct from telicity. They make the case for a need to distinguish between predicates that truly refer to changes of states from those that merely infer that a change has taken place. Their claims support the views presented in Piñón (1997) where change of state predicates must be represented differently from predicates typically assigned to the achievement class in those typologies that assume such a class, e.g. the Vendler-Dowty event taxonomies.

Marín and McNally adopt the ontology of eventualities proposed by Piñón (1997) and assume that eventualities are comprised of two fundamentally different sorts: there are *happenings*, which include events, processes and states; and *boundary* happenings that encompass beginnings and endings of happenings. Happenings (e.g. *eating the sandwich*, *run a mile*, *to hate something*) have temporal extension (or temporal trace) meaning that they have a nontrivial temporal interval. However, boundary happenings (e.g. *reach the store*, *recognize the man, arrive*) are truly instantaneous (or punctual) predicates that are not associated with a temporal interval but rather refer to a temporal point. If we accept that all events require change and change requires time, however short (Piñón, 1997, p. 276), then how do we describe punctual predicates that are events located in time but do not have temporal extension at all, nor directly describe changes (they only presuppose a change)? Such events are not standardly assumed to exist in traditional event semantics (Piñón, 1997, p. 277). The analysis developed by Piñón presents a two-class event

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[38] Such predicates have already been shown to exist in the literature as briefly presented in Section 2.5.2.

ontology that accounts for truly punctual events. Thus, in Piñón's event typology, achievements are punctual non-dynamic events that refer to either left or right boundaries.

Marín and McNally (2011) further develop the use of the BEGIN operator that is used in Piñón's (1997) semantics for boundary events. They use it in their semantics of initial boundary SRPV events. They define BEG(inning) as a three place predicate relation between happenings; the left-boundary happening *e*, the happening *e'* it is a boundary of, and the description *P* of that happening (Marín and McNally, 2011, p. 491). The stipulation in the final clause guarantees that *é* is not immediately preceded (<<) by another happening *e''* that can also combine with *e'* and form a larger happening *P* represented by (*e'' ⊕ e'*). The following semantics in (78) is Marín and McNally's formulation for initial bound events which encompass inchoative predicates. According to this view, inchoativity is defined as "any predicate which describes an eventuality which necessarily is or includes the beginning of some happening" (Marín and McNally, 2011, p. 491).

(78) **Beg**: = λeλe′λP[**Boundary-Happening**(e) ∧ **Eventuality**(e′) ∧ **Left-Boundary**(e, e′) ∧ P(e′) ∧ ¬∃e″[e″<< e′ ∧ P(e″⊕ e′)]]

Marín and McNally (2011) provide evidence for the legitimacy of their claims in eight diagnostic tests used to detect aspectual properties of duration, telicity, and punctuality. The sum of Marín and McNally's claims for SRPVs is as follows: all SRPVs are initial boundary events (i.e. they are inchoative predicates or onsets of states) that do not refer to the change that brought them about, i.e. change is merely entailed. SRPVs can be further subdivided into two groups: punctual and non-punctual predicates. The non-punctual subclass refers to the onset of the state and some duration of the stative eventuality and is represented by verbs like *aburrise* 'to get bored', see example in (79a). The punctual subclass includes verbs like *enfadarse* 'to get angry' that only refer to the initial point of the state without including reference to any other part of the state in question, as shown in (79b), thus presenting truly punctual events as defined by Piñón. The two subclasses are called *aburrise* and *enfadarse* classes to refer to their respective SRPV type.[39]

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[39] See Marín and McNally (2011, p.474) for a representative list of verbs for each class.

(79) a. Maria se ha aburrido
      Marta SE has bored
      'Marta has gotten bored.'

    b. Josep se ha enfadado
      Josep SE has angered
      'Josep has gotten angry.'

<div align="right">(Marín and McNally, 2011, p. 469)</div>

One issue that arises in identifying the *enfadarse* class as a punctual predicate that does not refer to any temporal extension of the state denoted by the verb is whether such predicates should be classified as a stative eventuality at all. Marín and McNally argue that verbs in the *enfadarse* class have a generic or habitual reading that is excluded in typical stative predicates. The examples below show the difference between the interpretations of *enfadarse* class verbs, illustrated in (80a), which have a generic reading, versus a canonical stative verb which only allows a present state reading, as shown in (80b).

(80) a. SE asombra/asusta con los fuegos artificiales
       SE amaze/frighten with the fires artificial
       'He is (generally) amazed/frightened by fireworks.'
       Not: 'He is amazed/frightened (now) by the fireworks.'

    b. Le gustan los hombres con barba.
      her like   the men   with beards
      'She likes men with beards.'

<div align="right">(Marín and McNally, 2011, pp. 484-485)</div>

What we have in the *enfadarse* class is a group of verbs that are non-dynamic not because they are stative, but because they are punctual. This is confirmed by how their behaviour differs from canonical states regarding durative adverbials, the progressive, and present tense interpretations.[40] This is problematic because all traditional event taxonomies recognize dynamicity as the defining feature separating states from events; all events (accomplishments, activities, and achievements) are classed as dynamic and states are not (see e.g. Vendler, 1957; Dowty, 1979b; Olsen, 1997;

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[40] Some of these tests are discussed in Chapter 4 in the investigation on the distinctions within BA psych verbs. Refer to Marín & McNally (2011) for more details.

Filip, 2012; also see Table 2.1 above for Vendler's event typology). The existence of a non-dynamic class of verbs that does not fully pattern like states nor events is also recognized in Fábregas and Marín (2013; 2017). Leaving aside the specific arguments of their study, the question is raised of whether onsets of states should be classified as stative predicates given that they are not durative, even though they are non-dynamic. This question is explored in Chapter 3 regarding BA data.

I return to some of the diagnostics used by Marín and McNally (2011) to maintain an aspectual distinction between the two SRPV classes in Chapter 4. For the purposes of the review here, it is enough to see how Marín and McNally provide a robust argument that all initial boundary events are inchoative predicates that are not telic, nor do they refer directly to a change of state, contrary to the standard descriptions of inchoativity as described above.

The ambiguity surrounding the term inchoative (given that it is identified as a change of state predicate with the BECOME operator in the majority of literature) leads Rozwadowska (2012) to consistently refer to such predicates as inceptives, initial boundaries, or onsets. The following section looks at her discussion of such predicates in Polish.

2.5.4 Polish inceptive psych verbs

Rozwadowska (2003; 2006; 2012; 2020) argues extensively that Polish psych verbs are not telic eventualities. Even in their eventive (non-stative) readings, they are unlike accomplishment verbs as frequently claimed in the literature (see 2.3.3). Rozwadowska maintains that all Polish imperfective psych verbs, in both SubjExp and ObjExp constructions, are canonical stative predicates and thus are atelic, whereas all prefixed (or perfective) psych verbs are initial boundary events which are also not telic. She establishes their non-telic status through standard tests of telicity such as entailment patterns, cooccurance with adverbs, and the scope of *almost* (see Rozwadowska 2003 for details regarding these tests). She concludes that the relationship between the imperfective stative psych verb and its prefixed inchoative variant (i.e. perfective psych verb) is systematic and regular and shows a reverse temporal pattern to accomplishments (Rozwadowska, 2003, p. 869). In Polish, perfective accomplishments are telic complex events that encode a change of state. However, she shows that a perfective stative predicate is a non-telic

eventuality that encodes the beginning of a state, i.e. they are inceptive predicates. In (81), the aspectual representations of right-boundary (accomplishment) eventualities and the left-boundary (inceptive) eventualities are illustrated respectively in (81a) and (81b).

(81) Basic aspectual contrasts (Rozwadowska, 2003, p. 872; brackets my own)
   a. …………………………..|
          activity   culmination (terminal point)
                                (change)
   b. |———————————————
      initial point [inception]   state
      (change)

Due to this aspectual distinction, Rozwadowska (2012) agrees with Biały (2005) that Polish ObjExp verbs do not constitute a homogenous aspectual group. However, while Biały (2005) divides ObjExp verbs into stative and non-stative subgroups, Rozwadowska argues that *all* ObjExp verbs are stative and the distinction is between perfective and imperfective ObjExp verbs, where the former are inceptive states and the latter are canonical states. She explicitly argues for the absence of CAUSE in her analysis of Polish ObjExp verbs (Rozwadowska, 2020, p. 69). As mentioned earlier (see 2.3.3.3), Biały (2020) picks up Rozwadowska's arguments and agrees that Polish ObjExp verbs have a standard stative interpretation that does not encode CAUSE with the added observation that recurrent verbs may be coerced into an accomplishment (i.e. CAUSE) reading provided an agent is present in the construction.

Rozwadowska (2012) argues that non-stative ObjExp verbs cannot be accomplishments but are rather inceptive eventualities. She adopts Marín and McNally's (2011) arguments for SRPVs and postulates that inceptive Polish ObjExp verbs are punctual eventualities. The crucial difference between non-stative ObjExp verbs and accomplishment predicates lies in the absence of a developmental stage or dynamicity feature, which is lacking in inceptive eventualities due to their punctual nature (Rozwadowska, 2012, p. 544). The arguments presented by Rozwadowska (2003; 2006; 2012) for Polish, and Marín and McNally (2011) for Spanish, are essentially the same and

boil down to the following claim: psych verbs are non-dynamic because they are either states, or they are punctual inchoative/inceptive events.[41]

Rozwadowska's arguments for the inceptive nature of Polish perfective psych verbs have found support in later studies (see Willim, 2016; 2021; Biały, 2020). The consensus on Polish psych verbs is that they are canonical states in their imperfective forms and inceptive states in their perfective forms, that do not involve the semantics of change or telicity (Rozwadowska 2020; Biały 2020). This conclusion is at odds with the aspectual classification of psych verbs in works such as Arad (1998b), Pylkkänen (2000), and Hirsch (2018), who associate non-stative ObjExp verbs with canonical change of state verbs denoting a right aspectual boundary. Moreover, the above analysis of Polish psych verbs contradicts the claims made in Żychliński (2016) that English and Polish ObjExp verbs are not unique and are typical activity verbs.

What the previous discussions have shown is that states are not a simple, homogenous group of verbs. They are proven to have two subgroups, unbounded states and inceptive states, with grammatically relevant properties within the inceptive subtype that need further study. The fact that typologically different languages exhibit grammatically significant distinctions between states that extend to account for psych verb diversity is striking and only substantiates the need for formal representations of the different state types to properly account for event structure. Already we have seen how the reflexive *se* in Spanish and the perfective prefix in Polish generate inceptive readings. One avenue of investigation then, is whether BA has a stative dichotomy where inceptive readings are obtained, and if so, how the language encodes it.

2.6 Summary

This chapter presented a review of major discussions in the literature surrounding psych verbs with a focus on those issues most relevant to the proceeding chapters which investigate the structure of psych verbs in BA. The first part of this chapter presented the theoretical background in the aspectual literature that is required for an understanding of the themes discussed throughout this

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[41] The authors argue for different sets of psych verbs. Rozwadowska (2012) focuses on the ObjExp verb class, while Marín and McNally (2011) discuss Spanish reflexive verbs in the SubjExp verbs class.

thesis. This is followed by several sections that outline the unique effects psych verbs have on grammatical structures known as *psych effects* (see Landau, 2010 for an exhaustive review), and the problem that psych verbs pose for theories of argument structure and mapping, known as the *linking problem*.

The chapter also reviewed the diverse aspectual behaviour of psych verbs. The general consensus in a majority of studies is that SubjExp verbs are stative verbs whereas ObjExp verbs do not form a uniform group regarding their aspectual characterization (Arad, 1998b; Biały, 2005; Rothmayr, 2009; Alexiadou and Iordăchioaia, 2014; Temme, 2019; Rozwadowska et al., 2020). ObjExp verbs can be divided into at least two groups: one exhibits canonical stative qualities whereas the other patterns more like eventive predicates. It is generally acknowledged that causativity is what differentiates ObjExp verbs from SubjExp verbs. However, there is debate surrounding the classification of non-stative ObjExp verbs within the well-recognized Vendlerian event types, namely accomplishments, activities, and achievements. A summary of the various classifications is found in Table 2.2. The non-stative subclass of verbs is argued to behave like a complex change of state predicate that is telic, i.e. such verbs present right-boundary eventualities identified as accomplishments or achievements.

In the final section of this chapter, recent studies on psych verbs in Spanish (Marín and McNally, 2011; Fábregas and Marín, 2015) and Polish (Rozwadowska, 2003; 2012; Willim, 2016; Rozwadowska, 2020; Biały, 2020) claim that the Vendlerian classification is insufficient for accommodating the aspectual properties of non-stative psych verbs because they present initial, left-boundary eventualities that have unique properties distinct from other event types. Earlier studies have made the same claims regarding the initial boundary nature of some stative verbs as noted in Korean (Choi 2015a; 2015b), Chinese (Huang et al., 2000; Chang, 2003), Sḵwx̱wú7mesh (Bar-el, 2005), and Sənčáθən and Japanese (Kiyota, 2008). Importantly, inceptive states, and by extension inceptive psych verbs, are not telic predicates in all the above-mentioned studies. Whether they involve a change of state and thus a BECOME operator is debated. For Bar-el (2005) and Choi (2015b), for example, their semantics include the operator BECOME that is a left-boundary change of state in an intial subevent, as opposed to a right-boundary change of state predicate which contains BECOME in a final subevent. However, Marín and McNally (2011) and

Rozwadowska (2012; 2020), among others, argue that BECOME is not part of inceptive psych verb semantics since change is not asserted in such eventualities. The result of the latter analysis shows that non-stative psych verbs are not like canonical dynamic event predicates and cannot be accommodated within the traditional Dowty-Vendlerian event typologies.

The diverse and flexible behaviour of psych verbs, particularly ObjExp verbs, is reflected in the widely different accounts reviewed in this chapter. It is therefore the aim of this thesis to provide a rigorous description of BA psych verbs in order to gain an understanding of what patterns and grammatically relevant elements in the structure might govern their behaviour. Of particular interest is the distinction between inceptive states and prototypical states which yield different aspectual properties for psych verbs in Spanish and Polish (see e.g. Rozwadowska, 2003; 2020; Fábregas and Marín, 2017). Using the stative dichotomy as a baseline, the next chapter explores the properties of two types of stative verbs observed in some Arabic varieties like Egyptian (Mughazy, 2005; 2015) and Kuwaiti (Alotaibi, 2019). The chapter finds that the inceptive/unbounded state dichotomy is found in BA verbs and investigates the aspectual properties of both types in various morphosyntactic representations in an effort to establish a base pattern of behaviour on which to build predictions for psych verb aspectual characterizations.

BA presents an interesting case study due to the complex morphology of Arabic where both overt causative morphology and grammatical aspect (perfective, imperfective verb forms) are present. The presence of overt causative morphology, if we find evidence for stative ObjExp verbs constructions, challenges the claim that stative ObjExp verbs are not causative (Verhoeven, 2010; Biały, 2020; Rozwadowska, 2020) and supports the view that stative causatives exist (Van Valin and LaPolla, 1997; Arad, 1998; Pylkkänen, 2000). Overt grammatical aspect morphology will also be shown to have significant interactions with lexical aspect in BA where perfectivity is found to encode an inceptive aspect. This presents a unique comparison to some of the languages explored here, where inception was found to be morphologically marked via the perfective form in Polish (Biały, 2020) and *se* in Spanish (Marín and McNally, 2011), and inherently marked in Skwxwú7mesh (Bar-el, 2005) and Korean (Machicao y Priemer and Fritz-Huechante, 2018).

Chapter 3 BA Statives and Psych Verbs

A key focus in the analysis of psych verbs in recent years is the ambiguous event structure of some psych verbs (Rozwadowska et al., 2020). ObjExp verbs in particular have been documented cross-linguistically to exhibit stative/eventive ambiguities as reviewed in the previous chapter (see e.g. Pesetsky, 1996; Brennan and Pylkkänen, 2010; Arad 1998b; Pylkkänen, 2009; Kailuweit, 2015 among many others). One overarching goal of this thesis is to establish the aspectual characterization of BA psych verbs and to fill a gap in the literature on psych verbs where Arabic data is relatively limited. To that end, the aim of this chapter is twofold.

The first is to build on the arguments presented in the previous chapter (Chapter 2) which call for recognizing the relevance of a unique type of stative verb that refers to the initial boundary of the state denoted by the verb (see e.g. Chang, 2003; Bar-el, 2005; Kiyota, 2008; Marín and McNally, 2011; Choi, 2015b). Similar claims of initial boundaries and stative class diverseness are found in Arabic aspectual literature and reviewed in this chapter. This serves to establish a foundation on which BA stative verbs are examined where systematic split patterns are also observed. The overarching argument made here and for the rest of this thesis is that BA stative verbs are divided into two types: canonical unbounded stative verbs, and inceptive states that encode an event variable, setting them on par with traditional events. Inception is argued to be encoded via lexical root or perfective morphology in BA, resulting in complex interactions between lexical aspect and grammatical aspect that have consequences for argument structure.

The second aim of this chapter is to outline the morphological forms and structural patterns of BA psych verbs. Since psych verbs form a subgroup of stative verbs, the split patterns noted for BA statives are expected to extend into observable patterns of behaviour in psych structures. The main hypothesis advanced here is that BA psych verbs, in both SubjExp and ObjExp forms, are not a homogenous class of verbs. Essentially, we argue that there is a systematic and predictable stative/eventive division and pattern of behaviour observed in the BA stative class of verbs, and by extension psych verbs, that depends primarily on the type of stative root involved in the construction, and the grammatical aspect of the psych verb derivation.

The chapter is divided into two main sections. Section 3.1 discusses stativity in Arabic. It begins with an overview of prominent studies that provide insights into the heterogenous nature of stative verbs in various Arabic dialects, followed by an exploration of the event structure of stative verbs in BA. Section 3.2 focuses specifically on BA psych verbs and presents the different psych structures in the language and the predictions for the aspectual characterization of those structures, based on the pattern of behaviour established for BA stativity. The section also explores possible psych effects present in BA.

3.1 Stativity in Arabic

3.1.1 Previous treatments of stativity in Arabic

The previous chapter ended with a presentation of studies that argue for a distinction between two types of stative verbs (see Section 2.5). The first type of stative verb is the canonical unbounded state, and the other type is argued to refer to an initial boundary or onset of the state the verb refers to. The focus of this section is on the literature on Arabic lexical aspect that specifically addresses the heterogenous nature of the class of stative verbs in Arabic.

There have been a number of studies that investigate the lexical aspectual system in Arabic (Sitrak, 1986; Eisele, 1990; Aziz, 1994; Mughazy, 2005, 2015; Spagnol, 2009; AlRashed, 2012; Bubenik and Hewson, 2013; Eades and Persson, 2013; AlZahrani, 2016; Mansouri, 2016; Abusulaiman, 2019; Al Kaabi and Ntelitheos, 2019; Alotaibi, 2019; Alazmi, 2021). Yet, Alrashed (2012) and Al Kaabi and Ntelitheos (2019) argue that relatively few studies address the link between lexical aspect and argument structure in the language. Three studies stand out in their relevance to the current work in that they explore the subdivisions within the stative class of verbs and identify them based on the different patterns they exhibit regarding linguistic phenomena such as forming perfectives, deriving AP (active participles), and allowing habitual interpretations.[42]

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[42] A study on Arabic inceptives that I do not summarize here is Danks (2011) who extends Olsen's (1997) lexical aspect categories to account for inceptive verbs. Danks provides a corpus investigation of MSA vowel lengthening forms (III and VI) and challenges the widely accepted view that these patterns have mutual/reciprocal meaning. His studies lead to an investigation of aspect models where he identifies a class of inceptive verbs in MSA which he further subcategorizes into inceptive states and inceptive activities. He argues that MSA inceptive states are punctual onsets that are unmarked for telicity, i.e. inceptive states can be either telic or atelic depending on the given structure. See Danks (2011, Chapter 4) for more details of his analysis.

The first study is by Mughazy (2005) who addresses issues in the lexical aspectual approach to Egyptian Arabic (henceforth EA) found in previous studies and proposes rethinking lexical aspect based on Olsen's (1997) argument that aspectual properties are determined by lexically specified sematic privative features. The second study is Spagnol's (2009) scalar approach for stativity in Maltese (henceforth MA) which also adapts Olsen's lexical feature model. In recent work, Alotaibi (2019) studies interactions between lexical and grammatical aspect in Kuwaiti Arabic (henceforth KA) where Mughazy's arguments are adopted, and a distinction is made between two types of statives for KA.

Due to the important insights of these three studies in informing the current study of stativity in BA, the following sections are centered around presenting their approaches to stativity in their respective Arabic dialects. To that end, Section 3.1.1.1, presents a review of Mughazy's approach to stative verb classification in EA, where he argues that Egyptian statives form two sub-classes, involving individual-level and stage-level states. Section 3.1.1.2 presents Spagnol's model for statives in which stative predicates distribute on a scale ranging from 'total statives' to 'relative statives'. Section 3.1.1.3 discusses Alotaibi's (2019) findings for KA states, which are based primarily on Mughazy (2005) and Eisele (1990).

3.1.1.1 Mughazy (2005)

Mughazy builds on work presented by Eisele (1999), where several morphological and syntactic tests are used to identify lexical aspect classes in EA. Limiting the focus here to the discussion of stativity in EA, Mughazy distinguishes between two stative subgroups which he characterises as stage-level and individual-level states. He argues that stage-level states are temporary states that hold repetitively of an experiencer whenever the state is triggered. Conversely, individual-level states are more permanent states and hold indefinitely.

According to Mughazy (2005), two important features differentiate between the two stative verb sub-types. Only stage-level states allow the *bi*-imperfective[43] and perfective forms whereas

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[43] Mughazy (2005) refers to the imperfective forms of a verb preceded by *bi-* as *be-imperfect*. I use *bi*-imperfective in keeping with the aspectual terminology used in this thesis.

individual-level states do not. This is illustrated in the following example where the individual-level state *yiqrab* 'relate' is shown to not allow the perfective nor the *bi*-imperfective forms, see (1b) and (1c) respectively.

(1) a. ṣāliḥ yiqrab   l-ī   ḵāl-ī
        Salih be related to-me uncle-my
        'Salih is my uncle.'

     b. [*]⁴⁴ṣāliḥ qarab   l-ī   ḵāl-ī
        Salih was related to-me uncle-my
        #'Salih used to be my uncle.'

     c. *ṣāliḥ bi-yiqrab   l-ī   ḵāl-ī
        Salih PROG./HAB.-be related to-me uncle-my
        #'Salih is (habitually) my uncle.'
        *'Salih is being my uncle.'

                                                    (Mughazy 2005, p. 150)

Individual-level states describe inherent states, which hold without there being inchoative events that bring them about, i.e. there is not a trigger required for the state to hold (Mughazy, 2005). In (1a), the state holds the instant the speaker or his uncle come into existence. Mughazy explains that since such states hold independently from their conception, they cannot be used in the perfective as shown in (1b). This is because the perfective presupposes that an eventuality ceases to exist before speech time, and given that individual-level states are unbounded, a mismatch in features between bounded perfectivity and unbounded eventualities leads to unacceptable forms of perfective states such as (1b). Individual-level states are also incompatible with habitual readings since they lack a telic feature that allows an event to end and recur thus the *bi*-imperfective, which encodes progressive and habitual readings in EA, is barred as seen in (1c).

In contrast, the group of stative verbs that do allow the *bi*-imperfective and the perfective, i.e. stage-level states, describe eventualities of potentially recurring states due mainly to the inherent telic feature they have (Mughazy, 2005). These eventualities come about because of some prior

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⁴⁴ This example was not originally marked as ungrammatical in Mughazy (2005, pg. 150) however it was understood as unacceptable in his discussion.

trigger that then brings about a state that holds for some interval, and if it ceases to hold it may come about again. An example of such a recurrent state is presented in (2), where Ali is understood to undergo periods of feeling jealous over his fiancée due to certain stimuli. Importantly, this state is understood to emerge, hold for a time, and cease, until it emerges again (Mughazy, 2005).

(2) ʿalī   (*yiġīr)   bi-yiġīr   ʿalā ḳaṭibt-uh
     Ali be (jealous.IPFV) HAB.-be jealous on   fiancée-his
     'Ali is (habitually) jealous over his fiancée.'

                                                        (Mughazy, 2005, p. 150)

Ali is not believed to be in a constant, indefinite state of jealousy over his fiancée without any prior triggers or stimuli for such a state. This habitual state interpretation, i.e. stative verbs that have onsets and can recur, allows stative verbs of this group occur in the *bi*-imperfective form, since it denotes habitual readings in EA. Crucially, the notion that such eventualities are triggered or have some starting point directly relates to the notion of left-boundary states discussed previously (see 2.5). Moreover, the recurrent, or habitual, reading for initial boundary stative verbs is not unique to EA. We have already seen how the inceptive class of *enfadarse* Spanish Reflexive Psych Verbs (see 2.5.3) allows a habitual interpretation that is not present in the interpretations of canonical states. The habitual reading will prove to be a definitive criterion on which statives are classed in BA (see 3.1.2.1 and 4.2.1).

Mughazy's (2005) main aim in this work is to establish a frame of diagnostics that distinguishes one aspectual class from another. Therefore he proposes other structures and comparisons specifically addressing how to differentiate between states and all other aspectual classes (see Mughazy (2005, pp. 146-159) for further details). However, crucial to the study in this thesis is his differentiation between two types of states and his postulation as to how stage-level states differ from individual-level states due to the telic feature present in the former as discussed above. Based on this telic feature and the tests of licensing the *bi*-imperfective and perfective forms, Mughazy divides EA states into the following two groups illustrated in (3).

(3) a. Non-recurrent Statives [individual-level state]:   (EA)

yishbih	resemble	*yiqrab*	be related
yifriq	differ	*yihiʾi*	be lawful
yihimm	matter	*yisa'*	be wide
yiqannin	bedazzle	*yistaahil*	deserve

b. Recurrent Statives [stage-level-state]:

yiʿizz	endear	*yiġīr*	be jealous
yiḥinn	yearn	*yiʿānī*	suffer

(Mughazy 2005, p. 151)

The asymmetry Mughazy observes that only stage-level states allow the perfective form is also closely tied to observations made for other Arabic dialects as discussed in the following sections.

3.1.1.2 Spagnol (2009)

Spagnol (2009) tackles lexical and grammatical aspect in MA.[45] Unlike EA, where Mughazy (2005) explains the dichotomy within stative verbs in terms of a [+telic] feature, Spagnol (2009) argues that dynamicity plays a significant role in the interpretation of stative verbs in MA (Spagnol 2009, p.65). He states that stativity is expressed in two main ways in MA: at the morphological level, where some verbs only allow imperfective aspect, and at the syntactic level, where lexical aspect intersects with grammatical aspect, tense, and modality (Spagnol, 2009, p. 65). He proposes that stativity in MA be viewed as a scalar phenomenon where verbs fall along a continuum based on their behaviour in a series of tests. One end of the scale contains what he refers to as "totally stative verbs", like *taf* 'know', which cannot license dynamicity and lack perfective forms, while the other end, close to dynamic verbs, lie "relatively stative verbs", like *ḥab* 'love' which may express a dynamic reading and allows the perfective (Spagnol, 2009, p. 65).[46] Figure 3.1 illustrates Spagnol's (2009) proposal for the stativity scale in MA with examples of where MA statives fall on this continuum.

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[45] Maltese is listed as a Semitic language by Meltzer-Asscher (2021) and as an *Arabic island* by Versteegh (2014). Kaye (2018) argues Maltese started as an Arabic dialect but through isolation developed into its own Semitic language. Leaving aside the proper classification of the Maltese language, there are enough similarities to Arabic to draw comparisons on the behaviour of the stative class of verbs.

[46] The MA examples presented throughout this section are provided from Spagnol (2009) and presented here as given in his work. The majority of examples he illustrates are without glosses.

	Defective		Semi-PFVless		Relative		
	PFVless	**Pseudo**	**Simple**	**Phrasal**			
Total Statives	*taf* 'know'	*ġand-* 'have'	*tizin* 'weigh'	*taqaʿ taḥt* 'fall under'	*siṭāʿ* 'be able'	*ḥabb* 'love'	**Relative Statives**
	tišbah 'resemble'	*qis-* 'seem'	*tīḫū* 'lead to'	*tiji minn* 'be related'	*ḥāmil* 'adore'	*ḥtij* 'need'	
	tubġuḍ 'hate'	*fi* 'contain'	*tinklūd* 'include'	*tifhim fī* 'master'	*rīd* 'want'	*štāq* 'wish'	
PFV	-		+/-		+		
IMP	-		-		-	+	
PST.PTCP	-		-		-/+	+	

Figure 3.1: Stativity Continuum in MA (Spagnol, 2009, p. 65).

In Spagnol's (2009, p. 65) view, there are three main categories that form this stativity continuum and reveal an asymmetry regarding the grammatical aspect opposition: (i) perfectiveless statives, which lack a perfective form; (ii) semi-perfectiveless verbs, which do not appear in the perfective when the verb refers to a stative eventuality; and (iii) relative statives, which have available perfective forms.

The perfectiveless statives category contains verbs like *tišbah* 'resemble' and *taf* 'know' which have a gap in the perfective form. The only way to indicate the perfective aspect for such verbs in MA is through utilizing a so-called tense verb *kīn* 'be' in the perfective in addition to the perfectiveless stative verb, for example *kunt nišbahha* 'I resembled her' and *kīn yaf* 'he knew' (Spagnol 2009, p. 66). Unlike Mughazy (2005), who argues that non-recurrent stative verbs in EA lack the perfective form because they violate the telic requirement for the perfective, Spagnol (2009, p. 79) argues that the imperfective form is intrinsically linked to stativity as evidenced by the fact that a number of stative predicates do not have perfective forms. For example, two groups of states do not have perfective forms at all like the perfectiveless stative verbs and pseudo-verbs, while other stative verbs do not appear in the perfective form when a stative eventuality is intended, like semi-perfectiveless verbs which are discussed next.

The semi-perfectiveless category includes verbs that have perfective forms available only when referring to dynamic eventualities, i.e. stative situations of these verbs cannot be formed in the perfective. Spagnol (2009, p. 68) provides the example of the verb *tizin* 'weigh' which has both a perfective and imperfective form in its eventive reading, as in *yizin/wizin il-paṭāṭā* 'he weighs/weighed potatoes'. However, in its stative reading, the perfective form is unavailable, as in *yizin/*wizin tminīn kīlū* 'he weighs eighty kilos'. Imperfective eventualities like *tizluq* 'slippery', *taqṭaʿ* 'cuts', and *taḥraq* 'burns' are lexically expressed as stative and do not occur in the perfective unless a dynamic interpretation is imposed.

The final category of verbs on the stativity scale envisioned by Spagnol, called relative statives, include verbs like *ḥabb* 'love' and *rīd* 'want' that are closest to canonical dynamic verbs. According to Spagnol (2009, p. 69), stativity in MA is diagnosed by the morphological restriction of not allowing the perfective or the imperative mood. However, relative statives are distinct because there exists a perfective form for verbs in this category. Further, some stative verbs that exhibit the perfective form are subdivided into two kinds of stative perfectives: those that may also appear in the imperative mood, and those that do not. The availability of the imperative for the stative perfective is contingent on the presence of a degree of agency. Verbs like *rīd* 'want' do not occur in the imperative (**rīd jīlāt* 'want an ice-cream!') (Spagnol 2009, p. 70) since it is not possible to infer agency for such predicates. Verbs similar to *ḥabb* 'love', on the other hand, may occur in the imperative provided some degree of agency is involved such as in *ḥubb dāk lī taġmil* 'love what you do' (Spagnol 2009, p. 70). Spagnol notes that when *ḥabb* is used in the more robust stative use to mean 'like', the imperative is not allowed (**ḥubb il-frawlī* 'like strawberries!') (Spagnol 2009, p. 70).

In MA, Spagnol identifies three different categories of stative verbs that vary in their behaviour regarding the formulation of the perfective and the assignment of [+dynamic] features. Unlike the observations made by Mughazy (2005) for EA and Alotaibi (2019) KA (discussed in the next section), there is no mention of a special recurrent interpretation for the stative in the imperfective form in MA. However, he does comment on syntactic structures, like the progressive, that may trigger an aspectual shift. A stative verb may shift into a stage-level state reading marked for durativity and telicity. The progressive in example (4) implies that the situation is temporary in

that the knife has lost its sharpness for a while rather than it having the characteristic of being blunt, and thus statives in the progressive are classed as a stage-level states (Spagnol 2009).

(4) sinn is-sikkina għax   mhux (qed) t-aqta'
     whet DEF-knife because not   PROG 3.SG.F-cut
     'Whet the knife because it is not sharp.'

(Spagnol 2009, p. 72)

It is important to note how for both Mughazy (2005) and Spagnol (2009) stage-level states are telic eventualities. This is a significant point that will be discussed further in Section 3.1.4 where I argue against an individual/stage-level distinction between states in BA.

3.1.1.3 Alotaibi (2019)

Alotaibi (2019) picks up on Mughazy's (2005) arguments that states should be sub-grouped into individual-level states and stage-level states. She uses Mughazy's tests in relation to KA data and finds that KA states pattern like EA states regarding eventivity tests. Alotaibi presents unique observations regarding the aspectual interpretations of the two types of stative verbs in their interactions with grammatical aspect. She provides an illustrative summary (provided in Figure 3.2 below) of the way Vendler's event types interact with grammatical aspect in KA based on the features of [±Process] and [±Telic]. She illustrates each event type in the imperfective with a cylindrical shape that represents the internal stages of the event; the gradient indicates a dynamic process, the transparent cylinder indicates lack of a dynamic or process stage, and the solid colour refers to a homogenous eventuality (Alotaibi 2019, p. 67). Telicity is indicated with circles. Accomplishments and achievements are telic eventualities and thus have opaque circles on the right-boundary signifying the telic end point of the event. Activities and states, being atelic eventualities, either do not have a circle or they have a transparent one. The perfective column indicates the point of the event the perfective aspect projects to the grammar.
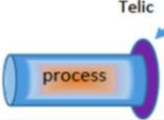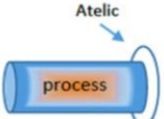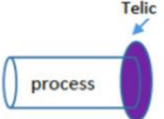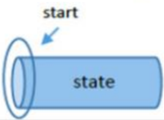
Event Type	Perfective viewpoint	Imperfective viewpoint	Examples
Accomplishment	Telic point	Telic — process	*yākil tufāḥah* 'eat an apple' *yarkiḍ kīlū* 'run one kilo'
Activity	Any point	Atelic — process	*yarkiḍ* – 'run' *yisbaḥ* – 'swim
Achievement	Telic point	Telic — process	*yūṣal* – 'arrive' *yfūz* – 'win'
Stage-level State	initial point	start — state	*ykāf* – 'fear' *y'arif* – 'know'
Individual-level State		state	*yišbah* – 'looks like' *yiqrab* – 'relates to'

Figure 3.2: The representation of event type features in different grammatical aspect forms (Alotaibi 2019, p. 80).

There are a couple of important insights made by Alotaibi (2019). As mentioned earlier, she follows Mughazy (2005) and divides states into two types: stage-level states (e.g. *yi-ḳāf* 'IPFV-fear', *yi-krah* 'IPFV-hate', *yi-ʿrif* 'IPFV-know'), and individual-level states (e.g. *yi-qrab* 'IPFV.relate', *yi-šbah* 'IPFV.resemble').[47] In Figure 3.2, Alotaibi places a transparent circle at the start of the imperfective stage-level state eventuality. The significance of this representation is that it reflects the trigger required for such eventualities to hold. For both Mughazy (2005) (see discussion in 3.1.1.1) and Alotaibi (2019), stage-level states are temporary characteristics of an individual that are either internally or externally triggered into effect via some dynamic event and may cease, and then hold again depending on the recurrence of the trigger. Stage-level states are distinguished from individual-level states which do not have an initial bound circle which reflects their unbounded nature as illustrated in Figure 3.2. This distinction between the semantic properties of both stative types is reminiscent of the discussions presented in Section 2.5, where a distinction is made between unbounded states and those that refer to an initial boundary.

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[47] For more on Alotaibi's discussions and tests for the two KA stative verb types which she bases on work by Eisele (1999) and Mughazy (2005) work refer to Alotaibi (2019, p. 83-92).

Similar to Spagnol (2009), Alotaibi takes perfectivity to encode an eventive predicate that must have reference to an existentially bound event (one that involves a specific event) (2019, p. 74) and is thus incompatible with states that do not refer to such events. Considering this, she argues that KA stage-level states allow perfective forms since they have an initial point that marks a transition into a state, whereas individual-level states are incompatible with the perfective form because they do not have a triggering event or mark a transition as the former stative type does (Alotaibi 2019, p. 68). This is illustrated in the representation of the two perfective states in Figure 3.2 above. The perfective stage-level state is represented from the point which triggered the state into being, i.e. it is presented from the initial boundary indicated by the transparent circle. An example of a perfective stage-level state is shown in (5). The perfective form focuses the transition point of the stage-level state *jiʿt* 'hungered' and projects onto the grammar resulting in a predicate that refers to a state that overlaps utterance time, i.e. a present perfect reading is present.

(5) ʾanā jiʿt   (#qabl šway   / alḥīn/ *bāchir)   (KA)
     I   hungered.PFV.1SG (#minutes ago/ now/ *tomorrow)
     Literally: 'I hungered' meaning 'I am hungry now'

                                                              (Alotaibi 2019, p. 49)

Contrary to Fassi Fehri (2012) where the perfective form is taken to allow both past tense and present perfect tense, Alotaibi argues that the present perfect reading in examples such as (5) are a result of the interaction between the lexical aspect of the verb, here a stage-level state, and the perfective form. The perfective of stage-level states focuses on the transition point regardless of the information related to the state (Alotaibi, 2019, p. 49). When the state itself is focused or asserted, a stative adjectival form (the active participle form) of the root is used instead as illustrated in (6). Here, the 'state of being hungry' is the most important information so there is no reference to the transition from a state of not being hungry to a state of being hungry.

(6) ʾanā jūʿān-a
     I   ADJ.hungry-SF
     'I am hungry.'

<div align="right">(Alotaibi 2019, p. 49)</div>

As for individual-level states, this subclass of states has gaps in the perfective paradigm because they represent canonical stative predicates that are unbounded and cannot express transitions. Examples for such verbs are *yi-qrab* 'IPFV.relate' and *yi-šbah* 'IPFV.resemble', which cannot be derived in the perfective form *qarab 'relate.PFV' and *šabah 'resemble.PFV' respectively (Alotaibi 2019, p. 85). This perfective gap allows Eisele (1999), Mughazy (2005), Spagnol (2009), and Alotaibi (2019) to use the perfective form as a test to distinguish between robust stative verbs and those that have more event-like behaviour.

3.1.2 Stativity in BA

In this section, the focus will be on describing the aspectual properties of BA stative verbs and their interaction with grammatical aspect.[48] I follow the arguments presented in the previous studies (see 3.1.1) which identify (im)perfective morphology as a useful diagnostic for distinguishing between robust states and those that have more eventive properties. For this reason, this section is subdivided to address the imperfective and perfective aspectual forms. The purpose here is to establish a baseline of BA stative verb behaviour on which predictions can be made for how psych verbs, which are a subset of stative verbs, behave.

The main claims that will be made here and substantiated further with various diagnostics in the following chapter with regards to psych verbs are as follows: (i) BA imperfective form stative verbs are not a homogenous class of verbs but can be subclassed into unbounded states and left-boundary states (or inceptive states), and (ii) the perfective form restricts states to a left-boundary inceptive interpretation that not all stative verbs allow.

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[48] The focus so far in this chapter has been on the general class of stative verbs. This section will restrict the data to non-psych stative verbs. Psych verbs are reserved for the discussion in Section 3.2.

3.1.2.1 Interpretation of states in the imperfective form

Non-dynamic BA verbs (i.e. states) are not a uniform class in their imperfective forms. The recurrent reading observed for a subtype of stative verbs by Mughazy (2005) in EA and Alotaibi (2019) in KA is also present for BA statives. It is found that the inherent recurrent reading available for this subset of stative verbs facilitates the use of the habitual adverbial as a diagnostic test to classify BA stative verbs into two groups based on their aspectual interpretation as either inceptive states or canonical unbounded states. In their descriptions for recurrent stative verbs, Mughazy and Alotaibi speak of a trigger required for the state to come about (see 3.1.1). This is taken to be the initial onset point for the state that characterizes the inceptive states discussed in the previous chapter (see 2.5) which can be detected using a punctual adverbial (Bar-el, 2005). Both the habitual and punctual adverbial tests will prove valuable in clearly distinguishing an inceptive subclass of states in BA.[49]

The following discussion will also aim to identify the aspectual characterization of inceptives states. Habitual readings are typically considered a property of dynamic verbs (see Dowty, 1979; Fábregas and Marín, 2013), it is therefore necessary to identify if inceptive states are events or states using the event tests introduced in (2.1.3). This goes to establish state/event characterizations for inceptive states that would later inform predictions on BA psych verbs. For this reason, the event diagnostics here will investigate both causative and non-causative forms of stative verbs.

We begin with the distinction between two stative verb types based on the availability of a habitual reading that can be detected using a habitual adverbial. For a bit of background, BA dynamic imperfectives (i.e. non-stative imperfectives) as in other Arabic dialects (see Alotaibi 2019; Bahloul 2008), are generally ambiguous between an existential eventive reading and a habitual, generic, non-existential interpretation.[50] The sentences in (7) present examples of BA imperfective dynamic verbs in simple matrix clauses. The possible habitual, progressive, and generic interpretations for each sentence are demonstrated with the felicitous use of the adverbials in parenthesis.

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[49] Whether the initial boundary in BA inceptive states is lexically encoded as it is for Skwxwú7mesh (Bar-el, 2005), or grammatically encoded as is the case for Polish (Biały, 2020) is addressed throughout the proceeding discussion.
[50] An existential event refers to an individual, specific or particular event, i.e. a non-generic or universal event.

(7) a. ʿalī yi-qraʾ   al-maqālah   (al-ḥīn)   (kull   yum)   ACCOMPLISHMENT
Ali IPFV.3SM-read DET-article.SF (DET-now) (every day.SG)
'Ali is reading the article now.' [PROGRESSIVE]
'Ali reads the article every day.' [HABITUAL]
'Ali reads the article.' [GENERIC]

b. ʿalī yi-lʿab   kūrah (al-ḥīn)   (kull   yum)   ACTIVITY
Ali IPFV.3SM-play ball.SG (DET-now) (every day.SG)
'Ali is playing football now.' [PROGRESSIVE]
'Ali plays football every day.' [HABITUAL]
'Ali plays football.' [GENERIC]

c. ʿalī yi-fūz   fī al-luʿbah   (kull   marrah) (dāʾiman)   ACHIEVEMENT
Ali IPFV.3SM-win in DET-game.SF (every time.SG) (always)
'Ali wins this game every time.' [HABITUAL]
'Ali wins this game.' [GENERIC]

Where dynamic verbs usually denote habitual or progressive readings in their imperfective forms as seen above, imperfective stative verbs are known to have simple present interpretations (Alotaibi 2020, p. 296). The examples for the BA stative imperfectives given in (8) below are adapted from Alotaibi (2020, p. 296) where he presents the same sentences in MSA. Notice that only the present tense interpretation is available; neither the progressive adverbial *alḥīn* 'now' nor the habitual adverbial *kull yum* 'every day' are allowed.

(8) a. suʿād ti-ʿrif   al-ʾijābah   (*al-ḥīn)   (*kull   yum)
Suad IPFV.3SF-know DET-answer.SG (DET-now) (every day.SG)
'Suad knows the answer.' [PRESENT STATE]
#'Suad is knowing the answer.' [PROGRESSIVE]
#'Suad knows the answer every day.' [HABITUAL]

b. suʿād ti-ṣaddiq   al-ʾakbār   (*al-ḥīn)   (*kull   yum)
Suad IPFV.3SF-believe DET-news.PL (DET-now) (every day.SG)
'Suad believes the news.' [PRESENT STATE]
#'Suad is believing the news now.' [PROGRESSIVE]
#'Suad believes the news every day.' [HABITUAL]

The examples above of stative verbs that do not allow a habitual interpretation in their imperfective forms are examples of the first subtype of stative verb in BA which include canonical stative verbs like *yi-zin* 'IPFV-weigh', *yi-qrab* 'IPFV-relate', and *yi-ḥiqq* 'IPFV-have.right'. Following traditional aspectual descriptions of states (see e.g. Dowty, 1979; Smith, 1997), this class of stative verbs is understood to refer to durative verbs that do not refer to initial or final boundaries (see 2.1.1).

Contrary to Alotaibi (2020, p. 289) who generalizes that stative verbs only allow simple present tense interpretations in their imperfective forms in Arabic, both Mughazy (2005) and Alotaibi (2019) have noted the presence of a habitual, or recurrent, interpretation for a group of stative verbs in their dialects which they classify as stage-level states[51] (see discussion in 3.1.1). The presence of a habitual reading is also found in some BA stative verbs as illustrated in (9) where habitual adverbials are shown to be compatible.[52]

(9) a. ʿalī yi-fham   al-maṭlūb   (kull   yum) (*al-ḥīn)
        Ali IPFV.3SM-understand DET-requirement (every day.SG) (DET-now)
        'Ali understands the requirements every day.' [HABITUAL]
        'Ali understands the requirements.' [PRESENT STATE]
        #'Ali is understanding the requirements.' [PROGRESSIVE]

     b. al-ʿiyāl   yi-jūʿ-ūn   (kull mā   yi-lʿab-ūn)   (*al-ḥīn)
        DET-child.PL IPFV.3-hunger-PL (whenever IPFV.3-play-PL) (DET-now)
        'The children become hungry every time they play.' [HABITUAL]
        'The children are hungry.' [PRESENT STATE]
        #'The children are becoming hungry now.' [PROGRESSIVE]

Unlike the canonical stative verbs shown in (8), the stative verbs above do not yield a present tense state reading. They also do not allow the progressive reading generally allowed for dynamic verbs as seen in (7). This leaves us with a unique class of non-dynamic verbs that do not have the standard present tense state interpretations expected of states, rather, they yield habitual readings.[53] Additionally, Mughazy (2005) and Alotaibi (2019) note that this type of stative verb, is unique in

[51] I depart from the stage/individual-level stative distinction used by Mughazy (2005) and Alotaibi (2019) in their classifications for stative verbs. See discussion in Section 3.1.4.
[52] I am not aware that either Alotaibi (2019) or Mughazy (2005) use habitual adverbials as a diagnostic for recurrent imperfective stative verbs.
[53] The non-dynamic classification of this type of stative verb is confirmed further on in the discussion.

that it refers to an initial onset (see e.g. Figure 3.2). Essentially, stative verbs that have habitual interpretations should be examples of the inceptive state discussed in Section 2.5 where some stative verbs refer to a left-boundary.[54] To test whether a left-boundary can be detected for BA states that have a habitual interpretation as opposed to standard states, the punctual adverbial used by Choi (2015b) and Bar-el (2005) (see 2.5.2) is utilized here. If an inceptive reading is available, then the matrix verb contains a left-boundary.[55] Consider the following examples:

(10) a. hū yi-jūʿ   lamma yi-šūf   al-ʾakil
        he IPFV.3SM-hungry when   IPFV.3SM-see DET-food
        'He becomes hungry when he sees the food.'
        #'He was already hungry when he saw the food.'

   b. *hū yi-ʿrif   al-ḥal   lamma yi-ji   al-ʾiḵtibār
        he   IPFV.3SM-know DET-answer when   IPFV.3SM-come DET-exam.SG
        'He knows the answer when the exams comes.'

The example in (10a) is of a stative verb that has shown habitual interpretations (see 9b) in conjunction with a punctual adverbial clause. The only reading available is one where the onset of the state denoted by the verb begins simultaneously when the punctual adverbial occurs. Hence, the verb *yijūʿ* 'become hungry' is considered an inceptive verb in this test. In (10b), the canonical state is not felicitous with a punctual adverbial clause. This is because the adverbial establishes a boundary in BA at which the eventuality either begins or finishes and an unbounded state does not have such boundaries. Based on this evidence, the argument made for BA stative verbs is that they can be divided into two classes: one is a canonical unbounded state with present tense, non-habitual interpretations, and the other is an inceptive state that refers to an initial boundary and has habitual interpretations.

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[54] In the previous chapter it was mentioned that a conscious choice is made to avoid using the term *inchoative* stative verb (as opposed to Bar-el, 2005; Marín and McNally, 2011, who do) to refer to initial onset stative verbs due to the fact that *inchoative* is linked to change of state and telicity in the literature. Rather, following Rozwadowska (2020), the term *inceptive* stative verb is used to distinguish those stative verbs that refer to initial onsets (or left boundaries). The term inceptive stative verb is used here to refer to what Mughazy (2005) and Alotaibi (2019) identify as recurrent stative verbs.

[55] Punctual adverbials, or reference time adverbials, are also used to detect a left-boundary for BA psych verbs. See discussion in Section 4.2.4.

Thus far, BA inceptive stative verbs are claimed to behave differently from canonical stative verbs. Most intriguing is their allowance of a habitual interpretation in the present tense, which is at odds with observations made by Dowty (1979) for English, Spagnol (2009) for MA, and Alotaibi (2020) for MSA and Taif Arabic where habitual readings in the present tense are only available for non-stative verbs. It is therefore necessary to verify the aspectual classification of inceptive eventualities (e.g. *yijūʿ* 'become hungry', *yiʿṭaš* 'become thirsty', *yimraḍ* 'become ill', and *yizbuṭ* 'works'). To do this, we use the tests mentioned in Chapter 2 that aim to diagnose the central features of stative verbs as being non-dynamic, non-agentive predicates. These tests are used to distinguished states from dynamic verbs and are reviewed here with respect to BA data. As mentioned prior, we examine stative verbs in their non-causative and causative forms in order to establish a baseline of expected behaviour for later predictions on possible aspectual classifications for BA non-causative SubjExp verbs and causative ObjExp verbs.[56] If we accept the arguments presented by Marín and McNally (2011) and others (see 2.5) that inceptive states are punctual events, then inceptive states are expected to behave like achievements regarding traditional event tests since they both share a punctual feature. Unbounded states are predicted to behave like canonical states.[57]

The first test has to do with diagnosing dynamicity with progressive structures. Verbs expressing both inceptive states and unbounded states are considered non-dynamic verbs. Unbounded states are non-dynamic due to their stative nature and inceptive states are non-dynamic due to their punctual nature. Thus, we expect both to reject the progressive construction in their non-causative forms. The prediction is borne out as illustrated in the following examples.

(11) a. *maha qāʿd-ah   ti-ʿrif   al-jawāb   UNBOUNDED STATE [-CAUSE]
         Maha PROG-3SF IPFV.3SF-know DET-answer.SM
         'Maha is knowing the answer.'

---

b. *al-ʾawlād qāʿd-īn yi-ʿṭaš-ūn maʿ al-liʿb   INCEPTIVE STATE [-CAUSE]
DET-child.PL PROG-3PL IPFV.3-thirst-PL with DET-play
Intended: 'The children are becoming thirsty from playing.'

Similarly, achievement verbs, shown in (12a), do not allow the progressive due to their punctuality (Rothstein, 2004). In contrast, typical events like accomplishments, shown in (12b), readily allow the progressive.

(12) a. *ʿalī qāʿid yi-lāḥiḏ taṣṣaruf-āt-hum   ACHIEVEMENT [-CAUSE]
Ali PROG.3SM IPFV.3SM-notice behavior-PL.F-3PL
Intended: 'Ali is noticing their behavior.'

b. maha qāʿd-ah ti-ḏākir ad-dars   ACCOMPLISHMENT [-CAUSE]
Maha PROG-3SF IPFV.3SF-study DET-lesson
'Maha is studying the lesson.'

In their causative forms, unbounded states, shown in (13a), prohibit the progressive while inceptive states, seen in (13b), allow it. It appears as though unbounded states maintain their non-dynamic structure even when causative morphology is present. However, I argue that the inceptive state only accepts the progressive under an iterative reading (Moens and Steedman, 1988), which is accessible in their causative forms. Evidence for this comes from the fact that adding *alḥīn* 'now' to the construction in (13b) to force a current ongoing process reading would render it unacceptable.

(13) a. *maha qāʿd-ah ti-ʿarrif-hum ʿala al-barnāmaj   UNBOUNDED STATE [+CAUSE]
Maha PROG-3SF IPFV.3SF-know.CAUS-3PL on DET-program.SGM
'Maha is making them know the program.'

b. maha qāʿd-ah ti-jawwiʿ-nī (*al-ḥīn)   INCEPTIVE STATE [+CAUSE]
Maha PROG-3SF IPFV.3SGF-hunger.CAUS-1SG.ACC (DET-now)
'Maha is making me hungry.'
#'Maha is making me hungry right now.'

Conversely, causative events easily allow progressive structures (14a). Interestingly, causative achievements pattern like causative inceptives where they are only acceptable in an iterative

interpretation and not a present progressive one. In (14b), the only acceptable interpretation is one where the subject is making me fall multiple times, it cannot mean that right now he is in the process of making me fall.

(14) a. ʾaḥmad qāʿid   yi-ʾakkil   al-ʾawlād   (al-ḥīn) ACCOMPLISHMENT [+CAUSE]
         Ahmad PROG.3SM IPFV.3SM-feed.CAUS DET-child.PL (DET-now)
         'Ahmad is feeding the children (now).'

   b. qāʿid   yi-ṭayyiḥ-ni   (*al-ḥīn)   ACHIEVEMENT [+CAUSE]
      PROG.3SM IPFV.3SM-fall.CAUS-1SG.ACC (DET-now)
      'He is making me fall.'
      #'He is making me fall now.'

The second set of tests has to do with the agentive feature. Stative verbs are non-agentive and thus do not normally allow agentive constructions (Levin and Rappaport Hovav 2005). Based on this fact, agentive constructions like the imperative and the use of agentive adverbs like *deliberately* and *purposely* are often used to distinguish states from events (see 2.1.3). The one downside of such tests is that many achievement verbs are also infelicitous with agentive contexts. In the following agentive diagnostics, we find the same aspectual patterns observed in the progressive test. Unbounded states do not tolerate agentive contexts in their non-causative or causative forms. In their non-causative forms, punctual inceptives and achievements do not allow agentive contexts while in their causative forms they do. The following examples illustrate these patterns.

The first agentive test reviewed here is the imperative structure. Both canonical BA statives, see (15a), and inceptive verbs of state, shown in (15b), prohibit derivation into the imperative form in their non-causative forms.

(15) a. *ʾi-ʿrif-u   al-jawāb   UNBOUNDED STATE [-CAUSE]
         IMP-know-2PL DET-answer.SM
         'Know the answer!'

   b. *jūʿ   INCEPTIVE STATE [-CAUSE]
      hunger.IMP.2SM
      'Become hungry!'

Similarly, non-causative achievement verbs are shown to not accept the imperative as in (16a) while accomplishments allow them as shown in (16b).

(16) a. *fūz   ACHIEVEMENT [-CAUSE]
       win.IMP.2SM
       'Win!'

    b. tˤāl   bi-surˤah   ACCOMPLISHMENT [-CAUSE]
       come.IMP.2SM with-speed
       'Come quick!'

In the causative form, statives show a split pattern of behaviour. Unbounded states, exemplified in (17a), prohibit imperative derivations, whereas inceptive states, illustrated in (17b), allow them.

(17) a. *ˤarrif-hum   ˤalī-h   UNBOUNDED STATE [+CAUSE]
       IMP-know.CAUS-2PL on-3SM
       'Make them know him!'

    b. jawwiˤ-hum   INCEPTIVE STATE [+CAUSE]
       hunger.IMP.CAUS.2SM-3PL
       'Make them hungry!'

Causative inceptive states pattern like the event verbs illustrated in the following examples where the imperative is allowed for causative achievements (18a), and causative accomplishments, (18b).

(18) a. fawwiz-ah   ACHIEVEMENT [+CAUSE]
       win.CAUS.IMP.2SM-3SM
       'Make him win!'

    b. jallis-hum   hināk   ACCOMPLISHMENT [+CAUSE]
       sit.IMP.CAUS.2SM-3PL there
       'Make them sit there!'

Another agentive diagnostic is one that tests the compatibility of predicates with agentive adverbials. Both unbounded states and inceptive states in their non-causative forms reject agentive adverbials like *intentionally* and *purposely* as illustrated in examples (19a) and (19b) respectively.

(19) a. *ˤumar qāṣid   yi-ˤrif   al- jawāb   UNBOUNDED STATE [-CAUSE]

       Omar   intentionally.3SM IPFV.3SM-know DET-answer.SM

       'Omar intentionally knows the answer.'

  b. *aṭ-ṭullāb   yi-jū-ūn   bi-lˤāni   INCEPTIVE STATE [-CAUSE]

     DET-student.PL IPFV.3-hungry.PL with-purpose

     'Students get hungry on purpose.'

As for non-causative events, achievements show mixed compatibility with agentive adverbials, see (20a). The compatibility of achievement verbs with agentive adverbials is believed to be influenced by whether or not the situation denoted by the verb can be controlled by an agent (see Smith, 1997). For example, it is unreasonable to assume that one can control a situation to bring about a win, thus *yifũz* 'win', in (20a), is unacceptable with an agentive adverbial, however it is reasonable to assume that one may put in minimal effort so as to guarantee a loss so *yiḳsar* 'lose' is acceptable. The accomplishment in (20b) is shown to allow the agentive adverbial.

(20) a. ˤumar qāṣid   yi-ḳsar   /   ACHIEVEMENT [-CAUSE]

      Omar intentionally.3SM IPFV.3SM-lose

      *yi-fũz

      IPFV.3SM-win

      'Omar intentionally loses.'

      #'Omar intentionally wins.'

  b. maha qāṣid-ah   tu-kutub   ar-risālah   ACCOMPLISHMENT [-CAUSE]

     Maha intentionally-3SF IPFV.3SF-write DET-message.SG

     'Maha intentionally wrote the message.'

As with previous tests, the two state types are split in their behaviour in their causative forms. The following examples show that causative unbounded states prohibit agentive adverbials, see (21a), as opposed to causative inceptive states which allow them, see (21b).

(21) a. *qāṣid   yi-ʿarrif-hum   al- jawāb   UNBOUNDED STATE [+CAUSE]
        intentionally IPFV.3SM-know.CAUS-3PL DET-answer.SM
        'He intentionally makes them know the answer.'

b. hī   ti-jawwiʿ-hum   bi-lʿāni   INCEPTIVE STATE [+CAUSE]
        she IPFV.3SF-hungry.CAUS-3PL with-purpose
        'She makes them hungry on purpose.'

In their causative forms, achievement and accomplishment verbs may license agentive adverbials as exemplified below.

(22) a. hū qāṣid   yi-ḳarrib   as-sayyārah   ACCOMPLISHMENT [+CAUSE]
        he intentionally IPFV.3SM-ruin DET-car.SF
        'He is intentionally ruining the car.'

b. ʿumar yi-ṭayyiḥ-ha   bi-lʿāni   ACHIEVEMENT [+CAUSE]
        Omar IMPV.3SM-topple.CAUS-3SF with-purpose
        'Omar is toppling them on purpose.'

A summary of the results is given in the table below:

Table 3.1: Summary of compatibility of BA imperfective event types with progressive and agentive contexts.

Test		Unbounded state	Inceptive state	Achievement	Accomplishment
Progressive	[-CAUSE]	-	-	-	+
	[+CAUSE]	-	*	*	+
Imperative	[-CAUSE]	-	-	-	+
	[+CAUSE]	-	+	+	+
Agentive adverbial	[-CAUSE]	-	-	+/-	+
	[+CAUSE]	-	+	+	+

* Causative achievements and inceptive states only allow the progressive when it is interpreted iteratively.

In short, this section has shown that within the BA stative class of verbs, a distinct class of inceptive state can be differentiated from canonical states based on the presence of a left-boundary and a habitual reading. I take inception to be an inherent property in inceptive states and unbounded states to be inherently stative. Evidence for a lexical distinction between the two stative roots will pop up several times during the forthcoming discussions and will be explicitly mentioned.

The use of traditional event tests like compatibility with progressive and agentive contexts has shown that inceptive states are indistinguishable from achievements. If we accept that inceptive states are non-dynamic events due to their punctual nature as Marín and McNally (2011) suggest, and given that achievements are generally non-agentive and prohibit the progressive (Rothstein, 2004; Mittwoch, 2019), it is not surprising to see that in their non-causative forms inceptives and achievements pattern like canonical states in their incompatibility with agentive and dynamic contexts.[58] However, in their causative forms, inceptives and achievements pattern like events and are acceptable in both agentive and dynamic contexts, unlike causative unbounded states which are prohibited in such contexts. Crucially, the causative stative verb type Pylkkänen (2000) argues for is evidenced in BA, where overt causative morphology is present in verbs that can only appear in stative contexts.

Another issue raised here is the fact that traditional event tests are found to not distinguish between punctual events represented by achievements and inceptive states, and canonical states in non-causative forms (see Table 3.1). It we accept that inceptive states are non-dynamic events (Maienborn, 2008; Fábregas and Marín, 2017) with aspectual properties that distinguish them from all other event classes (Rozwadowska, 2020), then it becomes necessary to find a set of tests that may differentiate between inceptives and canonical states. In traditional event tests, the distinction between achievements, unbounded states, and inceptive states is blurred. Achievements are telic and may be eliminated using a telic test as will be discussed in Section 4.2.2. However, we still cannot distinguish between inceptive states and unbounded states since they are both atelic. This issue is addressed by adopting Maienborn's (2005) event semantics and her event tests which are successful in differentiating between the two stative types (see 3.1.4).

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[58] Only the agentive adverbial tests showed mixed compatibility with achievement verbs based on whether the event can be controlled or not.

We return to the stative dichotomy in later discussions. For now we turn our attention towards the aspectual readings of the two stative types in their perfective forms.

3.1.2.2 Interpretation of states in the perfective form

In this study, we present the argument that stative verbs in the perfective form denote punctual changes into an atelic state, i.e. all stative verbs with perfective forms have inceptive interpretations. The claim is that the dichotomy within stative verbs observed in the imperfective form disappears with perfective morphology, where a left-boundary is imposed on all stative verbs. This section focuses on three tasks. The first explores the idea that perfective morphology assigns boundaries in BA; non-dynamic verbs are argued to be left boundaries whereas dynamic verbs are right boundaries when derived in the perfective form. The second task is to examine the atelic nature of states in the perfective form, which is argued to be a property of left-boundary eventualities as opposed to right-boundary eventualities that assign telicity. The last objective of this section is to verify that states in the perfective form, even though they obtain inceptive interpretations, may still be assimilated to the stative class of verbs as being non-dynamic and non-agentive predicates which fail traditional event tests. This establishes the groundwork for the aspectual characterization of psych verbs in their perfective forms (whether they are events or states), as will be discussed in detail in Chapter 4.

Before exploring the aspectual nature of states derived in the perfective form and their classification in the semantic taxonomies of events, a brief overview of perfectivity in Arabic is presented. Ingham (1994, p. 87) states that the perfective in Najdi Arabic presents the action as an "unanalysed whole and a completed punctual event". It is generally acknowledged that the perfective form denotes single past events. The perfective selects the end point of an eventuality and refers to it in its entirety without including the internal stages of development (Comrie, 1976; Binnick, 1991; Mughazy, 2015). By this, we mean that for each event type, the perfective form pinpoints one specific point to represent the event in its entirety. The selected point is generally acknowledged to be the point at which the eventuality the predicate refers to is considered *complete*

(Declerck, 2007). Alotaibi (2019) argues that this point from which the perfective projects in KA is the telic point in accomplishments and achievements, a temporary endpoint in activities, and the initial point that triggered the state for stage-level states (see Figure 3.2 for illustration). Thus, only stative perfectives project from the left-boundary, whereas all other perfective event types pinpoint the right-boundary which is generally acknowledged to be telic (see Chapter 2). Presented below are BA examples of the different event types in a neutral matrix clause in the perfective.

(23) a. ʿumar katab   al-ḵiṭāb   ACCOMPLISHMENT
         Omar write.PFV.3SM DET-letter.SG
         'Omar wrote the letter.'

      b. ʿumar mašā   ACTIVITY
         Omar walk.PFV.3SM
         'Omar walked.'

      c. ʿumar fāz   ACHIEVEMENT
         Omar win.PFV.3SM
         'Omar won.'

      d. ʿumar fihim   as-sālfah   INCEPTIVE STATE
          Omar understand.PFV.3SM DET-issue.SG
          'Omar came to understand the issue.'

      e. ʿumar ʿirif   al-ḥall   UNBOUNDED STATE
         Omar know.PFV.3SM DET-answer.SG
         'Omar came to know the solution.'

For the perfective verbs in (23 a-c), the interpretation is that of a completed action. Once Omar wrote the letter in (23a), the act of writing that specific letter cannot continue since it is understood as having reached an end point beyond which the event cannot continue. The same is true of the events in (23 b, c). However, the inceptive state *fihim* 'came to understand' in (23d) and the unbounded state *ʿirif* 'came to know' in (23e), are interpreted as a coming about of a state not a completion of one. For example, in (23e), Omar came into a state of knowing the solution and the state of knowledge continues indefinitely.

While the inceptive reading of the inceptive state verb is not surprising, the aspectual shift observed with the verb *ʿirif* 'came to know.PFV' is of particular interest. In its imperfective form, the verb is unbounded and does not refer to an inceptive interpretation.[59] However, in its perfective form, an inceptive reading is present where the state of knowing is understood to come about at a particular point. Essentially, where the unbounded state was incompatible with a left-boundary detecting punctual adverbial clause in its imperfective form, in its perfective form, it is expected to be acceptable. To illustrate, consider the following pair of sentences for the root *wiṯiq* 'trust' used in a matrix clause co-occurring with a punctual adverbial clause.

(24) a. *ʾa-ṯiq   fī-h   lamma   ʾa-smaʿ   kalām-ah
        IPFV.1SG-trust in-3SM when   IPFV.1SG-hear word.PL-3SG
        'I trust him when I hear his words.'

    b. waṯiq-t   fī-h   lamma simiʿ-t   kalām-ah
        trust.PFV-1SG in-3SM when   hear.PFV-1SG word.PL-3SG
        'I trusted him when I heard his words.'

In its imperfective form, the verb *ʾaṯiq* 'trust.IPFV' is incompatible with the boundary setting adverbial clause because the verb is an unbounded state (see also 3.1.2.1). However, in its perfective form, the same root allows the adverbial clause since the verb contains in its meaning an inceptive interpretation encoded by the perfective morphology. This test shows that an inceptive boundary is detectable for canonical states in their perfective forms. Not surprisingly, the stative root *fihim* 'understand' is compatible with a punctual adverbial clause since it has inceptive interpretations in both its imperfective (25a), and perfective (25b) forms.

(25) a. sārah ti-fham   ad-dars   lamma ʾa-šraḥ-ah
        Sara   IPFV.3SF-understand DET-lesson.SG.M when   IPFV.1S-explain-3SM
        'Sara understands the lesson when I explain it.'

    b. sārah fihimi-t   ad-dars   lamma šaraḥ-t-ah
        Sara   understand.PFV-3SF DET-lesson.SG.M when   explain.PFV-1S-3SM
        'Sara understood the lesson when I explained it.'

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[59] The lack of an inceptive reading for the imperfective *yiʿrif* 'know' is diagnosed using the punctual adverbial test in example (10b).

This goes to support the claim made here that perfective morphology aspectually marks an inceptive reading on all states by assigning a left-boundary. We return to this test in Section 4.2.4 where the left-boundary diagnostic is used to diagnose inceptive readings for BA psych verbs.

The left-boundary that the perfective form assigns stative verbs might explain why some stative verbs reject the perfective form. Verbs like *yišbih* 'resemble', seen in (26), and *yistāhil* 'deserve', seen in (27), are unbounded states that do not allow an onset interpretation and so cannot occur in the perfective form, see (b) examples below.

(26) a. yi-šbih   ʾaḳ-ūh
        IPFV.3SM-resemble brother-3SM
        'He resembles his brother.'

     b. *šabah   ʾaḳ-ūh
        resemble.PFV.3SM brother-3SM
        'He resembled his brother.'

(27) a. yi-stāhil-ūn   kull ḳayr
        IPFV-deserve-3PL all   goodness
        'They deserve all goodness.'

     b. *ʾistāhal-ū   kull ḳayr
        deserve.PFV-3PL all   goodness
        'They deserved all the goodness.'

The perfective gap in the paradigm of some stative verbs is also cited in previous studies (see 3.1.1 for details). For Spagnol (2009) and Alotaibi (2019), the perfective gap exists because the imperfective form is intrinsically linked to stativity while perfective forms lend themselves more to eventive interpretations. In other words, perfectivity is an event-denoting morphological form that prohibits robust statives, like individual-level/unbounded states. This analysis is problematic when we consider that stative verbs in their perfective forms fail traditional event tests like compatibility with agentive contexts and event frame tests as will be shown in the following discussion. However, a solution is found in Maienborn's (2005; and subsequent work) event

taxonomies where inceptive verbs classify as events. This discussion is reserved for Sections 3.1.4 and 4.1.

Mughazy (2005) explains that the perfective gap found with individual-level states (what I refer to as unbounded states) is due to their lack of a telic feature which creates a mismatch with the telic feature inherent to perfectivity. Before addressing the claim that perfective morphology is inherently telic, a comment is in order regarding the claim found in Mughazy (2005) and Alotaibi (2019) that individual-level states do not allow perfective forms (see 3.1.1). While I agree that the perfective gap seems to appear only with canonical states that do not have habitual interpretations, it is not accurate to say that *all* individual-level states, or canonical states, do not allow perfective forms.

A case in point is the verb *yiʿrif* 'IPFV.know' which Mughazy (2005) and Alotaibi (2019) classify as a stage-level state based solely on its ability to form the perfective, *ʿirif* 'knew.PFV'. They do not discuss how *yiʿrif* does not exactly qualify as a stage-level state according to the criteria they mention of having an initial boundary and allowing a recurrent interpretation. This is problematic since *yiʿrif* is shown to not allow recurrent interpretations with the habitual adverbial, and it fails the initial boundary detecting adverbial test (see 3.1.2.1). Mughazy and Alotaibi's classification of *yiʿrif* as a stage-level state is contrary to my findings, which show it to be canonical state on par with their individual-level states (see also Kratzer, 1995; Maienborn, 2019).

In sum, the lack of a perfective cannot be used as a test to segregate between the two stative types in BA, as it incorrectly rules out some unbounded states like *yiʿrif* 'IPFV.know' and groups them together with states that have inherent inceptive interpretations.[60] Furthermore, the argument made here is that the perfective gap in the paradigm of several unbounded stative verbs is explained if we accept that perfective morphology indicates a boundary: the left-boundary is encoded for states denoting onsets of atelic states, and the right-boundary is encoded for events denoting telic change of state verbs. If unbounded states are lexically encoded states, then we predict that some may resist the inceptive aspectual shift that perfective morphology forces.

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[60] I return to BA stative verb classifications in 3.1.4.

This leads to the next task in this section, which is to explore the (a)telic nature of perfective states. Telicity and its relationship to perfectivity is a matter of controversy because both crucially involve some terminal end point or terminal boundedness (Binnick, 1991, p. 190).[61] The view that the perfective is understood as *complete* has often led to equating perfectivity with boundedness, which many also be taken to imply telicity (Declerck, 2007; Liu, 2014; Smith, 1997). For Arabic, the widely held view is that perfective verbs represent completed events:

> The perfective presents the situation as closed and bounded with the final endpoint reached and that is why it is more appropriate with telic situations than with atelic ones since the ending point is culminated giving the completeness reading typical of this form in SA [MSA] (Al-Aqarbeh and Al-Sarayreh 2017, p. 71).

Al-Aqarbeh and Al-Sarayreh (2017) follow Smith (1997) and use event continuation (or the expansion test) (among other tests; see Al-Aqarbeh and Al-Sarayreh 2017 for more details) as a diagnostic for the aspectual readings of the MSA perfective. The expansion test is when a clause with a perfective predicate is conjoined with a clause that contains an imperfective predicate that asserts the eventuality may have continued (Bar-el, 2005, p. 69), usually using a *still* conjunction. The MSA example in (28) is provided from Al-Aqarbeh and Al-Sarayreh (2017, p. 71) where they show that a perfective predicate is incompatible with a clause that asserts the perfective eventuality has not reached its final point.

(28) *ʾaḥmad-u   rasama   lawḥatan   *wa māzāla yarsumu-hā*   (MSA)
     Ahmad-NOM PERF.draw.3SGM picture-ACC and still   IMPF.draw.3SGM-it
     'Ahmad drew the picture and he is still drawing.'

Alotaibi (2019) argues against the generalization that Arabic perfective verbs represent telic events, and states that the conflict that arises with the expansion test is linked to the type of lexical

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[61] The terms *telic/atelic* or *bounded/unbounded* are used interchangeably by some scholars (see e.g. Rozwadowska 2003) while others call for a distinction between the notions of *telicity* and *boundedness* (Declerck, 2007; Depraetere 1995; Liu, 2014). Boundedness has to do with temporal boundaries set by grammatical aspect (e.g. *John studied*, *she walked for hours*) whereas telicity concerns whether the eventuality can be understood as complete (e.g. *Mary ate an apple*, *they watched the movie*) (Depraetere, 1995; Smith, 1997). I use the term atelic in the perfective context here and take it to mean the absence of a final point in the meaning of the eventuality denoted by the verb beyond which the eventuality cannot be understood to hold. Thus, an atelic perfective eventuality may be extended to speech time.

aspect of the perfective predicate. She argues that only telic events disallow expansion, whereas states and activities, being atelic, do not prohibit such structures. She provides the MSA counterexample in (29a) and the KA example in (29b) of an activity predicate that allows expansion with *ma-zaala* 'still'.

(29) a. rakaḍ-a   ḳālid-un,   [wa mā-zāla ya-rkuḍu]   (MSA)
        ran.PF.3SM Khalid-NOM [and still   3SM.MP.run]
        'Khalid ran (since the morning) and he is still running'
                                                        (Alotaibi 2019, p. 64)

    b. ʿazzām sibaḥ   (min aṣṣubḥ)   wa māzāl yi-sbaḥ   (KA)
       Azzam swam.PF.3SM (from the morning) and still   3SM.MP.swim
       'Azzam swam (since the morning) and he is still swimming'
                                                        (Alotaibi 2019, p. 71)

My intuition as a native Arabic speaker diverges from Alotaibi (2019) for example (29a); I do not find this example acceptable.[62] However, since the example in (29a) is in MSA which arguably cannot be judged intuitively, and the second example in (29b) is in KA which I have no knowledge of, I leave the matter in favour of examining the effect of the lexical aspect of the perfective predicate on the acceptability of the expansion test in BA. The sentences in (30) present examples of expanded perfective verbs from all four aspectual classes: accomplishment, activity, achievement, and state. The only acceptable sentence is that of the stative perfective verb in (30d), whereas all dynamic perfective verbs disallow modification with *lissā* 'still'.

(30) a. *ʿumar katab   al-ḳiṭāb   w   lissā yi-ktub-ah   ACCOMPLISHMENT
        Omar   write.PFV.3SM DET-book.SG CONJ still   IPFV.3SM
        'Omar wrote the book and he is still writing it.'

    b. *ʿumar mašā   w   lissā yi-mšī   ACTIVITY
       Omar   walk.PFV.3SM CONJ still IPFV.3SM-walk
       'Omar walked and is still walking.'

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[62] Other native speakers informally consulted also found the example unacceptable.

c. *ʿumar fāz   w   lissā yi-fūz   ACHIEVEMENT
   Omar win.PFV.3SM CONJ still IPFV.3SM-win
   'Omar won and he is still winning.'

d. ʿumar ʿirif   al-j-awāb   w   lissā yi-ʿrifa-h   STATE
   Omar know.PFV.3SM DET-answer.SM CONJ still IPFV.3SM-know-3SGM
   'Omar came to know the answer and he still knows it.'

The expansion test provides evidence that the stative perfective verb is unique in that it allows an atelic interpretation, as opposed to the other lexical event type perfectives. This is contrary to arguments in the literature that the Arabic perfective is complete and beyond expansion, i.e. telic or bounded (Comrie, 1976; Mughazy, 2005; Fassi Fehri, 2012; Al-Aqarbeh and Al-Sarayreh, 2017; Aloula, 2021).

One of the main claims made in this thesis concerns the unique aspectual properties of stative verbs in the perfective form, which carry punctual and atelic properties and have inceptive interpretations. Danks (2011) argues for the presence of inceptive states in MSA and posits that they are punctual onsets that may be either telic or atelic depending on the given structure. The argument that inceptive predicates may be telic is also found in Brustad (2000). Brustad (2000, p. 170) notes that the verb *ḥabb* in EA has both a stative atelic meaning 'to love' in the imperfective form, and an inceptive telic meaning of 'to fall in love with' in the participle form. However, it is my contention that inceptive verbs in BA do not encode a telic property. It is therefore a primary task to establish through diagnostic tests that inceptive states in the perfective and imperfective form are atelic and that they have a discernible left-boundary. I return to telicity and inceptive tests in more detail in Chapter 4 with respect to psych verb data.

The final topic addressed in this section has to do with the behaviour of non-dynamic verbs in the perfective form regarding tests normally compatible with eventive verbs. Alotaibi (2019) argues that perfectivity is an event-denoting morphological form in that the perfective form overrides any lexical aspectual properties of a predicate and allows a perfective predicate to have an existential eventive reference (Alotaibi 2019, p. 90). It is important to explore the state/event classification of perfective states because it directly influences what predictions can be made for perfective psych verbs. Recall that one of the important issues investigated in this thesis is the event/state or

agentive/agent-less characterization of BA psych verbs due to the well-known ambiguous nature of ObjExp verbs cross-linguistically (see Chapter 2 for details). For this reason, the following discussion explores the acceptability of perfective stative verbs in structures traditionally considered eventive. The exploration will include causative and non-causative forms of stative verbs to form a baseline for expected behaviour in perfective psych verbs.

Traditional tests for eventhood aim to diagnose the presence of features not typically associated with stative verbs, like agency and dynamicity as seen in the previous section 3.1.2.1. One agency test that is compatible with perfective forms in BA is modification with agentive adverbials like *bilʿāni* 'purposely', as illustrated below. Perfective states in their non-causative forms are not compatible with agentive adverbials, suggesting a stative classification, see (31).

(31) a. *ʿirif-u   a-ṭṭirīq   bi-lʿāni   UNBOUNDED STATE [-CAUSE]
        know.PFV-3PL DET-way with-purpose
        'They came to know the way purposely.'

   b. *jāʿ   bi-lʿāni   INCEPTIVE STATE [-CAUSE]
        hunger.PFV.3SM with-purpose
        'He became hungry purposely.'

As for non-causative events, as in their imperfective forms, achievements show mixed acceptability depending on the verb in use, see (32a), and accomplishments readily allow agentive adverbials, see (32b).

(32) a. ṭāḥ   /*fāz   bi-lʿāni   ACHIEVEMENT [-CAUSE]
        fall.PFV.3SM/ win.PFV.3SM with-purpose
        'He fell purposely.'
        #'He won purposely.'

   b. katab   a-rrisālah   bi-lʿāni   ACCOMPLISHMENT [-CAUSE]
        write.PFV.3SM DET-message.F with-purpose
        'He wrote the message purposely.'

Non-dynamic verbs in their causative forms show the same split pattern of behaviour seen in their imperfective forms regarding the agentive adverbial test. The following examples illustrate how the causative unbounded state, exemplified in (33a), prohibits modification with *bi-lʿānī* 'purposely' while the causative inceptive, seen in (33b), allows it.

(33) a. *ʿarraf-hum   ʿalā aṭ-ṭirīq bi-lʿāni   UNBOUNDED STATE [+CAUSE]
know.CAUS.PFV-3PL on DET-way with-purpose
'He made them know the way purposely.'

    b. jawwaʿ-nī   bi-lʿāni   INCEPTIVE STATE [+CAUSE]
hunger.CAUS.PFV.3SM-1S.ACC with-purpose
'He made me hungry purposely.'

Eventive verbs in their causative forms readily allow agentive adverbial modification as shown in the following examples.

(34) a. kasar-ū-hā   bi-lʿāni   ACCOMPLISHMENT [+CAUSE]
break.PFV-3PL-3SF with-purpose
'They purposely broke it.'

    b. ṭayyaḥ-ū-h   bi-lʿāni   ACHIEVEMENT [+CAUSE]
fall.CAUS.PFV-3PL-3SM with-purpose
'They purposely made him fall.'

Testing for a dynamic feature using the progressive test is not possible for BA because the perfective in Arabic generally does not include the internal stages of a predicate and thus cannot be considered dynamic (Comrie, 1976; Mughazy, 2015). Therefore, progressive structures are ill-formed with all BA perfective verbs as shown in the following examples.

(35) a. *qāʿid   daras   al-faṣl   ACCOMPLISHMENT
PROG.3SM study.PFV.3SM DET-chapter
'He was studying the chapter.'

b. *qāʿdah mašat ACTIVITY
   PROG.3SF walk.PFV.3SF
   'She was walking.'

c. *qāʿid ʿirif STATE
   PROG.3SM know.PFV.3SM
   'He was knowing.'

As shown in (35), attempting to test the event or state status of BA stative verbs in the perfective form based on the presence or absence of a dynamic feature is not feasible. Thus, in lieu of the progressive test, the *event frame* test "*what happened/occurred/took place was (that)…*" (Jackendoff 1983, p. 170) is used (see 2.1.3). The following examples show the contrast between states and events with the eventive frame in BA examples.

The perfective event verbs in both their non-causative, see (36), and causative forms, see (37), are compatible with the event frame. This is expected given they are events.

(36) a. ʾilli ḥaṣal ʾinn-ah kasar al-luʿbah ACCOMPLISHMENT [-CAUSE]
        what happen.PFV.3SM that-3SM break.PFV.3SM DET-toy.SG
        'What happened was that he broke the toy.'

     b. ʾilli ḥaṣal ʾina-hum faz-ū ACHIEVEMNET [-CAUSE]
        what happen.PFV.3SM that-3PL win.PFV-3PL
        'What happened was that they won.'

(37) a. ʾilli ḥaṣal ʾinn-ah ḵarrab al-jihāz ACCOMPLISHMENT [+CAUSE]
        what happen.PFV.3SM that-3SM ruin.PFV.3SM DET-device.SG
        'What happened was that he ruined the device.'

     b. ʾilli ḥaṣal ʾinn-ah ṭayyaḥ al-makīnah ACHIEVEMNET [+CAUSE]
        what happen.PFV.3SM that-3SM topple.PFV.3SM DET-machine.SG
        'What happened was that he toppled the machine.'

Interestingly, perfective states show a split pattern of behaviour in their non-causative forms. The inceptive state is compatible with the event frame as seen in (38a) whereas the unbounded state, seen in (38b), is not. This pattern supports our suspicions that inceptive states are closer to being

events than they are standard states. This test is an indication that inceptive states are lexically encoded events that should be distinguished from states.[63]

(38) a. ʾilli   ḥaṣal   ʾinna-hā jāʿ-at   INCEPTIVE STATE [-CAUSE]
        what happen.PFV.3SM that-3SF hunger.PFV-3SF
        'What happened was that she got hungry.'

    b. *ʾilli   ḥaṣal   ʾinna-hum ʿirif-ū   UNBOUNDED STATE [-CAUSE]
        what   happen.PFV.3SM that-3PL   know.PFV-3PL
        al-jawāb
        DET-answer-SM
        'What happened was that they came to know the answer.'

This test for eventhood indicates that Alotaibi's (2019) claim that the perfective form only allows event predicates is not entirely accurate seeing that the unbounded state allows the perfective form and fails the event frame test.[64]

In their causative forms, the same pattern is observed where inceptive states are compatible with event frames whereas unbounded states prohibit them. Consider the following examples:

(39) a. ʾilli   ḥaṣal   ʾinn-ah   maha jawwaʿ-at   INCEPTIVE STATE [+CAUSE]
        what happen.PFV.3SM that-3SM Maha hunger.CAUS.PFV-3SF
        alʿiyāl
        DET-child.PL
        'What happened was that Maha made the children hungry.'

    b. *ʾilli   ḥaṣal   ʾinn-ah   maha ʿarraf-at-hum   UNBOUNDED STATE [+CAUSE]
        what happen.PFV.3SM that-3SM Maha know.CAUS.PFV-3SF-3PL
        ʿalā al-makān
        on   DET-place
        'What happened was that Maha made them know the place.'

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[63] The first piece of evidence seen for a lexical distinction between the two stative verbs was the presence of a habitual interpretation in inceptive states (see 3.1.2.1 and 4.2.1).

[64] Section 3.1.4 reviews Alotaibi's (2019) claim in light of Maienborn's (2005) event tests that rely on ontological properties that distinguish between events and states and crosscut all of Vendler's traditional event classes.

The event frame test shows a clear differentiation between inceptive states and unbounded states where the former pattern like events and the latter like canonical states.

A summary of the results is given in the table below:

Table 3.2: Summary of compatibility of BA perfective event types with event frames and agentive adverbials.

Test		Unbounded state	Inceptive state	Achievement	Accomplishment
Agentive adverbial	[-CAUSE]	-	-	+/-	+
	[+CAUSE]	-	+	+	+
Event frame	[-CAUSE]	-	+	+	+
	[+CAUSE]	-	+	+	+

In sum, this section has shown that BA perfective morphology encodes an inceptive interpretation on all stative verbs. Additionally, contrary to expectations (see e.g. Mughazy, 2015), perfectivity does not encode telicity on unbounded states and inceptive state verbs, as opposed to all other verb types which have an endpoint and do not accept an expansion phrase. Importantly, the section has shown that although all perfective stative verbs have inceptive interpretations, the event frame differentiates between inherently inceptive states and inherently unbounded states. Inceptive states pattern like events while unbounded states pattern like canonical states (see Table 3.2 above). Crucially, the data suggests that even though perfective morphology coerces some unbounded states into an inceptive interpretation, the core event structure of the verb remains stative and may not be overridden. Coercion has no bearing on event structure (Biały, 2020), and thus it is assumed that unbounded states in both their imperfective and perfective forms are inherent states.

3.1.3 Interim summary

As with other Arabic dialects (see 3.1), stative verbs do not present a homogenous class of verbs in BA. The non-dynamic class of verbs traditionally labeled *states* (see Vendler, 1957; Dowty,

1979; Smith, 1997) is divided into inceptive states and unbounded states. The prior discussions have shown that BA inceptive states have eventive properties like the availability of a habitual reading, and they behave like events, particulary achievements, regarding traditional event tests. This association between inceptives and achievmnets in BA supports the claims that inceptive states are punctual events (Marín and McNally, 2011) and that all punctual predicates are non-dynamic events (Piñón, 1997).[65] Figure 3.3 shows the aspectual interpretations of inceptive states in the different morphosyntactic representations examined in the previous discussions.
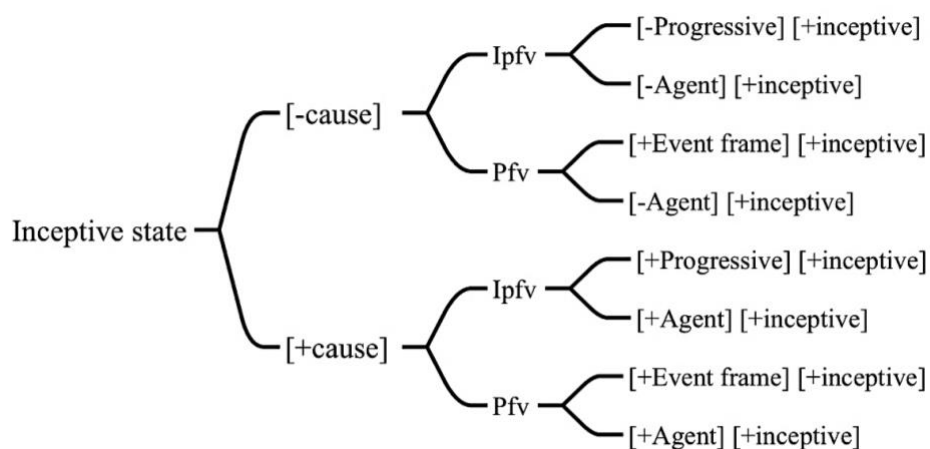
Figure 3.3: The aspectual interpretation of inceptive states in various levels of morphosyntactic representation.

In contrast, BA unbounded states are canonical states and behave as expected of standard states regarding compatibility with event tests. Most intriguing is the finding that perfective morphology shifts unbounded states into an inceptive reading that not all states allow, resulting in perfective gaps in the verbal paradigm of some states. Importantly, the inceptive aspect encoded by the perfective does not result in an eventive shift according to the event frame test, i.e. unbounded states retain an inherent stative status even when coerced into inceptive readings. Figure 3.4 illustrates the aspectual characterization of unbounded states in all the morphosyntactic structures reviewed so far.

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[65] See Section 4.2.3 for punctuality tests of inceptive psych verbs.
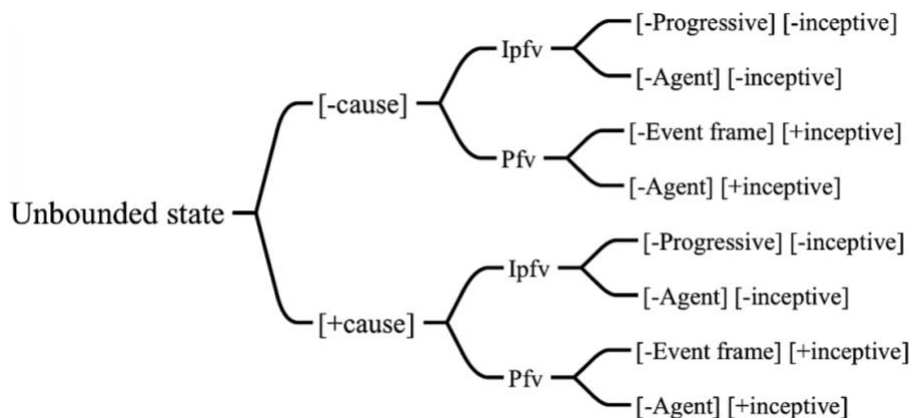
Figure 3.4: The aspectual interpretation of unbounded states in various levels of morphosyntactic representation.

Having discussed the role of (im)perfective morphology on the aspectual interpretations of stative verbs, it is time to turn our attention to lexical aspect and the evidence that there are two distinct stative roots in BA that have different aspectual properties. The next section explores the Davidsonian and Kimian state distinction as analysed by Maienborn (2005).

3.1.4 Davidsonian events

There are two primary paradigms that address a distinction between two types of states.[66] The first is the stage-level/individual-level distinction first proposed by Carlson (1977) and further developed by Kratzer (1995).[67] The second is a Davidsonian/Kimian state distinction argued for by Maienborn (2019; 2011; 2008; 2005).[68] In this thesis, I adopt the terminology and conceptualizations of states as provided by Maienborn. This section briefly presents her views on the grammatically relevant ontological distinctions between Davidsonian states (henceforth D-states) and Kimian states (henceforth K-states) and the linguistic diagnostics used to differentiate between them. This thesis argues that this distinction is found in BA at the root level and that distinctions can be made between the two state root types in all the verb derivations investigated

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[66] In recent work, Silvagni (2021) questions if there is a difference between the stage/individual-level and the Davidsonian/Kimian classes and argues the distinctions are one and the same. His work reconciles the two paradigms using data from copular constructions.

[67] The distinction crosscuts all Vendlerian classes, however, the focus is only on stative verbs here. See Maienborn (2019) for a summary.

[68] See Mittwoch (2005) and Ernst (2016) for arguments against a Davidsonian/Kimian analysis for states.

in this study (e.g. interactions with perfective and causative morphology). For this reason, I will henceforth refer to K-state or D-state root verbs derived into whichever verb form is under discussion. However, before outlining Maienborn's theory and how BA data fits within that paradigm, a brief note is given on why the stage/individual-level distinction is rejected.

So far in this thesis, it has been repeatedly mentioned that some properties of stative or psych verbs are attributed to the stage-level classification of eventualities. In Chapter 2, those ObjExp verbs that show more event-like properties are considered stage-level states, as opposed to stative ObjExp verbs or SubjExp verbs, which are counted as individual-level states (Biały, 2005; Fábregas and Marín, 2015; Pylkkänen, 2000). In the current chapter, recurrent states in EA or initial boundary states in KA are called stage-level states to be distinguished from individual-level states which are non-recurrent or do not have an initial boundary (Alotaibi, 2019; Mughazy, 2005). There are two main problems with the stage/individual-level paradigm: the first has to do with the conceptual basis of the differentiation between stage-level and individual-level states; and the second concerns the telic feature cited for stage-level states, which is not borne out by BA data.

The first discussion addresses the conceptual foundation of the stage/individual-level distinction. Stage-level states are defined as temporary, accidental, or transitory predicates (e.g. *tired*, *wait*, *angry*), while more permanent or inherent properties are called individual-level states (e.g. *intelligent*, *love*, *know*). In the literature, this definition has been uncritically adopted (Carlson, 1977; Luís Filipe, 2011; Iwabe, 1990; Kratzer, 1995; Satu, 2001; Mughazy, 2005; Maienborn, 2019; Mittwoch, 2019; Silvagni, 2021). The objection here is with the rather subjective conceptualization of stage/individual-level states as a 'temporary vs. permanent' dichotomy which could lead to confusion when classifying some verbs. For example, *love* (Maienborn 2019) and *know* (Kratzer 1995) are cited as examples of individual-level states since they refer to more permanent properties. If we accept that all individual-level states in Arabic do not allow perfective derivations, as argued by Alotaibi (2019) and Mughazy (2005; 2015), then it should not be possible to have perfective forms of *yiḥubb* 'love.IPFV' and *yiʿrif* 'know.IPFV'. This is not true, as shown by the acceptability of the forms *ḥabb* 'loved.PFV' and *ʿirif* 'knew.PFV'. However, counterexamples can be found in other states classed as individual-level, like *yišbah* 'resemble.IPFV' and *yiqrab*

'relate.IPFV' which do not allow perfective forms, e.g. *šabah 'resembled.PFV' and *qarab 'related.PFV'.

It could be argued that *yišbah* 'resemble.IPFV' and *yiqrab* 'relate.IPFV' are more long-term properties than *yiḥubb* 'love.IPFV' and *yiʿrif* 'know.IPFV', hence the former set of verbs are considered permanent properties in Arabic while the latter are not. In this view, *yiḥubb* 'love.IPFV' and *yiʿrif* 'know.IPFV' would be considered stage-level states in Arabic. Since the perfective form is allowed for these two verbs then a stage-level analysis seems appropriate. However, this classification would group *yiḥubb* 'love.IPFV' with verbs like *yiḳāf* 'fear.IPFV' as stage-level states that allow perfective forms, which itself is problematic due to the different aspectual interpretations between the two verbs; the former being unbounded and the latter inceptive (see discussion in 3.1.2). Already, the subjective and relative nature of relying on temporary vs. permanent properties to differentiate between stative verbs is evident. It is therefore necessary to find a clear delimitating set of characteristics that distinguish between the two states, which is possible with Maienborn's paradigm as will be discussed shortly.

The second complication that prevents the adoption of a stage/individual-level distinction and terminology in this thesis has to do with the aspectual features of stage-level states. In Section 3.1.1 Mughazy (2005) argues that EA recurrent states are stage-level states that are inherently telic; they may end and begin again depending on some prior event (Mughazy, 2005). In fact, Olsen (1997, p. 37) assigns a telic privative feature to stage-level states meaning that stage-level states are always interpreted as telic predicates and cannot be interpreted as atelic either through syntactic manipulation or pragmatic implicature. The conflict here is in the argument advanced by recent studies in the literature and adopted in this thesis where inceptive states (recognized as stage-level states by Mughazy) are argued to be a unique class of predicates which feature punctual and atelic properties (see e.g. Marín and McNally, 2011; Rozwadowska, 2020; see Chapter 2 for details). BA inceptive states are shown to be atelic (see Chapter 4 for tests) and thus cannot be assimilated to the stage-level state class of verbs. To avoid the confusion of claiming a stage-level state designation for inceptive states that are extensively argued to be to be atelic in this thesis, we adopt a Davidsonian event classification which makes no claims as to the (a)telic property of inceptive states.

For these reasons, an alternative to the stage/individual-level dichotomy is found in the Davidsonian/Kimian paradigm proposed by Maienborn (2005; and subsequent work) which provides a satisfactory set of ontological features for events vs. states and provides linguistic tests based on those ontological properties which make it possible to reliably identify stative verbs as either D-states or K-states. The novelty of Maienborn's approach is the finding that not all stative verbs fail eventive tests, which is surprising due to their non-dynamic nature. D-states have mixed properties between states and events whereas K-states are pure states. The following discussion outlines Maienborn's model (see Maienborn 2019 for a recent review of her paradigm).

Maienborn adopts Davidson's seminal work (1967) with respect to event semantics. The core assumption regarding Davidsonian eventualities is that they are *spaciotemporal entities* in the world, i.e. they are "concrete particulars" (LePore, 1985, p. 151), which necessarily involve participants serving some function (Maienborn, 2005; 2008; 2011; 2019). Based on this definition, Maienborn presents the ontological properties of events, seen in (40). Events are spaciotemporal entities and so may be perceptible (40a) and located in space and time (40b). Events also imply inherent participants and so may vary in the way they happen in the world (40c).

(40) Ontological properties of Davidsonian events:
    a. Events are perceptible.
    b. Events can be located in space and time.
    c. Events can vary in the way they are realized.

                                                            (Maienborn, 2011, p. 808)

These properties can then be used as a basis for the following event diagnostics, which can be used to detect the presence of event arguments:

(41) Linguistic diagnostics for Davidsonian events:
    a. Event expressions can serve as infinitival complements of perception verbs.
    b. Event expressions combine with locative and temporal modifiers.
    c. Event expressions combine with manner adverbials, instrumentals, comitatives, etc.

                                                            (Maienborn, 2011, p. 808)

Focusing here on stative verbs, the diagnostics presented in (41) can be used to distinguish stative verbs that have a hidden event variable, allowing them to exhibit event-like behaviour, i.e. D-states. Since events can be perceived, D-state verbs should be able to serve as infinitival complements of perception verbs, see (42):[69]

(42) a. I saw the child sit on the bench.   D-STATE
     b. I saw my colleague sleep through the lecture.   D-STATE
     c. *I saw the child be on the bench.   K-STATE
     d. *I saw the tomatoes weigh 1 pound.   K-STATE
                                               (Maienborn, 2011, p. 819)

Also, D-states, being events that are located in space, may combine with locative modifiers,[70] see (43).

(43) a. Hilda waited at the corner.   D-STATE
     b. The pearls gleamed in her hair.   D-STATE
     c. *The dress was wet on the clothesline.   K-STATE
     d. *Bardo was hungry in front of the fridge.   K-STATE
                                               (Maienborn, 2011, p. 819)

The split in stative verbs can also be seen in how some states would allow modification with manner adverbials, comitatives, and other modifiers that elaborate on the internal structure of an event, see (44). Normally, states do not allow such modification since they lack internal structure (Dowty, 1979). Katz (2003) calls this the *stative adverb gap*, where stative verbs in particular reject certain adverbs.

(44) a. Bardo slept calmly/with his teddy/without a pacifier.   D-STATE
     b. Carolin sat motionless/stiff at the table.   D-STATE
     c. *Bardo was calmly/with his teddy/ without a pacifier tired.   K-STATE
     d. *Carolin was restlessly/patiently thirsty.   K-STATE
                                               (Maienborn, 2011, p. 820)

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[69] Maienborn's original arguments in (2005; 2008) are based on German data, I use her (2011) English examples for ease of representation. She lists the verbs *sleep, sit,* and *wait* as D-state verbs.

[70] Maienborn (2011, p.819-820) makes a distinction between locative VP-modifiers and locative frame adverbials which are sentential modifiers. See Maienborn & Schäfer (2010) for more details.

Kimian states are characterized by Maienborn (2008, p. 113) as "abstract objects for the exemplification of a property P at a holder *x* and a time *t*". K-states are perceived as ontologically "poorer" than those of D-states; they may be located in time, but not in space, and serve as an antecedent for anaphoric reference, but they cannot be perceived, nor vary in the way they are realized. Maienborn lists the properties of K-states as provided in (45) with a note that (45 a, b) are specific properties that arise due to the abstract nature of K-states.

(45)   Ontological properties of Kimian states:
    a.   K-states, being abstract objects, are not accessible to direct perception and have no location in space.
    b.   K-states, being abstract objects, are accessible to (higher) cognitive operations.
    c.   K-states can be located in time.

<div align="right">(Maienborn, 2008, p. 113)</div>

The diagnostic tests that can be obtained from these properties are as follows:

(46)   Linguistic diagnostics for Kimian states:
    a.   K-state expressions cannot serve as infinitival complements of perception verbs and do not combine with locative modifiers.
    b.   K-state expressions are accessible for anaphoric reference.
    c.   K-state expressions combine with temporal modifiers.

<div align="right">(Maienborn, 2008, p. 113)</div>

The K-state properties in (45) parallel the Davidsonian properties listed in (41). This accounts for their behaviour regarding the eventivity tests in (42-44). In the previous examples, it was observed how K-states resist being complements of perception verbs (42 c, d), reject locative modification (43 c, d), and any adverbial modification (44 c, d) as opposed to D-states, which allow all the mentioned structures.

Maienborn (2011) claims that the Davidsonian event diagnostics summarized in (41) present sufficient evidence for the presence of a fundamental split within stative verbs. She argues that D-states denote true Davidsonian events, whereas K-states are resistant to a Davidsonian analysis

and present Kimian statives. In this view, the descriptions found in standard event taxonomies where eventivity implies dynamicity (see 2.1.1) is claimed to be an oversimplification of the data. The presence of Davidsonian events in the class of non-dynamic predicates supports the view that eventivity and dynamicity are independent properties (see Fábregas and Marín (2013; 2015; 2017) and Silvagni (2021) for more on this). This results in a taxonomy of predicates where D-states exhibit intermediate behaviour between states and events, and where prototypical properties of events (e.g. spaciotemporal location) and states (e.g. being non-dynamic) are observed to be present in D-states.

How can Maienborn's D/K-state model be reconciled with the data observed so far for BA statives? It was previously noted (see Section 3.1.1) that BA imperfective inceptive states have habitual interpretations that are more in line with readings of event predicates. Imperfective unbounded states, on the other hand, have present tense readings which are typical of canonical states. If we assume that BA imperfective inceptive states are derived from D-state roots and unbounded states from K-state roots, then D-state root states should pass Maienborn's event tests while K-state root states are predicted to fail. The application of Maienborn's tests regarding BA data for imperfective stative verbs is presented in the following where inceptive states are illustrated in the (a) examples, and unbounded states are shown in the (b) examples.

(47) Perception report
    a. šif-t   al-walad   yi-fham
        see.PFV-1SG.NOM DET-boy.SG IPFV.3SM-understand
        'I saw that the boy understands.'

    b. *šif-t   maha ti-ʿrif   al-makān
        see.PFV-1SG.NOM Maha IPFV.3SF-know DET-place.SG
        'I saw Maha know the place.'

(48) Locative modifier
    a. yi-fham   fī al-faṣl
        IPFV.3SM-understand in DET-class.SG
        'He understands in class.'

b. *ti-ʿrif   al-ḥall   fī al-faṣl
    IPFV.3SF-know DET-solution in DET-class
    'She knows the solution in class.'

(49) Manner adverbial

a. yi-fham   bi-surʿah
    IPFV.3SM-understand with-speed
    'He understands quicky.'

b. *ti-ʿrif   al-ḥall   bi-surʿah
    IPFV.3SF-know DET-solution with-speed
    'She knows the answer quickly.'

Unbounded states, like Maienborn's K-states, cannot serve as complements to perception verbs, see (47b), may not combine with locative modifiers, see (48b), and are incompatible with manner adverbials, see (49b). Inceptive states, on the other hand, are acceptable in all these contexts. Therefore, according to Maienborn's taxonomy of events and diagnostics, we take imperfective inceptive states to be Davidsonian events and imperfective unbounded states to be Kimian states.

Recall that perfective morphology encodes inceptive readings on stative verbs. Therefore, both D-state root states and K-state root states are expected to pass Maienborn's event tests if we assume that inceptive readings are eventive. Consider the following examples which illustrate perfective D-state root states in the (a) examples, and K-state root states in the (b) examples.

(50) Perception report

a. šif-t   al-walad   fihim
    see.PFV-1SG.NOM DET-boy.SG understand.PFV.3SM
    'I saw the boy understand.'

b. šif-t-ah   wazan   kitīr
    see.PFV-1SG.NOM-3SM weigh.PFV.3SM plenty
    'I saw it weigh a lot.'

(51) Locative modifier

    a. fihim-t   fī al-faṣl

        understand.PFV-1SG.NOM in DET-class.SG

        'I understood in class.'

    b. ʿirifi-t   al-ʾijābah   fī al-faṣl

        know.PFV-1SG.NOM DET-answer in DET-class.SG

        'I knew the answer in class.'

(52) Manner adverbial

    a. fiham   bi-surʿah

        understand.PFV.3SM with-speed

        'He understood quickly.'

    b. ʿirif   al-ḥall   bi-surʿah

        know.PFV.3SM DET-answer with-speed

        'He knew the answer quickly.'

Given that perfective unbounded states have inceptive readings, it is not surprising to find that they should pass the above event tests based our assumption that inceptive states are events in Maienborn's semantics. Importantly, the eventive reading K-state root verbs obtain in their perfective forms is not similar to the inherent Davidsonian event present in the lexical structure of D-state root verbs. The former never allow agentive and eventive contexts while the latter do when conditions are met. See 3.1.3 for overview.

Alotaibi's (2019) argument that only events are allowed perfective forms is now plausible when considering event tests such as those argued by Maienborn here. It was previously shown how Alotaibi's argument is called into question when examining perfective stative verbs in traditional event tests like event frames and incompatibility with agentive contexts where they fail and yield a stative classification despite their inceptive readings (see 3.1.2.2).

Figure 3.5 below illustrates the different aspectual interpretations of the two BA stative roots in BA. Despite the fact that perfective morphology blurs the distinction between D-state roots that encode an event variable and have inherent inceptive readings, and K-state roots that have canonical state readings which do not contain an event variable, the following chapter will show

how grammatically and semantically relevant differences can still be made between the two stative roots (see also 3.2.1.2). For this reason, the specific root type is mentioned in the discussions of various psych structures throughout the rest of the thesis.
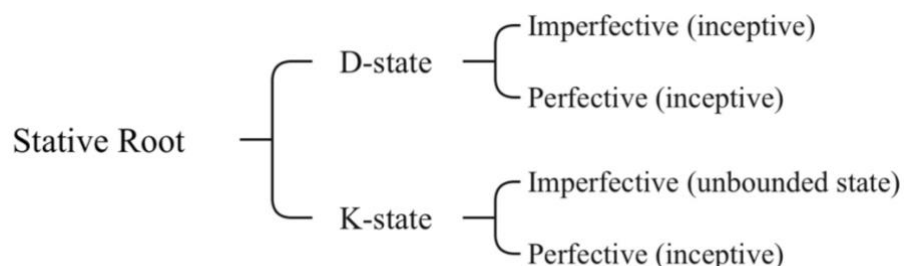
Figure 3.5: The aspectual interpretations of the two stative roots in their different grammatical aspect forms in BA.

In sum, the argument presented here is that non-dynamic verbs are not a homogenous class in BA. They are divided into inceptive events and canonical unbounded states. Inception in BA is encoded lexically with D-state roots and morphologically via perfective morphology. Where inceptive verbs, represented by D-state roots in the imperfective form and all K/D-state root verbs in their perfective forms, pass Maienborn's event tests, canonical states, represented by K-state root imperfective verbs, fail them.

The next section explores BA psych verb constructions in light of this classification for stative verbs. While all aspectual tests are reserved for Chapter 4, the rest of this chapter provides the foundations for the relevant morphosyntactic constructions used for BA psych verbs and what predictions can be made for their aspectual classification and behaviour based on the typology obtained in this section. Going forward, BA psych verb data is presented, bearing in mind the D/K-state root distinction and its interaction with grammatical aspect on aspectual interpretation.

3.2 BA psych verbs

BA exhibits the same psych structures observed cross-linguistically in languages such as Italian (Belletti and Rizzi, 1988), Greek (Anagnostopoulou, 1999), Japanese (Motomura, 2004), Hebrew

(Arad, 1998b; Landau, 2010), and Finnish (Pylkkänen, 1998; Nelson, 2000) (see Chapter 2 for review). As a brief reminder, psych verbs are known to present three types of structures where the Experiencer argument alternates between a subject position (Class I) (53a), an object position (Class II) (53b), or embedded under a preposition (Class III) (53c). The following examples illustrate the mapping of the Experiencer to these different structural projections in BA.

(53) a. maha_{EXP} ti-ḵāf   min ʿalī_{STIMULUS}   [CLASS I]
      Maha   IPFV.3SF-fear from Ali
      'Maha fears Ali.'

    b. ʿalī_{STIMULUS} yi-ḵawwif   maha_{EXP}   [CLASS II]
       Ali   IPFV.3SM-frighten.CAUS Maha
       'Ali frightens Maha.'

    c. al-ʾinsān_{STIMULUS} haḏā yi-ʿʿizz   ʿala-yyah_{EXP}   [CLASS III]
       DET-human   this   IPFV.3SM-precious on-1SG
       'This person is precious to me.'

The morphological similarity between the SubjExp and ObjExp verbs is apparent. The root ḵāf 'fear' forms a SubjExp verb when it appears in non-causative verbal derivations, as shown in (53a), and the same root forms the ObjExp verb illustrated in (53b) when it combines with causative morphology. In other words, as with many other languages (see Reinhart, 2001; Arad, 2002; Pylkkänen 1997) (see also Chapter 2), BA ObjExp verbs are causative formulations of SubjExp verbs. The alternation is productive for BA psych verbs as illustrated in the sample data in Table 3.1 where the same root may form both non-causative SubjExp and causative ObjExp forms.[71] The morphological differences between the two forms are indicated in bold text.[72]

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[71] There are different forms of expressing the causative in BA. I discuss BA causative structures in more depth in the following discussions (Section 3.2.1.2). Additionally, the imperfective forms of verbs are used for representation here since the perfective gap present in the paradigm of a number of K-state root verbs (see 3.1.2.2) is problematic for the purpose of this table.

[72] It is interesting that K-state root psych verbs have gaps for their ObjExp alternates, whereas the D-state roots are more productive. At this point, it is not clear why some K-state roots should impose such restrictions on causative forms.

Table 3.3: Examples of BA SubjExp - ObjExp verb alternations.

Root type	Verb translation	SubjExp	ObjExp
K-state	'inspire'	yil**t**ihim	yilhim
	'love'	yiḥubb	yiḥab**b**ib
	'hate'	yikrah	yikar**r**ih
	'please'	s**i**ʿid	yisʿid
	'wish'	yitmanā	yiman**n**ī
	'appreciate'	yiqaddir	–
	'be suspicious'	yišukk	yišak**k**ik
	'envy'	yiḥsid	–
	'be shy'	yistiḥī	_
	'amaze'	yi**n**dihiš	yidhiš
	'despise'	yiḥtiqir	yiḥaqqir
	'suffer'	yiʿānī	–
	'adore'	yiʿšaq	–
	'aspire'	yiṭmaḥ	_
D-State	'worry'	yiqlaq	yiqliq
	'fear/frighten'	yiḵāf	yiḵaw**w**if
	'anger'	yizʿal	yiz**z**aʿil
	'startle'	yi**n**fajaʿ	yifjaʿ
	'excite'	yi**t**ḥammas	yiḥammis
	'bore/bother'	yiṭfaš	yiṭaf**fi**š
	'torment'	yi**t**ʿaḏḏab	yiʿaḏ**ḏ**ib
	'entertain'	yi**t**sallā	yisallī
	'bother'	yiṭḍāyaq	yiḍāyiq
	'frustrate'	yi**n**qihir	yiqhar
	'stress'	yi**t**wattar	yiwat**t**ir
	'fluster'	yir**t**ibik	yirbik

In Chapter 2, a review is made of key research in the study of psych verbs. There, it is shown that the association between ObjExp verbs and causative morphology and/or causative event structure has long been recognized. Also, where ObjExp verbs are well known to have ambiguous stative and eventive readings, all SubjExp and DatExp verbs are generally argued to have stative interpretations (see e.g. Anagnostopoulou, 1999; Arad, 1998b; Rothmayr, 2009; Landau, 2010; Alexiadou and Iordăchioaia, 2014; Rozwadowska et al., 2020). As it pertains to BA data, one question arises based on the event structure patterns observed for BA statives so far. If we accept that BA has two types of stative roots as argued in the previous section 3.1.2, one is an eventive D-state root, and the other, a canonical stative K-state root, then how does this effect the aspectual

interpretation of BA SubjExp verbs derived from each root? Equally important is the question of whether the aspectual pattern of behaviour observed for K/D-state root types in their various morphosyntactic representations can be extended to include patterns in BA psych verbs (see Figures 3.3 and 3.4 for summary). If we accept that only D-states allow eventive readings, is it possible to identify state and event subclasses of ObjExp verbs based on the root type involved in the derivation?

The following discussion presents BA psych verb structures. In 3.2.1, an outline is given of SubjExp and ObjExp verb structures in BA. This is followed by an exploration of possible syntactic effects of stative ObjExp verbs in BA data in 3.2.2. An outline is then presented of the semantic effects predicted for BA psych verbs that are based on the patterns observed for the stative class in general discussed throughout this chapter which form the basis of the investigation in Chapter 4.

3.2.1 BA psych verb structures

This section presents the structural patterns of SubjExp and ObjExp verbs in some detail. It is subdivided into a discussion of each verb type for clarity. It must be noted that since the K/D-state dichotomy is fundamental in understanding the patterns of behaviour in BA psych verbs, a distinction most transparent in the imperfective derivation in BA, the majority of examples are in the imperfective form. The perfective form will be discussed when the discussion lends itself to it.

3.2.1.1 SubjExp

BA SubjExp verbs can be transitive or intransitive Form I verbs, although the intransitive SubjExp verb is more prevalent. SubjExp verbs can be derived from either K-state or D-state roots. In the absence of any other aspectual tests, the ability to distinguish between the two stative roots, as discussed in 3.1.2, lies in the presence or absence of a present state reading in their imperfective

forms. The examples below illustrate BA SubjExp verbs derived from K-state roots in (54), and those derived from D-state roots in (55).[73]

(54) a. maha ti-krah   al-maṭbaḵ   K-STATE
       Maha IPFV.3SF-hate DET-kitchen
       'Maha hates the kitchen.'

    b. hū yi-ʿānī   min al-maraḍ
       he IPFV.3SM-suffer from DET-illness
       'He suffers with illness.'

(55) a. hum yi-qlaq-ūn   min al-ʾiḵtibār-āt   D-STATE
       they IPFV.3-worry-PL from DET-exam-PL.F
       'They become worried from exams.'

    b. sārah ti-zʿal   min ʾaḵū-hā
       Sara IPFV.3SF-angry from brother-3SF
       'Sara becomes angry because of her brother.'

In the prior discussions, it was argued that while both stative root types fail traditional event tests that diagnose dynamicity and agency assigning them stative status in traditional descriptions of events, in Maienborn's (2019) event model, which is adopted in this study, BA inceptive states qualify as events (see 3.1.4). Since inception in BA is encoded via D-state roots and perfective morphology, then it is expected that those forms of SubjExp verbs should qualify as events and pass Maienborn's event tests (see Figure 3.3) while imperfective K-state root SubjExp verbs should be robust states and fail those event tests. Thus, in their imperfective forms, D-state root SubjExp verbs, like (55), are considered events, whereas the K-state SubjExp verbs in (54) are taken to be states. This split aspectual classification of SubjExp verbs contradicts statements found in the majority of literature where *all* SubjExp verbs are classified as states (see Chapter 2). The diagnostic tests on the aspectual properties and eventive classification of BA SubjExp verbs derived from K/D-state roots are detailed in Section 4.1.

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[73] The data examined in this thesis is limited to base Form I verb forms. I leave aside marked intransitive verb forms that result from argument reduction where de-transitivized ObjExp verbs form SubjExp verbs. See Azhari (2019) for some discussion on transitive alterations in Makkan Arabic SubjExp verbs.

Before moving on to ObjExp verb structures, it is worth noting an interesting pattern of behaviour observed for SubjExp verbs. It appears that a good number of intransitive SubjExp verbs derived from D-state roots are more flexible in their preposition choice for an [+animate] Oblique argument than those derived from K-state roots.[74] The examples in (56) of D-state rooted SubjExp verbs demonstrate the optional use of either a *min* 'from' or *ʿalā* 'on' preposition for the same Oblique NP. There is a distinct semantic difference in the interpretation of the Oblique argument that differs according to the preposition choice, and this may be explained via Pesetsky's (1996) Target and Subject Matter thematic roles associated with SubjExp verbs. For example, in (56a), if the preposition *min* 'from' is used, Maha is interpreted as the Subject Matter of Sara's fear. Whenever Sara experiences the fear described in the example, she is thinking in some way about Maha. The preposition *ʿalā* 'on', on the other hand, assigns Maha a Target role where Sara's fear is targeted towards Maha.

(56) a. sārah ti-ḵāf   min / ʿalā maha
     Sara IPFV.3SF-fear from / on   Maha
     'Sara becomes afraid because of Maha.'
     'Sara becomes afraid for Maha.'

    b. ʿumar yi-ġār   min / ʿalā ʾaḵ-ūh
      Omar IPFV.3SM-jealous from / on   brother-3SM
      'Omar gets jealous of his brother.'
      'Omar gets jealous over his brother.'

    c. yi-qlaq   min-hum / ʿalī-hum
      IPFV.3SM-worry from-3PL / on-3PL
      'He becomes worried because of them.'
      'He becomes worried over them.'

Another possible way of explaining the semantic difference between the two prepositions is that the NP of the *min* 'from' preposition can be viewed as the cause of the emotion denoted by the verb while the *ʿalā* 'on' preposition NP argument is a figurative location (see Landau, 2010).

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[74] I refer here specifically to the prepositions *min* 'from' and *ʿalā* 'on'. They are not the only possible propositions used with intransitive SubjExp verbs overall, e.g. there are *bi* 'with' and *fī* 'in' propositions used with obliques in such constructions which are not discussed here.

K-state root SubjExp verbs have a more restricted preposition use for oblique arguments as observed in (57). Either a Subject Matter thematic role is assigned using *min* 'from', or a Target role is assigned using *ʿalā* 'on'. Exactly what determines which preposition is used in the examples in (57) or why D-state root SubjExp verbs should have more flexibility in theta role assignment is not clear.

(57) a. muḥammad yi-ʿānī   min-hum (*ʿalī-hum)
      Mohammad IPFV.3SM-suffer from-3PL (on-3PL)
      'Mohammad suffers because of them.'
      #'Mohammad suffers over/for them.'

   b. ʿumar yi-šmaʾizz   min (*ʿalā) as-samak
      Omar IPFV.3SM-revolt from (on)   DET-fish
      'Omar is revolted from fish.'
      #'Omar is revolted over/for fish.'

   c. sārah ti-ḥin   ʿalā (*min) al-ʾṭfāl
      Sara IPFV.3SF-compassion on (from) DET-child.PL
      'Sara is compassionate for children.'
      #'Sara is compassionate because of children.'

I leave this matter for future research in hopes of further illuminating argument structure patterns in BA.

3.2.1.2 ObjExp

ObjExp verbs have received the most attention in the literature due to their peculiar distribution of arguments and their ambiguous aspectual nature. One important feature that all ObjExp verbs share is causation (Grimshaw, 1990; Pesetsky, 1996; Arad, 1998b; Biały, 2005; Pylkkänen, 2009). The following discussion starts with a very brief overview of causative structures in BA using data from psych verbs. The predictions for BA ObjExp verbs regarding their aspectual characterization and event structure as they pertain to the stative dichotomy is presented afterwards.

Causative structures in Arabic have been extensively studied and present interesting discussions regarding valency, transitive/intransitive alterations, derivation debates, and the meanings and

forms of causation in Modern Standard Arabic, and various dialects like Sudanese, Makkan, and Moroccan Arabic (Saad, 1982; Bolozky and Saad, 1983; DeMiller, 1988; Haspelmath, 1993; Al-Dobaian, 2002; Fassi Fehri, 2003; Hallman, 2006; Aguadé, 2012; AlRashed, 2012; Ouhalla, 2014; Alqadi, 2015; Taha et al., 2017; Ed-Darraji, 2018; Noamane, 2018; 2020; Azhari, 2019; Alotaibi, 2022). The complexity of causation in Arabic prohibits a deep exploration of causative structures in this thesis. Therefore the focus will be on those issues most relevant to the study of ObjExp verbs.

Root and derivation pattern languages, like BA, use fixed vowel templates where the root, made mostly of consonants, fills in the consonant slots in the template. For example, the morphological root *qlq* which carries the basic meaning of 'worry' fills in the consonant slots in the pattern ʾaC$_1$C$_2$aC$_3$ which results in *ʾaqlaq*.[75] The verbal templates, or Forms (see 1.3), that concern us most in the study of BA ObjExp verbs are Forms I, II, and IV which are lexically specified forms of causation in Arabic. While both Form II and Form IV verbs express overt causative morphology, Form II is generally accepted to be the most productive and most frequent causative verb type (DeMiller, 1988). In an analytical statistical study of the word formation and syntactic behaviour of emotion verbs in Jordanian Arabic, Alshdaifat (2021) finds that the majority of Form II and Form IV verbs of emotion are transitive. This is consistent with the general acknowledgment in the literature that causation is a valency increasing operation in Arabic (Saad, 1982; Bolozky and Saad, 1983; Alqadi, 2015).

Form I verbs are base verb forms that encompass a range of different meanings which may not be causative, for example *rāḥ* 'go.PFV', *širib* 'drink.PFV', and *kubur* 'grow.PFV'. However, like the English lexical causatives *break*, *open*, and *reveal*, many Arabic verbs have causative meanings built into their lexical semantics without overt causative morphology and take Form I. BA lexical causatives include examples like *fataḥ* 'open.PFV', *kasar* 'break.PFV', and *ḍarab* 'hit.PFV'. BA ObjExp verbs that are derived in Form I are illustrated in the following examples; K-state root ObjExp verbs are in (58), and D-state root ObjExp verbs are given in (59).

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[75] For more on Arabic verb patterns and derivations see Bahloul (2008) and Ryding (2005).

(58) a. ḳālid   yi-jḏib-nī   K-STATE ROOT
       Khalid IPFV.3SM-attract-1SG.ACC
       'Khalid attracts me.'

   b. jamāl-hā   yi-sḥar   a-nnās
       beauty-3SF IPFV.3SM-enchant DET-people
       'Her beauty enchants people.'

(59) a. ʿumar yi-qhar-hum   D-STATE ROOT
       Omar   IPFV.3SM-frustrate-3PL
       'Omar frustrates them.'

   b. al-waḍiʿ   yi-ḍāyiq-nī
       DET-situation.SG IPFV.3SM-bother-1SG.ACC
       'The situation bothers me.'

Form II causatives are developed from Form I with a doubling of the middle consonant in a process known as gemination. This second consonant is the overt causative morphological marker for Form II. K-state root Form II ObjExp verb examples are presented in (60) while those with D-state roots are in (61).

(60) a. al-mudarrisah ti-ḥab**b**ib   al-banāt fī ar-riyāḍiyāt   K-STATE ROOT
       DET-teacher.SG IPFV.3SF-love.CAUS DET-girl.PL in DET-math
       'The teacher makes girls love math.'

   b. muḥammad yi-šak**k**ik-nī   fī nafs-ī
       Mohammad IPFV.3SM-suspecious.CAUS-1SG.ACC in self-1SG
       'Mohammad makes me doubt myself.'

(61) a. ar-raʿd   yi-ḳaw**w**if   aṭ-ṭifil   D-STATE ROOT
       DET-thunder.SG IPFV.3SM-frighten.CAUS DET-child.SG
       'The thunder frightens the child.'

   b. ḳālid yi-zaʿʿil   ʾab-ūh   bi-taṣarruf-āt-uh
       Khalid IPFV.3SM-anger.CAUS father-3SM with-action-PL.F-3SM
       'Khalid angers his father with his actions.'

Form IV causatives are often described as having an initial glottal stop ʾa- which transforms an intransitive Form I verb like *qaliq* 'worry' into a transitive causative verb ʾaqlaq 'worry' (see e.g. Al-Dobaian, 2002; Alqadi, 2015; Alshdaifat, 2021). What is overlooked in those descriptions is that the initial glottal stop in the Form IV pattern ʾaC$_1$C$_2$aC$_3$, sometimes described as the defining feature of Form IV causatives (see e.g. Al-Dobaian, 2002; Alqadi, 2015; Alshdaifat, 2021), is only present in the perfective derivation of this verb pattern (Ryding, 2005; Aguadé, 2012). The imperfective Form IV pattern yu-C$_1$C$_2$iC$_3$, as in *yuqliq* 'worry' in MSA, does not have a glottal stop. In BA, the vocalic melody shifts from yu-C$_1$C$_2$iC$_3$ in *yuqliq* 'worry' found in MSA to the pattern yi-C$_1$C$_2$iC$_3$ *yiqliq* 'worry'. The examples in (62) further clarify how a vowel change may augment argument structure in BA using the morphological root *sa'ad* 'please'. In (62a), the SubjExp verb *tasʿad* 'to be pleased' is a Form I intransitive verb with an /a/ vowel before the last consonant. Changing the final /a/ vowel in *tasʿad* 'to be pleased' into /i/ as in *tisʿid* 'to please' results in an imperfective Form IV causative ObjExp verb as demonstrated in (62b).

(62) a. maha ta-sʿad   bi-l-hadāyā
         Maha IPFV.3SF-please with-DET-gift.PL
         'Maha becomes pleased with gifts.'

     b. maha ti-sʿid   ʾumma-hā
         Maha IPFV.3SF-please.CAUS mother-3SF
         'Maha pleases her mother.'

The following are some more examples of Form IV ObjExp verbs in their (im)perfective forms. Those derived from K-state roots are presented in (63) whereas D-state rooted derivations are in (64).

(63) a. yi-lhim-nī   / ʾa-lham-nī   K-STATE ROOT
         IPFV.3SM-inspire.CAUS-1SG.ACC / CAUS-inspire.PFV-1SG.ACC
         'He inspires/ inspired me.'

     b. ḵālid   yi-rhib   / ʾa-rhab   muwaḍḍafīn-ah
         Khalid IPFV.3SM-intimidate.CAUS / CAUS-intimidate.PFV-3SM employee-3SM
         'Khalid intimidates/ intimidated his employees.'

(64) a. al-wājib-āt   ti-zˤij   / ʾa-zˤaj-at   al-ʾaṭfāl   D-STATE ROOT
          DET-chore-PLF IPFV.3SF-annoy.CAUS / CAUS-annoy.PFV-3SF DET-child.PL
          'Chores annoy/ annoyed children.'

       b. yi-rbik-ū-nī   / ʾa-rbak-ū-nī
          IPFV.3-discompose.CAUS-PL-1SG.ACC / CAUS-discompose.PFV-3PL-1SG.ACC
          'They discompose/ discomposed me.'

This concludes the brief overview of the possible causative forms that ObjExp verbs may project. The proceeding discussion moves on to outline the semantic differences between ObjExp verbs derived from K-state roots and D-state roots.

There is a difference in the interpretation of ObjExp verbs based on the K/D-state root involved in the derivation. In extended periods of time, the emotion denoted by a D-state root ObjExp verb in the imperfective form is interpreted as an instantaneous onset of a state that holds in a sequence of phases that do not hold for long periods of time. This is illustrated in (65a), where the Experiencer is understood to repeatedly get irritated by the Stimulus whenever exposed to it. This is consistent with the recurrent reading expected of Arabic imperfective inceptive states. In contrast, the imperfective form of K-state root ObjExp verbs, illustrated in (65b), has a continuous reading where the emotion held by the Experiencer holds for the duration of the time indicated. Again, this is expected given that K-state roots have prototypical unbounded stative interpretations.

  (65) a. ʾaslūb-ah   yi-narfiz-nī   min zamān   D-STATE OBJEXP
          attitude-3SM IPFV.3SM-irritate-1SG.ACC from while
          'His attitude has irritated me for a while.'

       b. ʾaslūb-ah   yi-jḏib-nī   min zamān   K-STATE OBJEXP
          attitude-3SM IPFV.3SM-attract-1SG.ACC from while
          'His attitude has attracted me for a while.'

In their perfective forms, both K-state and D-state root ObjExp verbs, exemplified by *jaḏab* 'attract.PFV' and *narfaz* 'irritate.PFV' respectively, are interpreted as instantaneous onsets of an atelic state, i.e. they are inceptive events. Further details on these aspectual differences between the two root types and their interaction with grammatical aspect are presented in Chapter 4.

The K/D-state distinction is valuable since it makes it possible to accurately predict the state or event aspectual interpretation of ObjExp verbs. Recall the arguments presented in the literature where, traditionally, ObjExp are viewed either as a uniform semantic class of verbs that present ambiguous state/event interpretations (see e.g. Arad, 1998b; Pylkkänen, 1998; Rothmayr, 2009) or they are viewed not as a whole homogenous semantic class but are rather divided into stative and non-stative (or eventive) ObjExp verb subclasses (see e.g. Biały, 2005). BA is expected to pattern like Polish (Biały 2020) where ObjExp verbs are split into two groups: one group should have robust stative interpretations derived from K-state roots, and the other group has ambiguous stative/eventive interpretations derived from D-state roots.

D-state root ObjExp verbs are proposed to be Davidsonian events hence having a hidden event variable and are on par with canonical events. This predicts that when certain conditions are met, like the presence of an animate Stimulus, it should be possible to obtain a reading where an agent is acting intentionally to bring about a mental state in the experiencer. Therefore, it should be the case that only D-state root ObjExp verbs derive possible agentive structures. This pattern of behaviour is predicted based on to the aspectual characterization of the larger class of inceptive states discussed in (3.1.2) (see also Figure 3.3).

K-state root ObjExp verbs, on the other hand, are Kimian states and do not have an event argument. Consequently, in keeping with the core properties of states as being agentless, non-dynamic eventualities (see Figure 3.4), it is not expected that K-state rooted ObjExp verbs are compatible with agentive or progressive contexts. While perfective morphology aspectually shifts all K-state root ObjExp verbs to inceptive readings, it is not expected that grammatical aspect should affect compatibility with agentive and dynamic contexts, since the relevant factor in licensing such eventive constructions lies in the presence of an event argument in the predicate which is only present with D-state roots (see Maienborn, 2019). The diagnostics investigating these claims are discussed in Section 4.4.

In the previous chapter, it was shown that the dominant view in the literature associates agentive/eventive readings of ObjExp verbs with causation, which is viewed as a complex eventive

change of state predicate, i.e. an accomplishment (see Dowty 1979; Arad, 1998b; Pylkkänen, 2000; Biały 2005; Alexiadou and Iordăchioaia, 2014) (see 2.3.3 for discussion).[76] The data examined so far regarding BA ObjExp verbs challenges this view. In short, the argument advanced here is that eventive BA ObjExp verbs are inceptive states, a unique class of event type not accounted for in traditional Vendlerian classifications (see 2.5). They cannot be accommodated within the accomplishment class of verbs, which have the aspectual properties of being durative and telic events (see 2.1.1).

Crucially, the aspectual properties of inceptive states are argued to be punctual, atelic onsets of states that express the left-boundary of eventualities, which is in opposition to the properties of accomplishment predicates which are telic, durative, changes of state identified as right-boundary eventualities. The aspectual properties argued to be present for BA inceptive states and those of accomplishments cannot be reconciled. Hence, we accept recent arguments that call for the recognition of inceptive states as an autonomous class in event taxonomies that represents unique properties not found in traditional Vendlerian classes (Marín and McNally, 2011; Fábregas and Marín, 2017; Rozwadowska, 2020). I reserve further discussion on this issue for Chapter 4 where a battery of tests aims to characterize the semantic nature of BA ObjExp verbs.

In the case of BA K-state ObjExp verbs, we will show that they do not allow agentive interpretations (see 4.4). It is the position held in this study that K-state ObjExp verbs in both imperfective and perfective forms are exclusively stative and present evidence of causative stative verbs based the presence of overt causative morphology exhibited by some verbs of this class and on aspectual tests (namely compatibility with the *event frame* test, progressive contexts, and agentive modification which are detailed in Section 4.4). In this, BA is similar to Finnish ObjExp verbs, which also host causative morphology yet have stative interpretations (see e.g. Nelson, 2000; 1999; Pylkkänen, 2000) (see also 2.3.3.2).

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[76] Causative relations are found in all semantic classes of events. While many associate causatives with accomplishments to the point of using the two terms interchangeably at times, many also argue that causation cannot be attributed to any one aspectual class (see Levin and Rappaport Hovav, 2005).

On the basis of such verbs that have both causative morphology and are interpreted as states, Pylkkänen (2009; 2000; 1998) argues that causativity should be separated from aspect. The crucial difference between eventive causation and stative causation lies in fact that the former contains a change of state whereas the latter does not. The difference in the temporal relation between the sub-eventualities of eventive vs stative causative ObjExp verbs is also noted by many researchers (see e.g. Arad, 1998; Pylkkänen, 1998; Rothmayr, 2009). Stative causatives do not have the consecutive stages typical of canonical causatives (i.e. accomplishments) where a trigger or cause precedes a result. Rather, the perception of the stimulus accompanies the mental state experienced by the Experiencer argument. The contrast is illustrated below (repeated from Chapter 2).

Non-stative ObjExp sub-event structure **Stative ObjExp sub-event structure**

Stimulus   Mental state   Perception of stimulus ——————— stop

                                                                  Mental state   ------------------ stop
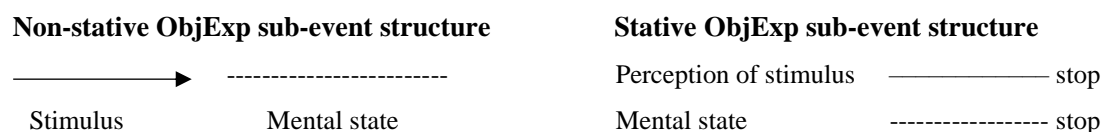
Figure 3.6: The sub-eventuality structure of stative and non-stative ObjExp verbs (Arad, 1998b, p.166).

In sum, this section argues that the eventive causative and stative causative distinction is present in BA and is determined by the distinction between D-state and K-state roots. In both their imperfective and perfective forms, D-state ObjExp verbs have ambiguous state/event interpretations whereas K-state ObjExp verbs have exclusive stative readings. In their eventive readings, D-state rooted ObjExp verbs are not accomplishments but rather, inceptive states. Evidence for this is based on aspectual tests that are detailed in 4.4. The next section discusses observations on psych effects with respect to BA data.

3.2.2 Psych effects in BA

In Chapter 2, a brief review is given of the unique syntactic behaviour of psych verbs noted cross-linguistically known as psych effects (see Landau 2010 for exhaustive review). Data was presented from Alotaibi et al., (2013), which suggests that Arabic generally does not show any unique psych effects. This section contributes data from BA where it is shown that ObjExp verbs, particularly the stative/non-agentive subgroup which displays psych effects in other languages, behave like

canonical transitive verbs in BA, and do not display any unique syntactic patterns. The section also presents a brief overview of the semantic characterization hypothesised for BA psych verbs that is the focus of the investigation in Chapter 4.

3.2.2.1 Syntactic psych effects in BA

Psych effects have been observed with stative or non-agentive ObjExp verbs, whereas eventive or agentive ObjExp verb behave like canonical transitive verbs. Since the argument advanced in this thesis is that only ObjExp verbs derived from K-state roots are robustly stative and do not allow agentive interpretations, the focus on the evidence used to investigate the presence of psych effects in BA will be primarily from the pool of K-state ObjExp verbs.

Perhaps one of the most well-known psych effects is backward binding. As mentioned in Chapter 2, backward binding is when an anaphor is licensed in subject position and governed by the antecedent in object position, see (66a) for Italian. This does not occur with non-psych verbs (66b) and is in violation of the usual c-command requirement on the antecedent-anaphor relation.

(66) a. Questi pettegolezzi su di se preoccupano Gianni piu di ogani altra cosa.
      'These gossips about himself worry Gianni more than anything else.'

     b. *Questi pettegolezzi su di se descrivono Gianni meglio di ogani biografia ufficiale.
        'These gossips about himself describe Gianni better than any official biography.'

(Belletti and Rizzi, 1988, p. 312)

In Alotaibi et al., (2013), Arabic ObjExp verbs are found to not behave differently from other non-psych verbs regarding backward binding where it seems to be acceptable for both psych and non-psych verbs.[77] However, in BA, backward binding is prohibited for all verb types. The examples

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[77] In Alotaibi et al. (2013), examples of backward binding are provided from MA and EA. I draw attention to their EA example, shown below (Alotaibi et al. 2013, p. 14, example 23):

i.   ʿalī ḍāyʾ-u   il-kalām ʿan nafs-ū
      Ali annoy.PV.3SGM-3SGM.ACC DEF-talk about self-3SGM.ACC
      'Ali was annoyed by the talk about himself.'

below illustrate the unacceptability of backward binding for both stative ObjExp verbs derived from K-state roots (67) and non-psych verbs (68).

(67) a. *at-taqrīr   ʿan-hā*i* yi-ʿjib   maha*i*
     DET-report.SG on-3SF IPFV.3SM-please.CAUS Maha
     'The report on herself pleases Maha.'

   b. *al-kalām ʿan-hum*i* yi-lhim   al-ʾawlād*i*
     DET-talk.PL about-3PL IPFV.3SM-inspire DET-child.PL
     'The talk about them inspires the children.'

   c. *al-ʾišāʿ-āt   ʿan   nafs-ah*i* karrah-at   ʿalī*i* fī al-jamʿ-āt
     DET-rumor-PL.F about self-3SM hate.CAUS.PFV-3PL.F Ali in DET-gather-PL.F
     'Rumors about himself make Ali hate gatherings.'

(68) a. *ʾaġrāḍ-ah*i*   yi-ḳarrij-hā   ʾaḥmad*i*
     thing.PL.F-3SM IPFV.3SM-take.out.CAUS-3SGF Ahmad
     'His things took out Ahmad.'

   b. *ṣuwar-hā*i*   ḥaraqa-t-hā   maha*i*
     picture.PL.F-3SF burn.PFV-3SF-3SF Maha
     Intended: 'Pictures of herself, Maha burned them.'

   c. *sayyārt-ah*i* ʿadam-hā   ḳālid*i*
     car.SF-3SM   ruin.PFV.3SM-3SF Khalid
     Intended: 'His car, Khalid ruined it.'

It was previously mentioned how Hebrew and MA (Maltese) require a resumptive pronoun that encodes an experiencer object within relative clauses (see 3.2.2.1). The following examples from MA show how there is a resumptive pronoun gap in the object relative clause of non-psych verbs, seen in (69b), whereas the resumptive pronoun is obligatory in relative clauses with an experiencer object as in (69a) (example repeated from example (27) in 2.2).

It is not my understanding that this example is of backward binding as the antecedent *Ali* precedes its anaphor *nafsū* 'himself'.

(69) a. kallim-t   lit-ṭifil   li   wijjḥ-et-**ū**   rās-ū
    spoke.PFV-1SG ACC.DEF-boy COMP make.hurt.PFV-3SM.ACC head-3SM.ACC
    'I spoke to the boy whose head was hurting yesterday.'

    b. kallim-t   lit-ṭifil   li   raʾ-t-***u**   ʾum-ī   ilbīraḥ
    spoke.PFV-1SG ACC.DEF-boy COMP saw.PFV-3SF-*3SM.ACC mother-1SG.ACC yesterday
    'I spoke to the boy who my mother saw yesterday.'

                              (Alotaibi et al., 2013, p. 13)

In BA, the use of a resumptive pronoun in direct object relativization is obligatory for both non-psych verbs (70) and K-state root ObjExp verbs (71). Hence, BA again does not show the resumptive pronoun psych effect displayed in both Hebrew and MA.

(70) a. al-bint   ʾilli   ʾa-šūfa-(hā/*∅)   kull   yum
    DET-girl.SF that IPFV.1SG-see-(3SF/*∅) every day.SG
    'The girl that I see every day.'

    b. al-ʾwlād   ʾilli ta-smaʿ-ūn-(hum/*∅)   min   hinā
    DET-child.PL that IPFV.2-hear-pl-(3pl/*∅) from here
    'The children that you hear from here.'

(71) a. al-bint   ʾilli   ti-jdib-(hā/*∅)   al-mūḍah
    DET-girl.SF that IPFV.3SF-attract-(3SF/*∅) DET-fashion.SG.F
    'The girl that fashion attracts her.'

    b. an-nās   ʾilli ti-ġrī-(hā/*∅)   al-fulūs
    DET-people that IPFV.3F-tempt-(3PL/*∅) DET-money
    'The people whom money tempts.'

The final syntactic psych effect explored here is the T/SM restriction first discussed in Pesetsky (1995) (see 2.3.2 for details) where the Causer and Target or Subject Matter (T/SM) arguments cannot appear in the same structure. While many languages conform to the T/SM restriction, such as Polish (Biały, 2005), Hebrew (Doron, 2017), and French (Pesetsky, 1995) (see also Landau, 2010 for other languages), BA does not evidence such restrictions. BA ObjExp verbs may license all three arguments (Causer, Experiencer, T/SM) as shown in the following examples.

(72) a. ʾaslūb-ah   yi-lhim-nī   fī ad-dirāsah
       method-3SM IPFV.3SM-inspire-1SG-ACC in DET-study
       'His method inspires me in studies.'

   b. ṣawt ar-raʿd   yi-ḳawwif-hā   min al-maṭar
      sound DEF-thunder IPFV.3SM-frighten.CAUS-3SF from DET-rain
      'The sound of thunder frightens her of the rain.'

   c. at-taqrīr   ʾa-ḥraj-nī   min al-mudīr
      DEF-repot.SM CAUS-embarrass.PFV.3SM-1SG.ACC from DET-manager
      'The report embarrassed me in front of the manager.'

In (72a) the Causer, ʾaslūbah 'his method', the Experiencer -nī 'me', and the T/SM ad-dirāsah 'studying', are all present in the structure. In all the examples in (72), all three arguments appear in the same structures in an apparent violation of the T/SM restriction. I am not aware of another language where such violations are perfectly acceptable as is the case with BA. However, White et al., (1998, p. 263), observe that while some Spanish T/SM violations are ungrammatical, as seen in (73a), some have marginal acceptability as seen in (73b).

(73) a. *A Juan le   enfurecen esos programas   con   el gobierno
        to John   CL-DAT annoy   those programs   with   the government

   b. ?Esos programas enfurecen a Juan con   el gobierno
      those programs   annoy   John with the government

To conclude, in terms of syntactic behaviour, BA ObjExp verbs do not seem to behave in any way special or deviate from non-psych transitive verbs in those structures often cited to present unique psych effects cross-linguistically. The structures explored here are in no way exhaustive, and further exploration is required to fully investigate if any syntactic idiosyncrasies are present with BA psych verbs.

3.2.2.2 Semantic psych effects in BA

The primary focus of this thesis is with the aspectual characterization and event structure of BA psych verbs. While this chapter outlines the heterogenous nature of states in BA which motivates

the predictions made for BA psych verb behaviour, the following chapter aims for systemic testing that diagnoses the predicted aspectual properties and underlying event structure of BA psych verbs. Hence, this section presents a very brief summary of the conclusions made throughout this chapter which provide the motivations for the tests used in Chapter 4.

It is argued that there exists a fundamental distinction in BA between K-state and D-state root types which crosscuts all stative verb derivations, and by extension both SubjExp and ObjExp verbs, and is central in accounting for the diverse behaviour of the different psych verb structures in BA. Following Maienborn (2005; and subsequent work), I take D-state root verbs, represented by inherent inceptive states, to be Davidsonian events that pass tests designed around the ontological property of events being spaciotemporal particulars (Maienborn, 2019). In contrast, K-state roots are 'ontologically poorer, more abstract entities than Davidsonian events' (Maienborn, 2019, p. 71) that are represented by typical states. Following Bar-el (2005), Kiyota (2008), and Rozwadowska (2012), among others (see 2.5), inceptive verbs, represented in BA by D-state root verbs and perfective states, are believed to be punctual, atelic events, while unbounded states, represented by imperfective K-state roots, are taken to be canonical states that are durative and atelic. These semantic features are investigated in the following chapter.

Based on the above distinctions, BA psych verbs (both SubjExp and ObjExp verbs) derived from D-state roots are believed to be Davidsonian events while those derived from K-state roots should be classified as Kimian states. In their non-causative SubjExp forms all BA psych verbs are taken to be non-dynamic verbs that do not allow progressive structures, nor are they compatible with agentive contexts. In their causative ObjExp verbs, we expect to see a clear delineation between a stative/eventive subclass of ObjExp verbs derived from D-state roots, and an exclusively stative subclass of ObjExp verbs derived from K-state roots. Figure 3.7 below summarizes the predicted aspectual patterns of BA psych verbs derived from the two stative roots. These are based on the pattern of behaviour observed for the general class of BA stative verbs in their causative and non-causative forms (see Figures 3.3 and 3.4 for summary).
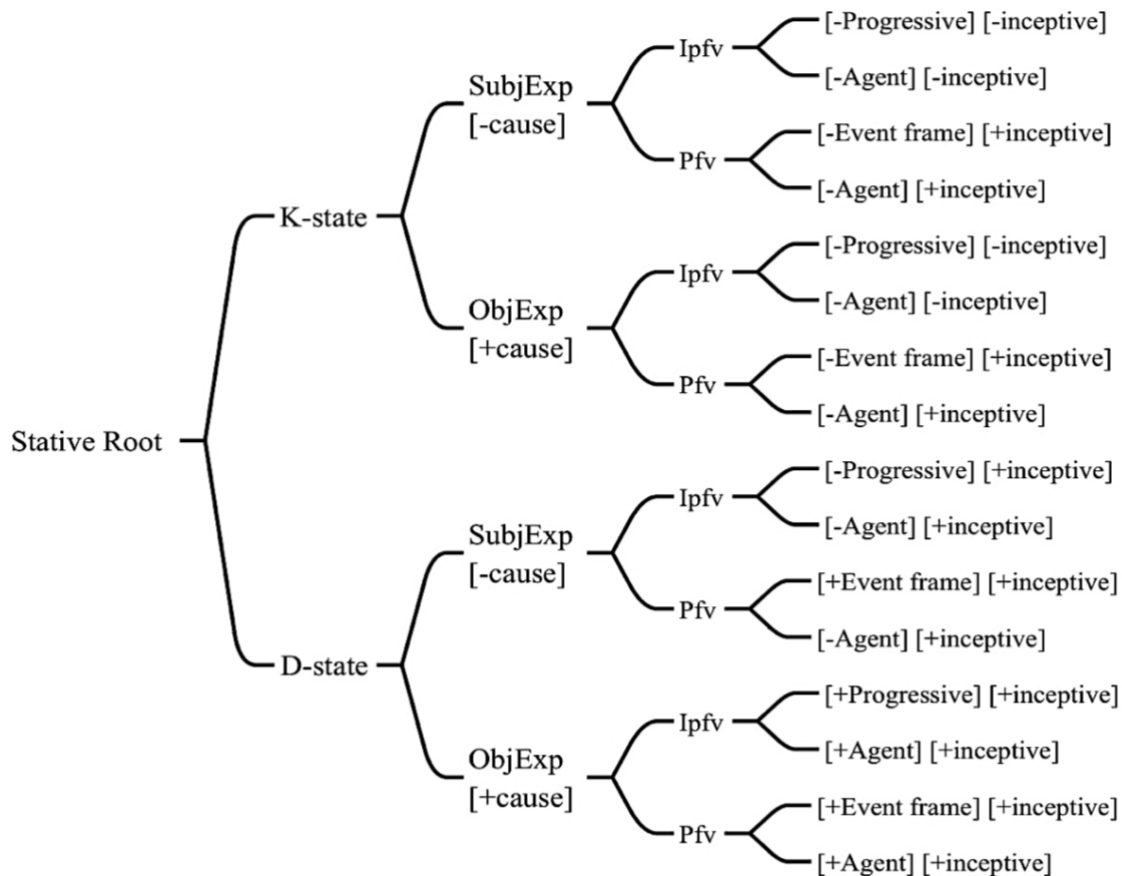
Figure 3.7: The proposed aspectual interpretations of K/D-state root derived BA psych verbs.

The aspectual characterization of psych verbs is not expected to deviate from the patterns observed for BA stative verbs in general. Chapter 4 goes through a battery of tests to test the predictions made here for psych verbs.

3.3 Summary and conclusions

This chapter presented an overview of the heterogenous nature of stative verbs in various Arabic dialects. It is found in the literature that Arabic stative verbs in MA, EA, and KA can be subdivided into at least two subgroups: one has robust stative properties, while the other exhibits more eventive properties. There is a clear distinction in Arabic between events and states that is revealed through tests like compatibility with the progressive or imperative forms, allowing recurrent interpretations, and licensing the perfective form or an active participle (see Mughazy, 2005;

Spagnol, 2009; Alotaibi, 2019). Building on this literature, BA stative verbs are also found to not be atomic. The argument explicitly presented here is that BA stative verbs are divided into inceptive states and unbounded canonical states (see also Bar-el, 2005; Choi, 2015a). This distinction is most evident in the imperfective form, while perfective morphology aspectually shifts all perfective stative verbs into inceptive readings (see 3.1.2.2). Thus, it is found that inceptive readings are encoded in two ways in BA: lexically, and morphosyntactically via perfective morphology.

Maienborn's (2005) Davidsonian/Kimian state division is adopted to explain BA data. Lexically encoded inceptive states are taken to be Davidsonian events derived from D-state roots, while unbounded states are Kimian states derived from K-state roots. It is argued that the D-state and K-state distinction is a property of roots in BA. D-state roots derive eventive non-dynamic verbs, and by extension, eventive psych verbs, while K-state roots derive stative non-dynamic verbs and stative psych verbs. This chapter has also shown that even though K-states in their perfective forms have inceptive readings and may pass Maienborn's event tests as a result of aspectual coercion via perfective morphology (see 3.1.4), they are not Davidsonian events as evidenced by their incompatibility with agentive contexts and the eventive frame (see 3.1.2.2).

The chapter has also shown that BA psych verbs, like such verbs in other Arabic dialects examined in Alotaibi et al., (2013), do not exhibit any peculiar syntactic psych effects. The most intriguing feature of BA psych verbs has to do with the dichotomy found in the non-dynamic class of verbs in BA in general. The argument presented here that D-state rooted verbs are non-dynamic events leads to the assumption that BA D-state SubjExp verbs may be classified as events as well. This claim is quite radical since the majority of the literature argues for a stative classification of SubjExp verbs (see e.g. Filip, 1996; Anagnostopoulou, 1999; Arad, 1998b; Pylkkänen, 1998; DiDesidero, 1999; Alexiadou and Iordăchioaia, 2014; Kailuweit, 2015; Darby, 2016; Temme, 2019; among many others) (see also 2.3). Chapter 4 will utilize Maienborn's event tests to support the claim that BA SubjExp verbs derived from D-state roots are non-dynamic events.

Another important claim advanced here is that K-state roots always derive stative verbs. This was found true even in the case of causative K-state root verbs where agentive and eventive

constructions were not possible, which indicates an inherent stative classification (see 3.1.2). Based on this pattern, K-state ObjExp verbs are expected to have a stative quality that would prohibit agentive and eventive contexts. Thus, the claim found in Pylkkänen (1998) that overt causative morphology and stative aspect are not incompatible finds support in BA data. Chapter 4 will seek to investigate this claim with agentive contexts and eventive constructions (see 4.4).

The following chapter will test these claims and try to characterize the aspectual nature of psych verbs in BA.

Chapter 4 Diagnostic Tests for the Aspectual Properties of BA Psych Verbs

Throughout the discussions in the previous chapters, we expounded on the seminal role aspectual features and agency play in the analysis of psych verbs. As discussed in Chapter 2, the common arguments in the literature of psych verbs discuss how psych effects only obtain on stative and/or non-agentive readings of ObjExp verbs. Grafmiller (2013) points out that studies that focus on the syntactic phenomena of psych verbs cannot distinguish the subclasses of psych verbs when all research argues for a grammatically relevant distinction between stative and non-stative psych verbs (ObjExp verbs in particular). The syntactic tests for psych effects did not yield any unique patterns for BA (see 3.2.2). Thus our attention turns to investigating the semantic and aspectual effects of BA psych verbs.

The previous chapter has shown that BA stative verbs are not a homogenous class of verbs but can be divided into verbs derived from K-state roots or D-state roots. Essentially, it is found that there is a complex interplay between the stative root type and the layers of morphosyntax (perfective and causative morphology) that contribute to state/event distinctions within stative verbs in BA (see 3.1.2). Essentially, while K-state roots have robust stative properties, D-state roots are unique in that they have ambiguous stative/eventive aspectual properties. Figures 3.3 and 3.4 (see 3.1.3) summarize the aspectual patterns found for lexically inceptive verbs derived from D-state roots, and unbounded states derived from K-state roots in BA. The aspectual characterization of the different stative roots in their different morphosyntactic realizations are expected to extend to include BA psych verbs which resulted in the aspectual predications presented in Figure 3.7 (see 3.2.2.2).

This chapter aims to test the generalizations made in the previous chapter using various tests. The predictions tested in the proceeding discussions boil down to the following:

(i)   There are two types of states, and by extension psych verbs, in BA: inceptive and unbounded.
        Inceptive psych verbs, encoded by D-state roots and/or perfective morphology, are predicted

to pass Maienborn's event tests. Imperfective forms of K-state roots, on the other hand, are expected to be canonical states and fail those same tests.

(ii) Inceptive psych verbs are a unique class of verbs that are punctual onsets of an atelic state. They encode a left-boundary but do not encode a change of state and an end point is not visible. Based on these properties, inceptive verbs are predicted to be distinguishable from states and right-boundary events like accomplishments and achievements.

(iii) Only D-state roots encode a Davidsonian event argument which should allow D-state root psych verbs to support agentive and eventive contexts. K-state roots do not encode an event variable and have robust stative properties that should prohibit agentive and eventive contexts.

(iv) ObjExp verbs derived from D-state roots are events that should have complex causative event structures and not allow object deletion. Those derived from K-state roots are expected to behave like simple events and allow the flexible object realization of simple event structures.

The first section in this chapter (4.1) applies Maienborn's (2005) event tests to establish the validity of a Davidsonian/Kimian state distinction in BA (prediction i). Next, Section 4.2 explores a series of tests that diagnose the presence of right boundaries or telic end points, temporal relations, as well as logical entailments to determine the aspectual properties of inceptive psych verbs and whether they are distinct from states and right-boundary events (prediction ii). Section 4.4 investigates the compatibility of BA psych verbs with agentive and eventive readings (prediction iii). Finally, Section 4.5 explores the simple and/or complex event structure of BA psych verbs by examining the flexibility of the distribution of the object argument (prediction iv).

Table 4.1 summarises all the aspectual tests used in this chapter to investigate the hypotheses advanced here regarding the aspectual properties and identification of BA psych verbs.

Table 4.1: Summary of tests used for the aspectual characterization of BA psych verbs.

Aspectual property	Test
Maienborn's event tests	Compatibility with manner adverbials
	Compatibility with locative modifiers
	Readings with degree modifiers
Habitual/iterative readings	Compatibility with habitual adverbials
Atelicity	Temporal adverbials
	Expansion test
	Imperfective entailments
Punctuality	Compatibility with *bišwayš* 'slowly'
	Compatibility with *fajʾah* 'suddenly'
Detecting a left-boundary	Reference time adverbials
Eventhood	Compatibility with the progressive
	Compatibility with the event frame
Agency	Possibility of imperative derivations
	Compatibility with agentive adverbials
Event complexity	Object deletion

4.1 Davidsonian and Kimian states in BA psych verbs

A claim is made in the previous chapter that there exists a fundamental distinction in BA between Davidsonian states and Kimian states that is grammatically relevant at the root level. It is also argued that grammatical aspect and morphosyntax may affect the aspectual interpretation of the verb, e.g. K-state root verbs in the perfective form pass the tests for Davidsonian states. However, the differentiation between D-state roots and K-state roots remains significant even derived into perfective forms where they all read as inceptive states. This is because only D-state roots allow iterative, eventive, or agentive interpretations (the latter two readings are discussed later in the chapter in Section 4.4). In this section, the focus is on using Maienborn's (2005; 2019) event tests to verify the state or event status of D/K-state root psych verbs in both (im)perfective forms.

4.1.1 Davidsonian events in the imperfective

The focus of this section is on the imperfective form, which is most transparent to the distinction between the two stative root types and cross cuts SubjExp and ObjExp verb derivations. It is claimed in the vast majority of the literature on psych verbs that SubjExp verbs are stative (see e.g. Pesetsky, 1995; Anagnostopoulou, 1999; Pylkkänen, 2000; Arad, 1998b; 2002; Landau, 2010; Verhoeven, 2010; Grafmiller, 2013; Kailuweit, 2015; Petersen, 2016; García-Pardo, 2018; Hirsch, 2018; Temme, 2019; Rozwadowska et al., 2020). Additionally, Rothmayr (2009), who similarly adopts Maienborn's (2005) paradigm to explain her German data, argues that all SubjExp verbs are Kimian states and lack a Davidsonian event argument.

However, BA data provides evidence that SubjExp verbs are split into two groups comprising of eventive SubjExp verbs derived from D-state roots, and stative SubjExp verbs derived from K-state roots. This distinction between K-state roots and D-state roots is also evident in ObjExp verbs as will be shown. The following series of event tests taken from Maienborn (2005; and subsequent work) (see 3.1.4 for review) will show a systematic stative/eventive asymmetry within BA imperfective SubjExp and ObjExp verbs based on the root type involved in the derivation.

4.1.1.1 Manner adverbials

The first of Maienborn's event diagnostics to be explored is compatibility with manner adverbials and comitatives. Modifiers that refer to the internal functional structure of an eventuality are typically not compatible with states since they lack an internal structure. However, Davidsonian states have an event argument and readily allow manner adverbials and comitatives, as shown in (1a), whereas Kimian states, lacking an event argument, are not compatible with manner modification as illustrated by the example in (1b).

(1) a. The pearls gleamed dully/ reddishly/ moistly.
     b. *Bardo owned thriftily/ generously much money.

(Maienborn, 2019, p. 68)[78]

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[78] The majority of Maienborn's examples presented in this section are repeated from Section 3.1.4. They are presented here again for easier reference.

This diagnostic is used by Rothmayr (2009) with respect to German SubjExp verbs to show that all SubjExp verbs have 'non-ambiguous' stative readings in her terminology, i.e. SubjExp verbs are Kimian states. Thus, all German SubjExp verbs prohibit manner adverbial modification as shown in (2).

(2) a. *Die Irmi glaubt die Geschichte sentimental   / naiv / gutgläubig.
         The Irmi believes the story   sentimentally/ naive / trustfully.
         'Irmi believes the story sentimentally / naively / trustfully.'

     b. *Die Irmi liebt "Die Strudlhofstiege" auf   inhaltliche Weise.
         The   Irmi loves "Die Strudlhofstiege" in related to content way.
         'Irmi loves "Die Strudlhofstiege" with respect to its content.'

<div align="right">(Rothmayr, 2009, p. 114)</div>

In contrast, Rothmayr (2009) views all German ObjExp verbs as a homogenous class of verbs that have ambiguous stative/eventive readings. She argues that all ObjExp verbs are causative states that have a CAUSE operator in their lexical semantic decomposition. The presence of CAUSE is the only way in which two sub-eventualities may combine and thus, CAUSE allows for the potential addition of the agentive DO and/or the eventive BECOME operators which give rise to the stative/eventive ambiguity with German ObjExp verbs (see 2.3.3.4). This ambiguity is demonstrated in the following examples with the verb *ärgerte* 'annoy' which allows for both an eventive reading where manner adverbials are allowed, see (3a, b), and a stative reading which prevents manner adverbials, as seen in (3c).

(3) a. Die Irmi ärgerte den Poldi vorsichtig / zärtlich / langsam /lauthals / direkt   / stumm.
         The Irmi annoyed the Poldi carefully / tenderly / slowly   /loudly   / directly / dumbly.
         'Irmi annoyed Poldi carefully / tenderly / slowly / loudly / directly / dumbly.'

     b. Der Witz ärgerte   den Poldi auf eine elegante / dreiste   / unpassende   / brutale /
         The joke annoyed the Poldi in   an   elegant / impudent / inappropriate / brutal /
         spöttische / zynische / raffinierte   Weise.
         quizzical / cynical   / sophisticated way.
         'The joke annoyed Poldi in an elegant / impudent / inappropriate / brutal / quizzical /
         cynical / sophisticated way.'

c. *Der Stau   ärgerte   den Poldi auf eine unpassende   / zynische Weise.
    The traffic jam annoyed the Poldi in   an   inappropriate / cynical   way.
    'The traffic jam annoyed Poldi in an inappropriate / cynical way.'

(Rothmayr, 2009, p. 61)

Importantly, the stative/eventive ambiguity is somewhat resolved in German with animate subjects which always allow eventive readings and thus manner adverbials as seen in (3a) (Rothmayr, 2009, p. 61).

BA data differs from German in that the distinction between K-states and D-states is determined by the root, not by animacy. BA psych verbs do not behave as a homogenous class of verbs in either SubjExp or ObjExp derivations. The manner adverbial diagnostic displays a split pattern of behaviour of the verbs in both SubjExp and ObjExp structures depending on the root type. The following examples of BA SubjExp verbs show how verbs derived from D-state roots are compatible with manner adverbials and comitatives, as shown in (4), whereas those derived from K-state roots restrict such modification, see (5).

(4)   a. yi-ġār   bi-quwwah   / marrah / kiṯīr   /   D-STATE
         IPFV.3SM-jealous with-harshness / plenty / frequently/
         bi-ṭrīqah   mu-zʿij-ah
         with-way.SG AP-annoying-SF
         'He gets jealous harshly/ extremely/ frequently/ in an annoying way.'

    b. yi-qlaq   bi-surʿah / bi-šiddah   / bi-šakil   mu-tʿib
         IPFV.3SM-worry with-speed / with-severity / with-mode.SG AP-exhausting-SF
         'He becomes worried quickly/ severely / in an exhausting manner.'

(5)   a. *yi-krah   ad-dirāsah   bi-surʿah   / marrah/ kiṯīr   /   K-STATE
         IPFV.3SM-hate DET-study.SG with-speed/ plenty / frequently/
         bi-ṭrīqah   mu-ḵīf-ah
         with-way.SG AP-scary-SF
         'He hates quickly/extremely/ frequently/ in a frightening way.'

    b. *yi-bġā   yi-ṭlaʿ   marrah/ kiṯīr
         IPFV.3SM-want IPFV.3SM-go.out plenty/ frequently
         'He wants to go out so much/ frequently.'

This distinction also extends to ObjExp derivations in BA. D-state root ObjExp verbs readily allow manner adverbial modification with both inanimate (6a) and animate (6b) subjects.

(6) a. az-zaḥmah ti-narfiz-nī   bi-surʿah   / kit̲īr   / bi-ṭarīqah   ġarīb-ah
        DET-traffic IPFV.3SF-annoy-1SG.ACC with-speed/ frequently/ with-way.SF strange-SF
        'Traffic annoys me quickly/ frequently/ in an inexplicable way.'

     b. hī ti-zaʿʿil   ʾaxū-hā   kit̲īr   / bi-šiddah   / bi-ʾistimrār
        she IPFV.3SF-anger.CAUS brother-3SF frequently / with-severity / with-continuation
        'She angers her brother frequently / severely/ continuously.'

In contrast, K-state ObjExp verbs do not allow manner adverbials as shown below in (7). Not even the presence of an animate subject as in (7b) can facilitate an eventive reading as it does for German.

(7) a. *al-film   yi-ʿjib-nī   kit̲īr   / bi-šakil   mū ṭabīʿī
        DET-film.SG IPFV.3SM-please.CAUS-1SG.ACC frequently/with-manner.SF NEG natural
        'The movie pleases me frequently/ in an unreasonable way.'

     b. *hum yi-lhim-ū-nī   dāʾiman/ bi-šiddah   / bi-ʾistimrār
        they IPFV.3-inspire.CAUS-PL-1SG.ACC always / with-severity / with-continuation
        'They inspire me always/ severely/ continuously.'

In sum, the type of root conditions acceptability in the manner adverbial test. Unlike German data, the animacy of the subject does not make a difference. The test shows that in both SubjExp and ObjExp imperfective forms, only D-state roots allow manner adverbial modification indicating an eventive reading whereas K-state roots prohibit manner adverbials which points to a stative interpretation.

4.1.1.2 Locative modifiers

Maienborn (2019) argues that only D-states allow locative modification, due to the presence of the Davidsonian event argument. By extension, K-states cannot accept locative modification because they do not have an event argument that can be modified. The following examples from Maienborn

(2019, p. 66) show how K-states prohibit locative modifiers, as in (8a), whereas D-states do not, as in (8b).

(8)   a. Hilda waited at the corner.
      b. *Bardo knew the answer over there.

Rothmayr (2009) follows this argument and predicts that SubjExp verbs should not allow locative modification because they are Kimian states. The following examples support this prediction for German, where SubjExp verbs are shown to be incompatible with locative modification.

(9)   a. *Die Irmi liebt "Die Strudlhofstiege" im 9 Bezirk.
         The Irmi loves "Die Strudlhofstiege" in the 9th district.
         'In the 9th district, Irmi loves "Die Strudlhofstiege."'

      b. *Die Irmi glaubt die Geschichte auf der Strudlhofstiege.
         The Irmi believes the story   on the Strudlhofstiege.
         'Irmi believes the story on the Strudlhofstiege.'

                                                              (Rothmayr, 2009, p. 116)

Rothmayr (2009) also observes that German ObjExp verbs generally do not allow locative modification, as shown in (10a). However, a frame setting locative reading is possible for ObjExp verbs when an animate subject is present, see (10b).[79]

(10) a. *Der Witz ärgerte die Irmi unter einem Baum.
         The   joke annoyed the Irmi under a   tree.
         'The joke annoyed Irmi under a tree.'

      b. Die Irmi ärgerte   den Poldi unter einem Baum.
         The Irmi annoyed the Poldi under a   tree.
         'Irmi annoyed Poldi under a tree.'

                                                              (Rothmayr, 2009, p. 62)

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[79] See Maienborn (2005) for an overview on the difference between locative VP-modifiers and frame setting locative modifiers.

In (10b), Irmi does something to annoy Poldi, e.g. she tickles him, and the location of this event happens to be under a tree. Thus, the locative modifier is a frame setting modifier which is not a true eventuality diagnostic (see Maienborn 2005; 2019 for discussion). The understanding here is that Irimi's tickling of Poldi always annoys him and the event just happened to have occured under a tree in (10b). In other words, it is not the location that triggers the emotion such that the tickling usually does not annoy Poldi, but it does under the tree. This latter reading is the locative VP-modifier reading required for a locative modifier to be interpreted as an event diagnostic. This leads Rothmayr (2009) to conclude that ObjExp verbs have Kimian state readings based on the unacceptability of event-related locative modification with ObjExp verbs.

However, unlike German, BA SubjExp verbs exhibit a split pattern regarding the locative modification test. In general, D-states allow an event to be placed in space via locative modification as shown in (11), where it is understood that the state holds of the subject only once they are in the location indicated by the modifier. This is the event related diagnostic use for locative modification discussed by Maienborn (2005, 2019).

(11) a. yi-ḵāf   fī al-makān   haḏā
        IPFV.3SM-fear in DET-place.SG this
        'He gets scared in this place.'

   b. ʿumar yi-ṭfaš   fī as-sūq
        Omar IPFV.3SM-bore in DET-mall.SG
        'Omar gets bored in malls.'

In contrast, it cannot be said that one experiences a certain state denoted by a K-state root once they enter a certain location, because K-states do not allow locative modification. The following examples demonstrate the prohibition BA K-state roots place on such modifiers in SubjExp structures.

(12) a. *muḥammad yi-ḥsid   ʾaḵ-ūh   fī al-madrasah
        Mohammad IPFV.3SM-envy brother-3SM in DET-school.SF
        'Mohammad envies his brother in school.'

b. *maha tu-ḥubb   ʿalī fī al-ḥadīqih
   Maha   IPFV.3SF-love Ali in DET-garden.SF
   'Maha loves Ai in the garden.'

The split pattern of behaviour of the stative root types regarding locative modification extends to ObjExp verbs. ObjExp constructions formed from D-state roots readily allow locative modification, where it is understood that the eventuality holds at the setting denoted by the adverbial as shown in (13). For example, in (13a), Omar annoys me when we are in the mall, not outside of it.

(13) a. ʿumar yi-ṭaffiš-nī   fī as-sūq
        Omar IPFV.3SM-annoy.CAUS-1SG.ACC in DET-mall
        'Omar annoys me in the mall.'

     b. at-tilfizyūn   yi-narfiz-nī   fī ġurfat   an-nūm
        DET-televeision.SG IPFV.3SM-annoy-1SG.ACC in room.SGF DET-sleep
        'The television bothers me in the bedroom.'

     c. sārah ti-ḳawwif-nī   fī aḍ-ḍalām
        Sara IPFV.3SF-frighten.CAUS-1SG.ACC in DET-dark
        'Sara frightens me in the dark.'

In these examples, there is nothing inherently frightening about Sara, or inherently bothersome about the television. They only have this effect on the experiencer in a certain location. This locative reading is evidence for the eventhood of D-state root ObjExp verbs.

Locative modification is not allowed for ObjExp verbs derived from K-state roots. In the examples below, it cannot be understood that certain locations trigger the emotion denoted by the verb. Thus, imperfective K-state ObjExp verbs are not events based the locative modification test.

(14) a. *yi-lhim-nī   fī al-jāmiʿah
        IPFV.3SM-inspire.CAUS-1SG.ACC in DET-university.SG
        'He inspires me at university.'

b. *ti-karrih-nī   fī at-tufāḥ   fī as-sūq
IPFV.3SF-hate.CAUSE-1SG.ACC in DET-apple.PL in DET-mall.SG
'She makes me hate apples in the mall.'

c. *al-lawḥah   ti-jḏib   maha fī al-maʿraḍ
DET-painting.SG IPFV.3SF-attract Maha in DET-exhibit.SG
'The painting attracts Maha in the exhibit.'

In sum, the locative adverbial test further develops the picture emerging of how BA psych verbs are split into eventive and stative groups based on the root type; the locative adverbial test shows that D-state roots derive eventive psych verbs while K-state roots derive stative psych verbs.

4.1.1.3 Degree modifiers

Maienborn (2005) suggests the use of the modifier *ein bisschen* 'a little bit' as a new eventuality diagnostic for German. This modifier is ambiguous between two readings. It can either be a degree modifier quantifying *how much* of the event denoted by the verb occurred or it can be an eventive modifier quantifying *how long* the event lasted. Events always support eventive timespan readings whereas statives should only allow degree interpretations. Consider the examples in (15) where D-state verbs modified with *ein bisschen* 'a little bit' support an eventive reading. An additional degree reading is possible depending on the verb meaning, as shown in (15b).

(15) a. Carol hat ein bisschen geschlafen.   *eventive reading*
      Carol has a little bit   slept.

     b. Das Fenster hat ein bisschen offen gestanden   *eventive and degree reading*
       The window has a little bit   open stood.

                                                   (Maienborn, 2005, p. 298)

The eventive reading of *ein bisschen* 'a little bit' indicates that Carol slept for a little while in (15a), and similarly, that the window was open for a little while in (15b). The verb *offen* 'open' in (15b) allows an additional degree reading where the window is understood to be open slightly as opposed to being completely open. The availability of an eventive reading of *ein bisschen* 'a little bit' referencing the length of time distinguishes D-states from K-states, which only allow a degree

reading. Consider the following examples where K-states are shown to lack the eventive time span reading of *ein bisschen* 'a little bit':

(16) a. Das Kleid war ein bisschen kurz.   *degree reading only*
        The dress was a little bit   short.

   b. Carol ähnelte   ein bisschen ihrer Großmutter.   *degree reading only*
      Carol resembled a little bit   her   grandmother.

                                                   (Maienborn, 2005, p. 298-299)

Ein bisschen 'a little bit' in (16a) refers to the length of the dress, not that it was short for a little bit of time. Similarly in (16b), Carol resembled her grandmother a little bit but not much. It cannot mean that she resembled her mother for a short duration of time.

Rothmayr (2009) argues that SubjExp verbs are not eventive and uses the *ein bisschen* 'a little bit' test to support the claim. She argues that SubjExp verbs only have a degree reading with *ein bisschen* 'a little bit' as shown in (17a, b), where the interpretation is that Irmi's love and trust is not high. A time span adverbial reading is not possible with the examples below indicating the lack of an eventive reading.

(17) a. Die Irmi liebt "Die Strudlhofstiege" ein bisschen.   *degree reading*
        The Irmi loves "Die Strudlhofstiege" a bit.
        'Irmi loves "Die Strudlhofstiege" to a little degree.'

   b. Die Irmi glaubt   die Geschichte ein bisschen.   *degree reading*
      The Irmi believes the story   a bit.
      'Irmi believes the story to a little degree.'

                                                   (Rothmayr, 2009, p. 117)

Rothmayr also finds that time-span readings are not possible with German ObjExp verbs. She uses this as evidence that Kimian state readings are possible in ObjExp verbs. She provides the example in (18) where the interpretation is of *how much* Irmi was depressed by the joke. It cannot mean that Irmi was annoyed by the joke for a little while.

(18) Der Witz deprimierte die Irmi ein bisschen.   *degree reading*
      The joke depressed   the Irmi a little.
      'The joke depressed Irmi a little.'

(Rothmayr, 2009, p. 62)

In BA, the equivalent of the German *ein bisschen* is *šuwayyah* 'a little' and proves to be a valid test to distinguish between events and states in BA. The following examples illustrate how *šuwayyah* 'a little' modifies the event in (19a) and the state in (19b).

(19) a. yi-ḏākir   šuwayyah (mū kiṯīr)   (baʿdyn ḳalāṣ)   *eventive and degree reading*
        IPFV.3SM-study little   (NEG plenty) (then   done)
        'He studies a little bit (not much).'
        'He studies a little while (then no longer).'

     b. yi-ʿrif   šuwayyah (mū kiṯīr)   (*baʿdyn ḳalāṣ)   *degree only reading*
        IPFV.3SM-know little   (NEG plenty) (then   done)
        'He knows a little bit (not much).'
        #'He knows for a little while (then no longer).'

In BA, both an eventive time span reading and a degree reading are available for events modified by *šuwayyah* 'a little' as shown in (19a). The presence of the two readings is illustrated by the adverbials between brackets where the degree reading shows that he studies a little bit of something but *mū kiṯīr* 'not much', and the time span reading shows that he studies for a short time *baʿdyn ḳalāṣ* 'then no longer'. Conversely, only a degree reading of *šuwayyah* 'a little' is allowed for the state in (19b) as indicated by the infelicitousness of using *baʿdyn ḳalāṣ* 'then no longer'. Maienborn's test is thus taken to be successful in distinguishing between stative and eventive verbs in BA, where the lack of a time span reading for *šuwayyah* 'a little' indicates the lack of an eventive interpretation.

In SubjExp constructions, it is predicted that both the eventive and degree readings of *šuwayyah* 'a little' are supported with SubjExp verbs derived from D-state roots since they are argued to be events, whereas stative K-state roots should only allow the degree reading. We take a look first at the BA D-state SubjExp constructions presented in (20) where both eventive and degree readings are found available.

(20) a. yi-zʿal   šuwayyah (mū kiṯīr)   (baʿdyn ḳalāṣ)   *eventive and degree reading*
IPFV.3SM-angry little   (NEG plenty) (then   done)
'He gets angry a little bit (not much).'
'He gets angry for a little while (then no longer).'

   b. yi-ḵāf   šuwayyah (mū kiṯīr)   (baʿdyn ḳalāṣ)   *eventive and degree reading*
IPFV.3SM-fear little   (NEG plenty) (then   done)
'He gets frightened a little bit (not much).'
'He gets frightened for a little while (then no longer).'

In contrast, SubjExp verbs with K-state roots only allow the degree modification reading. In the examples given in (21), only the degree of the eventuality is interpreted without any time span readings. This is reinforced with the unacceptable use of the *baʿdyn ḳalāṣ* 'then done' phrase, which means that the state cannot be interpreted to have held for a short period of time and then to have ceased to be.

(21) a. yi-ḥubba-hā   šuwayyah (mū kiṯīr) (*baʿdyn ḳalāṣ)   *degree reading*
IPFV.3SM-love-3SF little   (NEG plenty) (then   done)
'He loves her a little bit (not much).'
#'He loves her for a little while (then no longer).'

   b. yi-ṯiq   fī-hum šuwayyah (mū kiṯīr)   (*baʿdyn ḳalāṣ)   *degree reading*
IPFV.3SM-trust in-3PL little   (NEG plenty) (then   done)
'He trusts them a little bit (not much).'
#'He trusts them for a little while (then no longer).'

This test suggests that BA SubjExp verbs have both stative and eventive readings depending on the root involved in the derivation.

BA ObjExp verbs pattern like SubjExp verbs regarding how the modifier *šuwayyah* 'a little' is interpreted. ObjExp verbs with D-state roots support both degree and timespan readings:

(22) a. aš-šuġul   yi-narfiz-ni   šuwayyah (mū kiṯīr)   (kiḏā   ḳams daqāyiq)
DET-work IPFV.3SM-irritate-1SG.ACC little   (NEG plenty) (around five   minute.PL)
'Work irritates me a little bit (not much).'
'Work irritates me for a little while (around five minutes).'

    b. yi-qliq-nī   šuwayyah (mū kiṯīr)   (baʿdyn ḳalāṣ)
IPFV.3SM-worry.CAUS-1SG.ACC little   (NEG plenty) (then   done)
'He worries me a little bit (not much).'
'He worries me for a little while (then no longer).'

K-state ObjExp verbs only allow the degree readings as shown in (23). In neither example is it possible to interpret the modifier as indicating a time span as indicated by the unacceptability of a time span phrase.

(23) a. yi-ʿjib-nī   šuwayyah (mū kiṯīr)   (*kiḏā   ḳams daqāyiq)
IPFV.3SM-please.CAUS-1SG.ACC little   (NEG plenty) (around five   minute.PL)
'It pleases me a little bit (not much).'
#'It pleases me for a little while (around five minutes).'

    b. ʿumar yi-lhim-nī   šuwayyah (mū kiṯīr)   (*baʿdyn ḳalāṣ)
Omar IPFV.3SM-inspire-1SG.ACC little   (NEG plenty) (then   done)
'Omar inspires me a little bit (not much).'
#'Omar inspires me for a little while (then no longer).'

In conclusion, all three of Maienborn's event tests indicate that BA shows a systematic split between stative K-state roots and eventive D-state roots that cross cuts SubjExp and ObjExp verbs. The data examined so far supports the conclusion that BA psych verbs in their imperfective forms have consistent, predictable behaviour regarding event diagnostics, and by extension may be classified as either states or events based on the root involved in the derivation. Consequently, psych verbs whether in SubjExp or ObjExp forms cannot be considered a homogenous class of verbs in BA. The most important distinction in BA is between stative K-state roots and eventive D-state roots, which is contrary to the German data seen above where the distinction is made between stative SubjExp or ambiguous ObjExp verbs (many other languages make this distinction as well, see Landau 2010 for review).

The data examined so far from BA supports the claims made for the presence of stative causative structures (Arad, 1998a; 1998b; 1999; Biały, 2005; Pylkkänen, 2009; Rothmayr, 2009). All BA ObjExp verbs have a CAUSE operator as evidenced by overt causative morphology, but they may be either eventive verbs derived from D-state roots or states derived from K-state roots. The stative status of K-state ObjExp verbs is evidenced by their incompatibility with manner and locative modification, and timespan readings of *šuwayyah* 'a little'; all tests designed to diagnose the presence of an event. The stative status of K-state ObjExp verbs is further corroborated by their lack of dynamic and agentive readings discussed later in (4.4). For now, we examine further the effect perfective morphology has on psych verbs with respect to Maienborn's event tests in the following section.

4.1.2 Davidsonian events in the perfective

In previous discussions, we indicated that perfective stative verbs receive inceptive readings, which allow them to obtain eventive status and pass Maienborn's event tests (see 3.1.4). The working hypothesis introduced in the previous chapter (Chapter 3) is that psych verbs derived from K-state roots should pass Maienborn's event tests in their perfective forms due to their inceptive event status. This is striking since in their imperfective forms, stative verbs of K-state roots fail those event tests (see 4.1.1), indicating a stative classification. The reason for such a shift is proposed to be the event boundary imposed by perfective morphology. For stative verbs, the boundary is an initial or left-boundary that has punctual and atelic properties, investigated in the following section (see 4.2).

Consequently, we expect the asymmetry witnessed between psych verbs derived from D-state roots and those with K-state roots regarding Maienborn's event tests in their imperfective forms to disappear in the perfective form. The next section investigates this claim.

4.1.2.1 Manner adverbials

Psych verbs derived from D-state roots in the perfective are expected to allow manner adverbials considering the argument that they are inherent events. The following examples of a SubjExp verb in (24a) and an ObjExp verb in (24b) support this claim.

(24) a. sārah ziʿilit   marrah   / bi-surʿah   / bi-šakil   ġaryib
      Sara   angry.PFV-3SF extremely / with-speed / with-mode.SG odd
      'Sara became angry extremely/ quickly/ strangely.'

   b. al-ḵabar   ḵawwaf-hum   bi-surʿah   / bi-quwwah
      DET-news.SGM frighten.PFV.CAUS.3SM-3PL with-speed / with-harshness
      'The news frightened them quickly/ harshly.'

In their perfective forms, psych verbs derived from K-state roots are also expected to allow manner adverbials in both SubjExp and ObjExp constructions. The following examples indeed show that perfective K-state SubjExp verbs, see (25), and ObjExp verbs, see (26), allow manner adverbials.

(25) a. kirih-hā   bi-ššiddah   / bi-surʿah   / bi-šakil   ʿajīb
      hate.PFV.3SM-3SF with-severity / with-speed/ with-mode.SG strange
      'He came to hate her severely/ quickly/ in a strange manner.'

   b. ḥabb   al-luʿbah bi-surʿah   / marrah
      love.PFV.3SM DET-toy.sg with-speed / plenty
      'He fell in love with the toy quickly/ extremely.'

(26) a. ḥabbab-ū- nī   fī al-kitāb   bi-surʿah   / bi-šakil   ġaryib
      love.PFV.CAUS-3PL-1SG.ACC in DET-book.SG with-speed/ with-mode.SG odd
      'They made me love the book quickly/ strangely.'

   b. at-taqyyīm-āt karrah-at-nī   fī al-filim   bi-šiddah   /
      det-review-plf   hate.PFV.CAUS-3F-1SG.ACC in DET-movie.SG with-severity /
      bi-quwwah
      with-harshness
      'The reviews made me hate the movie severely/ harshly.'

The compatibility of manner adverbials with all BA perfective psych verbs indicates an eventive status for these verbs. This reading is not affected by the animacy features of the subject as seen in the examples above in (24b) and (26b), where inanimate subjects allow manner adverbials, and the verbs are read as events. This is contrary to German, where Rothmayr (2009) shows that inanimate subjects facilitate a stative reading for ObjExp verbs and disallow manner adverbial modification.

4.1.2.2 Locative modifiers

Perfective psych verbs derived from K-state roots are predicted to allow locative modification. The following examples of perfective K-state root SubjExp (27) and ObjExp verbs (28) bear out this prediction.

(27) a. kirih   al-ʾakl   fī al-maṭʿam   ḏāk al-yum   SUBJEXP
        hate.PFV.3SM DET-food in DET-restaurant that DET-day.SG
        'He hated the food in the restaurant that day.'

    b. ʾištahā   al-ḥalā   fī al-maqhā
        desire.PFV.3SM DET-dessert.SG in DET-café
        'He wanted dessert in the café.'

(28) a. ʿa-jab-ū-nī   fī al-masjid   OBJEXP
        CAUS-like.PFV-3PL-1SG.ACC in DET-mosque.SG
        'They pleased me in the mosque.'

    b. ad-daʿāyah   ʾa-ġra-t   al-ʾaṭfāl
        DET-advertisment.SGF CAUS-temp.PFV-3SGF DET-child.PL
        'The advertisement tempted the children.'

In (28), the animacy features of the subject of ObjExp verbs does not affect the acceptability of locative modification.

As mentioned previously, psych verbs of D-state roots are expected to pass Maienborn's event tests in their perfective forms just as they did in their imperfective forms due to their inherently inceptive nature. Following are a few examples that demonstrate their acceptability with locative modification in both SubjExp (29) and ObjExp (30) structures.

(29) ziʿil   fī al-madrasah
        angry.PFV.3SM in DET-school.SG
        'He became angry in school.'

(30) fājaʾ-nī   fī al-ʿamal
    surprize.PFV.3SM-1SG.ACC in DET-work
    'He surprised me at work.'

In sum, event-related locative modification is readily compatible with BA psych verbs of both K/D-states in their perfective forms.

4.1.2.3 Degree modifiers

The last of Maienborn's tests reviewed here is how the degree phrase *šuwayyah* 'a little' is interpreted. If we presume that perfective morphology encodes an eventive interpretation, then we expect to see both degree and timespan readings with all perfective psych verbs. A perfective SubjExp K-state example is presented in (31) and an ObjExp K-state structure is presented in (32), and both degree and timespan readings are shown to be available.

(31) a. ḥabba-hā   šuwayyah (mū kit̠īr)   (baʿdyn k̠alāṣ)
       love.PFV.3SM-3SF little   (NEG plenty) (then   done)
       'He loved her a little bit (not much).'
       'He loved her for a little while (then no longer).'

    b. ʾistaḥā   šuwayyah (mū kit̠īr)   (baʿdyn k̠alāṣ)
       shy.PFV.3SM little   (NEG plenty) (then   done)
       'He was shy a little bit (not much).'
       'He was shy for a little while (then no longer).'

(32) a. ʿa-jab-nī   šuwayyah (mū kit̠īr) (*kid̠ā ʾasbūʿ   bass)
       CAUS.3SM.please.PFV-1SG.ACC little   (NEG plenty) (around week.SG just)
       'It pleased me a little bit (not much).'
       'It pleased me for a little while (for just a week).'

    b. farraḥ-at-hum   šuwayyah (mū kit̠īr)   (baʿdyn k̠alāṣ)
       please.PFV.CAUS-3SGF-3PL little   (NEG plenty) (then   done)
       'She pleased them a little bit (not much).'
       'She pleased them for a little while (then no longer).'

Psych verbs of D-state roots are inherent events, therefore their aspectual classification is not expected to change with perfective morphology. Examples are given below where both D-state SubjExp (33) and ObjExp (34) verbs support degree and timespan readings.

(33) ziʿil   šuwayyah (mū kiṯīr)   (baʿdyn ḳalāṣ)
     anger.PFV.3SM little   (NEG plenty) (then   done)
     'He became angry a little bit (not much).'
     'He became angry for a little while (then no longer).'

(34) hum qahar-ū-nī   šuwayyah (mū kiṯīr) (baʿdyn ḳalāṣ)
     they frustrate.PFV-3PL-1SG.ACC little   (NEG plenty) (then   done)
     'They frustrated me a little bit (not much).'
     'They frustrated me for a little while (then no longer).'

The availability of both degree and timespan readings for perfective psych verbs supports an eventive classification for perfective derivations of both stative root types.

To conclude, Maienborn's event tests of compatibility with manner and locative adverbials as well as the availability of time-span readings for degree modifiers show that BA exhibits a fundamental state/event dichotomy within the psych verb class that cuts across SubjExp and ObjExp distinctions. Table 4.2 below presents a summary of the results obtained here for these event tests with respect to BA data. In their imperfective forms D-state root psych verbs are inceptive states with eventive status and K-state root psych verbs are unbounded canonical states. Perfective morphology shifts K-state roots into eventive readings and allows then to pass the event tests.

Table 4.2: Summary of results for Maienborn's (2005) event tests for BA psych verbs.

Test	Imperfective Form		Perfective Form	
	K-state root	D-state root	K-state root	D-state root
Manner adverbials	-	+	+	+
Locative modifiers	-	+	+	+
Degree modifiers	degree	degree/event	degree/event	degree/event

4.2 Aspectual properties of inceptive psych verbs

In Section 2.5, a review is given of recent literature that argues for a distinction between typical unbounded states and inceptive states, sometimes called *inchoative states* (see e.g. Bar-el, 2005; Choi, 2015b). Importantly, inceptive states are argued to have unique aspectual properties that cannot be accommodated in traditional event taxonomies. Inceptives are initial boundary events that are punctual and atelic and must be separated from final boundary events, identified by accomplishments and achievements, that are telic and not necessarily punctual. The following discussion will focus on diagnostics that aim to showcase the unique properties that distinguish inceptive states from canonical states, accomplishments, and achievements: they have habitual or iterative readings, they are punctual, they are atelic. In doing so, it is hoped that the debate surrounding the aspectual classification of psych verbs, especially the controversial group of ObjExp verbs, will be enriched with data from a morphologically rich language like Arabic.

4.2.1 Habitual and iterative readings

Several researchers have noted the presence of a recurrent interpretation for stative or psych verbs. Recall the recurrent stative subgroup classified as a stage-level states in EA (Mughazy, 2005; 2015) and KA (Alotaibi, 2019) that exhibit behaviour unlike canonical states (see 3.1.1 for review). Biały (2005; 2020) also distinguishes between recurrent and non-recurrent ObjExp verbs, each with their own unique semantic properties. In the previous chapter (see 3.1.2.1), we briefly discussed how BA imperfective inceptive states do not have the expected present state reading available for imperfective unbounded stative verbs; rather, inceptive states show compatibility with habitual readings in the present tense. The presence of a habitual or iterative reading is taken as evidence for the uniqueness of the D-state root class of psych verbs in BA.

First, a brief review is given of the presence of habitual interpretations for psych verbs in the literature. In Polish, Biały (2005) observes the presence of a habitual interpretation for a subset of ObjExp verbs. Biały's observation on the aspectual classification of Polish psych verbs is that all SubjExp verbs are stative, and ObjExp verbs are subdivided into stative ObjExp verbs and non-

stative ObjExp verbs.[80] One diagnostic he uses to come to this conclusion is the habitual reading available for a subset of psych verbs. As Biały (2005, p. 113) states, one of the hallmarks of stativity is the barring of habitual (or iterative) interpretations in the present tense as demonstrated in (35).

(35) a. *Tomek zna   Anię wiele razy dziennie
        'Tom   knows Ann   many times a day.'

     b. *Zosia przypomina swoją matkę   dwa razy dziennie
        'Zosia resembles   her   mother twice a day.'

                                                    (Biały, 2005, p. 128)

In Polish, SubjExp verbs are stative and therefore do not allow habitual readings, see (36) (from Biały, 2005, p. 116).

(36) *Tomek kocha Marię od   czasu do czasu   SUBJEXP
       'Tom   loves Mary from time   to time.'

However, Polish ObjExp verbs are divided in their behaviour. Stative ObjExp verbs, exemplified in (37a), prohibit habitual interpretations as shown by the unacceptable use of *od czasu do czasu* 'from time to time' which would yield the habitual reading of work satisfies Tom every time he does it. In (37b), such a habitual reading is present for the non-stative ObjExp verb where one possible reading is that snakes scare Mark every time he sees them.

(37) a. Praca   satysfakcjonuje Tomka (*od czasu do czasu)   STATIVE OBJEXP
        'Work satisfies   Tom   (from time to time).'

     b. Węże   przerażają Marka   NON-STATIVE OBJEXP
        'Snakes scare   Mark.'

                                                    (Biały, 2005, p. 129)

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[80] Biały (2020) later amends this statement and argues that all Polish psych verbs are stative although recurrent ObjExp verbs may allow eventive interpretations in the presence of an animate subject. See (2.3.3.3) for summary.

Marín and McNally (2011) also observe habitual readings for a subset of Spanish Reflexive Psych Verbs (SRPVs) (see 2.5.3). Recall Marín and McNally's division for SRPVs into two subclasses: the non-punctual *aburrirse* class, and the punctual *enfadarse* class. They note that while stative verbs generally do not allow habitual readings as observed in (38a), SRPVs exhibit varying behaviour, where the *aburrirse* class behave like states and have present state interpretations as seen in (38b), and the *enfadarse* class have habitual readings as seen in (38c) (a couple of these examples are repeated from (80) in 2.5.3).

(38) a. Le gustan los hombres con barba.
      her like   the men   with beards
      'She likes men with beards.'

    b. Se preocupa por el   future de sus hijos.
      Se worry   for the future of her children
      'She is worried (now) about the future of her children.

    c. Se asombra/asusta   con los fuegos artificiales.
      Se amaze /frighten with the fires   artificial
      'He is (generally) amazed/frightened by fireworks.'
      #'He is amazed/frightened (now) by fireworks.'

(Marín and McNally, 2011, pp. 484-485)

The habitual interpretation of the present tense SRPVs is used by Marín and McNally (2011) as one of many tests to identify the members of the *aburrirse* and *enfadarse* classes. Marín and McNally (2011, p. 485) argue that such habitual stative readings present clear evidence against considering the *enfadarse* class to be stative, even if these verbs do not display dynamic behaviour in any other way in Spanish.

In BA, the habitual reading is present for imperfective D-state root psych verbs. The following examples demonstrate the presence of a habitual interpretation for both SubjExp and ObjExp structures derived from D-state roots. Interestingly, while the present state reading is not available for D-state SubjExp verbs, see examples in (39), D-state ObjExp verbs support both a habitual and present state reading, see examples in (40).

(39) a. ʿumar yi-zʿal   (kull   yum)   SUBJEXP
     Omar IPFV.3SM-anger (every day.SG)
     'Omar gets angry every day.'
     #'Omar is angry.'

   b. ʿumar yi-qlaq   (maʿ kull   ʾiḳtibār / kull   yum)
     Omar IPFV.3SM-worry (with every exam.SG/ every day.SG)
     'Omar gets worried (with every exam/ every day).'
     #'Omar is worried.'

(40) a. ʿumar yi-zaʿʿil-nī   (kull   yum)   OBJEXP
      Omar IPFV.3SM-anger.CAUS-1SG.ACC (every day.SG)
     'Omar angers me every day.'
     'Omar angers me.'

   b. al-ʾaḳbār   ti-wattir-nī   (kull   laylah)
     DET-news.PLF IPFV.3SF-stress.CAUS-1SG.ACC (every night.SG)
     'The news stresses me every night.'
     'The news stresses me.'

In contrast, imperfective K-state verbs do not support habitual readings, as evidenced by their restriction on the use of habitual adverbials, seen in (41) and (42) for both SubjExp and ObjExp examples respectively. Notice how the sentence is acceptable in present state interpretations but the habitual modification is unacceptable in all K-state root experiencer verb structures.

(41) a. ʿumar yi-ḥubb   maha (*kull   yum)
     Omar IPFV.3SM-love Maha (every day.SG)
     'Omar loves Maha #(every day).'

   b. mā yi-lām   mudīr-ah   (*kull   mā šāfah   / kull   yum)
     NEG IPFV.3SM-bear manager-3SM (every   what see.PFV.3SM / every day.SG)
     'He cannot bear his manager #(every time he sees him/every day).'

(42) a. ʿalī yi-ʿjib-nī   (*kull   yum   / kull   mā šift-ah)
     Ali IPFV.3SM-please.CAUS-1SG.ACC (every day.SG   / every what see.PFV.1SG-3SM)
     'Ali pleases me #(every day/ every time I see him).'

b. al-baḥar   yi-sḥar   sārah (*kull yum / kull   mā   šāft-ah)
DET-sea.SG IPFV.3SM-enchant Sara (every day.SG / every what see.PFV.3SF-3SM)
'The sea enchants Sara #(everyday/ every time she sees it).'

It is clear from the BA data presented so far that a recurrent reading is inherent in verbs of D-state roots in their imperfective forms whereas K-state imperfectives do not allow a recurrent reading. This is not unique to BA and is observed in both EA and KA as discussed previously (see 3.1.1). Since habitual readings are properties of events, it is suggested that the presence of habitual readings for verbs derived from D-state roots may be added as an eventive diagnostic alongside Maienborn's (2005) event tests discussed above (see 4.1).

However, detecting the presence of a habitual reading as a diagnostic is only useful for distinguishing between stative root types in the imperfective. Habitual readings cannot be found in perfective forms of Arabic verbs (Mughazy, 2015). Lenci and Bertinetto (2000) argue that habituality is within the realm of imperfectivity (see also Comrie, 1976), while iterativity presupposes a closed interval and thus can be found in perfective contexts. Essentially, the contrast between habitual and iterative readings is aspectual in nature (Lenci and Bertinetto, 2000). If we accept that imperfective D-state root state verbs allow habitual readings because they are inceptive events, then it should be possible to obtain iterative readings for all psych verbs in their perfective forms, since perfective morphology assigns inceptive aspect as argued in Chapter 3. However, this is not the case. Consider first the examples of K-state root SubjExp and ObjExp verbs in (43) and (44) respectively.

(43) a. *ḥabba-hā   marrat-ayn   SUBJEXP
         love.PFV.3SM-3SF time-DUAL
         'He fell in love with her twice.'

     b. *baġā   yi-ṭlaʿ   kaḏā marrah
         want.PFV.3SM IPFV.3SM-out several time-PL.F
         'He wanted to go out several times.'

(44) a. *ʾa-lham-nī   ṯalāṯ marr-āt   OBJEXP
         CAUS-inspire.PFV.3SM-1SG.ACC three time.PL.F
         'He inspired me three times.'

b. *al-baḥr   saḥar-nī   kaḏā   marrah
  DET-sea.SG IPFV.3SM-enchant-1SG.ACC several time.SG
  'The sea enchanted me several times.'

As with their imperfective forms, pluractionality interpretations are not possible for psych verbs derived from K-state roots. The only interpretation available for the psych verbs in (43) and (44) is that of a single, instantaneous emergence of the emotion denoted by the verb. The same is not true for psych verbs derived from D-state roots in their perfective forms. Iterative readings are readily available as shown in the following examples for both SubjExp verbs, see (45), and ObjExp verbs regardless of the animacy of the subject, see (46).

(45) a. ziʿil   kaḏā   marrah
       angry.PFV.3SM several time.SG
       'He became angry several times.'

     b. ḫāf-ū   ṯalāṯ marr-āt
        fear.PFV.3SM three time-PL.F
        'He became frightened three times.'

(46) a. zaʿʿal-nī   marrat-ayn
       angry.CAUS.PFV.3SM-1SG.ACC time-DUAL
       'He angered me twice.'

     b. al-jawwāl   narfaz-nī   kaḏā   marrah
        DET-mobile.SG annoy.PFV.3SM-1SG.ACC several time.SG
        'The mobile annoyed me several times.'

The interpretation of D-state rooted psych verbs in the perfective is that of a single instantaneous emergence of an emotion. Given proper adverbial modification, like *kaḏā marrah* 'several times', an iterative reading is supported. The pattern observed here suggests that the habitual and iterative reading available for D-state root verbs is not due to their inceptive aspectual nature. Otherwise an iterative reading would be possible with K-state verbs in their perfective forms since they too have inceptive aspect (see 4.2.4). The presence (or absence) of a habitual/iterative reading is indicative of a grammatically relevant distinction between K-states and D-states at the root level. The absence of an iterative reading for perfective K-state root psych verbs and its presence in perfective D-state

root psych verbs supports the claim made in Chapter 3 that K-state root verbs are inherent Kimian states while D-state roots are inherent inceptive Davidsonian events. Even though perfective morphology might coerce some K-state roots into an eventive reading which allows them to pass Maienborn's (2019) event tests (see 4.1.2), they still behave differently to D-state rooted verbs in some environments; the iterative being one of them. Other constructions that reveal a lexical distinction between the two stative roots psych verbs include agentive, dynamic and event frame constructions discussed later in (4.4).[81]

A final comment here concerns the boundedness or telicity presupposed with iterative readings. I previously mentioned that Lenci and Bertinetto (2000) posit that iterativity is bounded and is within the realm of perfectivity, which is typically assumed to be bounded (Binnick, 1991; Comrie, 1976). Biały (2005) also attributes the availability of an iterative reading in a subset of Polish ObjExp verbs to the fact that iterativity is inherently culminative, which allows an event to end and recur giving rise to an iterative reading. The iterative reading is present in the recurrent (or non-stative) subset of Polish ObjExp verbs, illustrated in (47a). It is not present with non-recurrent (or stative) ObjExp verbs, as seen in (47b).

(47) a. Wczoraj   Tomek zdenerwował Marię trzy razy
       'Yesterday Tom   angered-PERF Mary three times.'

   b. *Wczoraj Tomek zafascynował   Marię trzy razy
       'Yesterday Tom   fascinated-PERF Mary three times.'

                                             (Biały, 2005, p. 130)

Hence, Biały (2005) concludes that the episodic subset of Polish ObjExp verbs have a culmination point, i.e. they are telic. Biały's (2005) episodic subtype of ObjExp verb is parallel to BA's psych verbs of D-state roots which also have iterative readings in their perfective forms. However, I have repeatedly claimed that inceptive verbs, whether encoded by D-state root or by perfective morphology, have an atelic feature where a right-boundary (or a change of state) is not discerned. This is the topic of the next discussion.

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[81] See also Section 3.1.2 for lexical differences between the two roots in the general class of BA stative verbs.

4.2.2 Atelicity

One of the main arguments in this thesis follows those proposed by Marín and McNally (2011) and Rozwadowska (2003; 2006; 2012; 2020), among others (see 2.5 for review) where inceptive events are understood as an independent event type not accommodated in traditional event taxonomies due to their unique aspectual properties. One of these is that they are left-boundary events that are atelic. In other words, inceptive events do not support the BECOME operator, which entails a telic end point and a result state. This is argued to be true of BA inceptive psych verbs even in their perfective derivations where telic readings are expected (Mughazy 2005; 2015; Al-Aqarbeh and Al-Sarayreh, 2017).

This section reviews three aspectual tests with respect to BA data to investigate the above claims. The first diagnostic test is with durative (*for x time*) and terminal (*in x time*) adverbials. The second test relies on an expansion test that shows inceptives in their perfective form may be extended to present tense while right-boundary events like accomplishments and achievements cannot. The final test utilizes perfective/imperfective entailments that show again how perfective inceptive verbs may entail the imperfective whereas telic events do not.

4.2.2.1 Temporal adverbials

Temporal adverbials are often used to disambiguate psych verbs towards either an atelic state or a telic, change of state event. Typically, the *in*-adverbial is used to delineate an event and detect the presence of a telic end point, as illustrated in (48a) while the *for*-adverbial is normally compatible with atelic eventualities, (48b) (Krifka, 1989; Rothstein, 2004; de Swart, 2012; Filip, 2012).

 (48) a. John built a house in a year / *for a year.
        b. John walked for an hour/ *in an hour.

For-adverbials, when combined with telic eventualities, trigger a coercion and an iterative reading is obtained. The following example (49) is borrowed from Moens and Steedman (1988, p. 20) illustrating how a culminated event like *arrive* may be coerced into an iterative reading when used with a *for*-adverbial.

(49) John arrived late at work for several days.

The use of temporal adverbials differs across languages. In Polish, durative adverbials show mixed behaviour with atelic verbs. They are incompatible with canonical stative verbs, see example (50a), while being perfectly acceptable with activities, see (50b). Accomplishments and achievements are telic and only allow delimiting adverbials as illustrated in (50c).

(50) a. *Maria znała francuski przez dwa lata.
     'Mary knew French   for   two years.'

  b. Tomek biegł przez dwie godziny/*w dwie godziny
     'Tom   ran   for   two hours /in two hours.'

  c. Maria napisała list   *przez dwie godziny/ w dwie godziny
     'Mary wrote   a letter for   two hours   / in two   hours.'

                                                    (Biały, 2005, p. 111)

In BA, similar patterns are seen where *for/in*-adverbials are not felicitous with prototypical stative verbs in either their imperfective or perfective forms, see (51).

(51) a. *ti-ʿrif   a-ṭṭarīq   muddat sanah   / fī sāʿah
     IPFV.3SF-know DET-way while   year.SG / in hour.SG
     'She knows the way for a year / in an hour.'

  b. *ʿirif-it-ah   muddat sanah   / fī sāʿah
     know.PFV.3SF-3SM while   year.SG / in hour.SG
     'She knew him for a year/ in an hour.'

Activities are durative events and are shown to allow *for*-adverbial modification, as seen in (52).

(52) a. yi-jrī   sāʿah   / *fī sāʿah
     IPFV.3SM-run hour.SG /   in hour.SG
     'He runs for an hour /#in an hour.'

b. jarā   sāʿah   / *fī sāʿah
   run.PFV.3SM hour.SG / in hour.SG
   'He ran for an hour/ #in an hour.'

Accomplishments and achievements only allow delimiting adverbials in BA.[82] Durative adverbials are not felicitous with telic events in BA. The examples below illustrate how both perfective and imperfective forms of telic events prohibit durative adverbial modification in BA indicating the presence of a right-boundary.

(53) a. yi-fūz   fī sāʿah   / *muddat sāʿah   ACHIEVEMENT
      IPFV.3SM-win in hour.SG/ *while   hour.SG
      'He wins in an hour/ #for an hour.'

   b. fāz   fī sāʿah   / *muddat sāʿah   ACHIEVEMENT
      win.PFV.3SM in hour.SG/ *while hour.SG
      'He won in an hour/ #for an hour.'

   c. ti-qraʾ   al-kutub   fī t̲alāt̲at šuhūr / *t̲alāt̲at šuhūr   ACCOMPLISHMENT
      IPFV.3SF-read DET-book.PL in three month.PL/ *three month.PL
      'She read the books in three months/ #for three months.'

   d. qaraʾ-t   al-kutub   fī t̲alāt̲at šuhūr / *t̲alāt̲at šuhūr   ACCOMPLISHMENT
      read.PFV-1SG DET-book.PL in three month.PL/ * three month.PL
      'I read the books in three months/ #for three months.'

In sum, the general pattern of behaviour regarding temporal adverbial modification in the different event classes in BA is as follows: in the class of atelic eventualities, only activities allow *for*-adverbials while states prohibit them, and telic events only allow *in*-adverbials. Having established this baseline of expected behaviour, we turn to viewing which temporal adverbial psych verbs license in BA in an effort to discern their atelic aspectual nature.

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[82] The cumulativity and quantization of the nominal object affect telicity readings as is well documented. Quantized arguments, such as *cut two apples* or *drink a glass of milk* marks telicity, whereas a verb is atelic if it has an atelic object such as *apples* or *drink milk* (see e.g. Krifka 1992; 1998; Borik 2006). See Alrashed (2012) for the effects of definite objects on telicity in MSA. Note that I use telic objects for all verb types in my examples to diagnose for a telic reading.

Since unbounded states do not allow either durative or delimiting adverbials, it is not surprising to see the same restriction on using *for*/*in*-adverbials with psych verbs derived from K-state roots in their imperfective forms, as they are believed to represent unbounded states.

(54) a. *ʿalī yi-ḥubb   al-ʾaflām   fatrah   / fī sāʿah   SUBJEXP
         Ali   IPFV.3SM-love DET-movie.PL while.SG / in hour.SG
         'Ali loves movies for a while/ in an hour.'

      b. *yi-bsiṭ-nī   fatrah   ṭawīl-ah / fī sāʿah   OBJEXP
         IPFV.3SM-happy-1SG.ACC while.SF long-SF   / in hour.SG
         'He makes me happy for a long period of time/ in an hour.'

A different picture arises with inceptive psych verbs. Imperfective D-state psych verbs prohibit the use of delimiting adverbials and allow durative adverbials, the same pattern seen with imperfective activities in (52a).

(55) a. ʿalī yi-zʿal   b-i-ssāʿāt   / *fī sāʿah   SUBJEXP
         Ali IPFV.3SM-angry with-DET-hour.PL/ in hour.SG
         'Ali becomes angry for hours/ in an hour.'

      b. al-muškilah   ti-qliq-nī   sāʿāt   ṭawīl-ah/*fī sāʿah OBJEXP
         DET-problem.SGF IPFV.3SF-worry.CAUS-1SG.ACC hour.PLF long.F / in hour.SG
         'The problem worries me for long hours/ in an hour.'

In their perfective forms, psych verbs have inceptive aspect and should also pattern like D-state imperfective verbs where durative adverbials are allowed while delimiting adverbials are barred, suggesting lack of a telic boundary. The following examples illustrate this pattern for perfective SubjExp verbs derived from K-state roots (56a) and D-state roots (56b), and perfective ObjExp verbs derived from K-state roots (57a) and D-state roots (57b).

(56) a. firiḥ-ū   bahā   kam   sāʿah   / *fī sāʿah   K-STATE SUBJEXP
         please.PFV-3PL with-3SGF several hour.SG /   in hour.SG
         'They were pleased with it for a few hours/ # in an hour.'

b. ziʿil   min ʾak̠-ūh   sinīn   ṭiwīlah / *fī sāʿah   D-STATE SUBJEXP
angry.PFV.3SM from brother-3SGM year.PLF long.F /   in hour.SG
'He became angry with his brother for many years/ # in an hour.'

(57) a. al-ʾanwār   saḥara-t-hum   yumayn / *fī sāʿah   K-STATE OBJEXP
DET-light.PLF enchant-3SGF-3PL day.DUAL/   in hour.SG
'The lights enchanted them for two days/ # in an hour.'

b. ad-dirāsah   ṭaffaš-at   al-ʾawlād   fatrah   / *fī sāʿah D-STATE OBJEXP
DET-study.SGF bother.PFV.CAUS-3SGF DET-child.PL while.SG/   in hour.SG
'School bothered the children for a while/ # in an hour.'

What is revealed in the data examined with respect to temporal adverbials is that psych verbs of imperfective K-state roots pattern like unbounded states whereas inceptive psych verbs, represented by psych verbs in their perfective forms and imperfective D-state psych verbs, pattern like activities. The position held so far is that the inceptive aspect is unique and cannot be ascribed to any traditional aspectual class. The results of this test, which equate inceptives with activities, seems contradictory. However, a deeper consideration shows a distinction between the two classes. The time span that is modified by the temporal adverbial is different between the two verb types in their perfective forms. In their perfective forms, activities denote right-boundary events while inceptives denote left-boundary events. This is evidenced by the timeline that is modified by the durative adverbial. Consider the examples in the following of an activity and an inceptive verb in their perfective forms modified with a durative adverbial.

(58) a. d̠ākar-t   sāʿatayn   ACTIVITY
study.PFV-1SG.NOM hour.DUAL
'I studied for two hours.'

b. ziʿil-t   sāʿatayn   INCEPTIVE STATE
angry.PFV-1SG.NOM hour.DUAL
'I became angry for two hours.'

The time modified by *sāʿatayn* 'two hours' in the two event types is different. For the activity, in (58a), the time modified by the adverbial is the duration of the studying event before it came to an end, i.e. the studying activity lasted for two hours before termination. Conversely, in the inceptive

event, in (58b), the time modified is the duration of the emotion after the initial onset of the state, i.e. after initiation, the anger lasted for two hours. The contrast between the two can be schematized in the following:

(59) a. activity event:　---------------------]
　　　　　　　　　　　　　sāʿatayn 'two hours'

　　　b. inceptive event:　[---------------------
　　　　　　　　　　　　　　sāʿatayn 'two hours'

The above illustration is similar to the aspectual contrast drawn by Rozwadowska (2003, p. 872) (see (60) below; repeated from (81) in (2.5.4)), where she argues that inceptive states are in symmetrical aspectual contrast to right-boundary events represented by activities and accomplishments in Slavic languages.

(60) Basic aspectual contrast:
　　a. --|
　　　　　　　　　activity　　　　　culmination (terminal point)
　　　　　　　　　　　　　　　　　　(change)
　　b. |─────────────────────────
　　　　initial point [inception]　　　state
　　　　(change)

In later work, Rozwadowska (2012; 2020) follows Marín and McNally (2011) and argues against a *change* analysis for inceptive events, largely due to the ambiguity of the term in the literature where change of state is associated with telicity which is not present in inceptive events (see 2.5). This is also the argument I adopt in this thesis. The data examined so far confirms that the *in*-adverbials readily available for BA telic events are not supported with inceptive psych verbs. Hence, this test shows that the lack of a detectable telic point indicates that a BECOME operator typically associated with a change of state, telic reading is not available for inceptive events.

To recapitulate, temporal modification has confirmed that K-state psych verbs in their imperfective forms may be classified as unbounded states and all inceptive psych verbs only accept durative adverbials but are not activities.

4.2.2.2 Expansion test

In a previous discussion, we briefly introduced how the expansion test allows for the continuation of the eventuality denoted by a stative verb in its perfective form into the present tense (see 3.1.2.2). Such a reading is not possible with other event types like activities, accomplishments, and achievements due to a right-boundary culminative point assigned by the perfective for these event types, see (60) above. As a reminder, the expansion test is when a present tense conjunct clause is utilized to extend the temporal boundaries of an eventuality in the past to the present moment.[83] The following examples of an expansion phrase are repeated from (30) in (3.1.2.2). As indicated, achievement and accomplishment verbs presuppose a telic end point and may not be expanded whereas stative verbs have no such supposition and thus may expand to present tense via the expansion phrase.

(61) a. *ʿumar fāz   w   lissā yi-fūz   ACHIEVEMENT
         Omar   win.PFV.3SM CONJ still IPFV.3SM-win
         'Omar won and he is still winning.'

     b. *ʿumar katab   al-ḳiṭāb   w   lissā yi-ktub-ah   ACCOMPLISHMENT
         Omar   write.PFV.3SM DET-book.SG CONJ still   IPFV.3SM
         'Omar wrote the book and he is still writing it.'

     c. ʿumar ʿirif   al-jawāb   w   lissā yi-ʿrif-ah   STATE
         Omar know.PFV.3SM DET-answer.SM CONJ still IPFV.3SM-know-3SGM
         'Omar came to know the answer and he still knows it.'

This is an important test used to diagnose the presence of atelic readings for psych verbs in their perfective forms as representatives of inceptive events in BA. This is also a test that is used for the native speaker experimental study presented in Chapter 5, where the atelic and punctual properties of psych verbs in their perfective forms are investigated. For this reason, some unexpected readings arise with the expansion phrase when using the imperfective verb form in the conjunct clause that

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[83] See Mansouri (2016) for the application of this test, and various others, to MSA statives.

may lead to confusion and need addressing. Consider the examples in the following where an activity (62a), and an achievement (62b) verb allow an expansion phrase, contrary to expectations.

(62) a. ʿumar mašā   fī al-ḥadīqah w   lissā yi-mšī   hināk
        Omar walk.PFV.3SM in DET-park.SF CONJ still   IPFV.3SM-walk there
        'Omar walked in the park and is still walking.'

    b. ʿumar fāz   fī al-luʿbah   w   lissā yi-fūz   fī-hā
        Omar win.PFV.3SM in DET-game.SF CONJ still   IPFV.3SM-win in-3SF
        'Omar won in the game and he still wins in it.'

I suspect that because the imperfective form in Arabic is inherently compatible with habitual readings (see e.g. Hallman, 2015), the use of the imperfective verb form in the expansion clause is allowed under a reading that some activity began and ended but continues to happen periodically until the present time. The expansion phrase here does not refer to the same instance of the event encoded by the verb in the matrix clause, rather the event in the expansion phrase indicates some other instance of the event.

In order to avoid getting false positives in the experimental test described in Chapter 5, a workaround is found using the active participle (AP) form of the matrix verb in the expansion clause. In Gulf Arabic, AP predicates have stative values (Eades and Persson, 2013). Since inceptive verbs are assumed to be instantaneous onsets of atelic states, then the AP derivation of the same root in the expansion phrase should serve to confirm the existence of the state denoted by the verb in the matrix clause. Using this modified expansion test *still + AP*, we find that perfective events are unacceptable in the construction as seen in (63), where they were previously allowed with the ambiguous imperfective expansion phrase (see (62) above).

(63) a. *ʿumar mašā   fī al-ḥadīq-ah w   lissā māšī   hināk
        Omar   walk.PFV.3SM in DET-park.SF CONJ still walk.AP.3SM there
        'Omar walked in the park and is still walking.'

    b. *ʿumar fāz   fī al-luʿbah   w   lissā fāyiz   fī-hā
        Omar   win.PFV.3SM in DET-game.SF CONJ still win.AP.3SG in-3SF
        'Omar won in the game and he is still winning in it.'

Of course, inceptive verbs in the perfective form are allowed with *still + AP* as predicted. To illustrate, in (64a), the expansion phrase asserts that the same eventuality denoted by the K-state SubjExp verb in the matrix clause continues to present time, so I fell in love with her and the expansion phrase asserts that the same state continues to the present. The same is true for the examples in (65), where the same state initiated by the ObjExp matrix verb is understood to continue to present time when a *still + AP* expansion phrase is used.

(64) a. ḥabbī-ta-hā   wa   lissā ḥābb-at-hā   K-state SubjExp
   love.PFV-1SG.NOM-3SGF CONJ still love.AP-1SG-3SGF
   'I fell in love with her, and I still love her.'

   b. ziʿil   wa   lissā zaʿlān[84]   D-state SubjExp
   angry.PFV.3SM CONJ still angry.AP.3SGM
   'He became angry, and he is still angry.'

(65) a. ʿumar ḥabbab-nī   fī al-bissah wa   K-state ObjExp
   Omar love.PFV.3SM.CAUSE-1SG.ACC in DET-cat.SF CONJ
   lissā ḥābb-at-hā
   still love.AP-1SG.NOM-3SGF
   'Omar made me love the cat, and I still love it.'

   b. ʾaqlaq-nī   wa   lissā qalqān   D-state ObjExp
   worry.CAUS.PFV.3SM-1SG.ACC CONJ still worry.AP.3SM
   'He worried me, and I am still worried.'

The expansion test using a *still + AP* adjunct clause is successful at unambiguously detecting the presence of a culmination point beyond which an event cannot be perceived to continue. The test contrasts between right-boundary events (like accomplishments, achievements, and activities) and inceptives in their perfective forms. Where the former verb type is bounded and fails the expansion test, the latter is atelic and passes. Hence, the expansion test is one more test alongside temporal modification that demonstrates the atelic nature of BA inceptive verbs.

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[84] The *faʿlān* form, illustrated in *zaʿlān* 'angry' in (64b) and *qalqān* 'worried' in (65b), is argued to be an active participle denoting exaggeration. See Ibraheem (2022).

4.2.2.3 Perfective/imperfective entailments

One of the tests used to detect the presence of a right-boundary relies on perfective/imperfective pairs (see Biały, 2005 and Rozwadowska, 2003; 2012 for details). The logic behind this test relies on the fact that the perfective entails a culmination that the imperfective does not: if an imperfective can be entailed from the perfective variant of the same verb then there is no perceived culmination to that event denoted by the verb. In a way this test is similar to the expansion test where the presupposition of a culminative boundary of the perfective is tested. In the expansion test the same event denoted by the verb is extended to present tense using an adjunct phrase, and the perfective/imperfective entailment test diagnoses the accuracy of an imperfective entailment from a perfective event.

Rozwadowska (2012) (see also Biały, 2005) finds that Polish ObjExp verbs have entailment patterns that indicate atelic readings contrary to typical telic verbs like accomplishments. In Polish, Rozwadowska (2012) explains that a perfective accomplishment does not entail its imperfective variant, as shown in (66a), and a negative entailment necessarily obtains as shown in (66b). Both sentences in (66) are logically equivalent. The fact that John wrote a letter necessarily means that he is no longer writing that letter. Once a letter is complete it cannot further undergo a process of *write*.

(66) a. Janek napisał ten list   *Does not entail*   Janek pisze list
        'John wrote that letter.'   'John is writing that letter.'

     b. Janek napisał ten list   *Necessarily* e*ntails*   Janek już nie pisze tego listu
        'John write that letter.'   'John is not writing that letter any longer.'

(Rozwadowska, 2012, p. 540)

In contrast, a negative inference is possible but not necessary with ObjExp verbs as shown in (67). While John angered or irritated Sophie at one time, it is not necessarily true that he no longer does so. There remains a possibility that he still angers or irritates her now.

(67) Janek zdenerwował Zosię
'John angered/irritated Sophie.'

Does not necessarily entail

Janek już nie denerwuje Zosi
'John does not anger/irritate Sophie any longer.'

(Rozwadowska, 2012, p. 540)

This suggests that ObjExp verbs lack the logical properties of causative telic events, which are complex events made of durative activities and a culmination (Rozwadowska, 2012, p. 541). The fact that the negative entailment is not necessary with ObjExp verbs can be taken as evidence that perfectivity does not entail telicity in this class of verbs.

BA exhibits entailment patterns like those seen for Polish accomplishment and ObjExp verbs. The accomplishment verb entailments are reviewed first and are demonstrated in the perfective/imperfective pairs seen in the following examples. The perfective form of *šāf* 'watch' does not entail the imperfective *yišūf* 'is watching', (68a), and a negative entailment is necessary as seen in (68b). If he watched the movie then the event is complete and he cannot be understood to still be watching it; on the contrary, a negative entailment of *he is no longer watching the movie* is obligatory.

(68) a. šāf   al-film   *Does not entail*   yi-šūf   al-film
     watch.PFV.3SM DET-film   IPFV.3SM-watch DET-film
     'He watched the movie.'   'He is watching the movie.'

   b. šāf   al-film   *Necessarily entails*   mā ʿād   yi-šūf   al-film
     watch.PFV.3SM DET-film   NEG longer IPFV.3SM-watch DET-film
     'He watched the movie.'   'He is no longer watching the movie.'

Neither of the entailment patterns illustrated for *šaf* in (68) hold for BA psych verbs. The perfective form does not necessarily **not** entail the imperfective, as in (69a), nor does it necessarily have negative entailments, as in (69b). That he became angry once may or may not entail that he becomes angry now.

(69) a. ziʿil   *Does not necessarily entail*   yi-zʿal
   angry.PFV.3SM   IPFV.3SM-angry
   'He became angry.'   'He becomes angry.'

  b. ziʿil   *Does not necessarily entail*   mā ʿād   yi-zʿal
   angry.PFV.3SM   NEG longer IPFV.3SM-angry
   'He became angry.'   'He no longer becomes angry.'

The same entailments are seen for D-state ObjExp verbs where the imperfective entailment (70a) and the negative entailment (70b) are supported but not necessary. If he frightened me one time it does not necessarily mean he still frightens me, nor does it necessarily mean that he does not.

(70) a. ḳawwaf-nī   *Does not necessarily entail*   yi-ḳawwif-nī
   frighten.PFV.3SM.CAUS-1SG.ACC   IPFV.3SM-frighten.CAUS-1SG.ACC
   'He frightened me.'   'He frightens me.'

  b. ḳawwaf-nī   *Does not necessarily entail*   mā ʿād   yi-ḳawwif-nī
   frighten.PFV.3SM.CAUS-1SG.ACC   NEG longer IPFV.3SM-frighten.CAUS-
   'He frightened me.'   1SG.ACC
                 'He no longer frightens me.'

The same pattern is seen with SubjExp verbs and ObjExp verbs derived from K-state roots, shown in (71) and (72) respectively. In both examples, an imperfective is not necessarily entailed by the perfective form, nor is a negative entailment necessary. Whether the event continues or not is dependent on context and world information.

(71) a. kirih-t-ah   *Does not necessarily entail*   ʾa-krah-ah
   hate.PFV-1SG.NOM-3SM.   IPFV.1SG-hate-3sm
   'I hated it.'   'I hate it.'

  b. kirih-t-ah   *Does not necessarily entail*   mā ʿād   ʾa-krahah
   hate.CAUS.PFV-1SG.NOM-3SM   NEG longer IPFV.1SG-hate-3sm
   'I hated it.'   'I no longer hate it.'

(72) a. ʿa-jab-nī   *Does not necessarily entail*   yi-ʿjib-nī
   CAUS.3SM-please.PFV-1SG.ACC   IPFV.3SM-please.CAUS-1SG.ACC
   'He pleased me.'   'He pleases me.'

b. ʿa-jab-nī   *Does not necessarily entail*   mā ʿād   yi-ʿjib-nī
CAUS.3SM-please.PFV-1SG.ACC   NEG longer IPFV.3SM-please.CAUS-
'He pleased me.'   1SG.ACC
                                                    'He no longer pleases me.'

In sum, the imperfective entailment patterns of psych verbs in their perfective forms differ from the imperfective entailments of accomplishments which represent canonical change of state verbs. BA data supports Rozwadowska's (2012) claim that the logical properties of ObjExp psych verbs differ from canonical causative verbs which entail an activity of some duration followed by a culmination. BA psych verbs in their perfective forms do not entail a telic end point as evidenced by the entailments seen above.

In conclusion, this section 4.2.2 investigated whether a telic endpoint could be discerned for BA psych verbs. The application of several tests has shown that BA psych verbs are atelic. The diagnostics used to prove this claim are the incompatibility with delimiting temporal adverbials, support of expansion phrases, and the imperfective entailments discussed above.

4.2.3 Punctuality

As a reminder, BA psych verbs are argued to split into two groups of unbounded states and inceptive states. Unbounded states are canonical states which are durative and do not have either left or right boundaries. Inceptive states are argued to be a distinctive class of verbs that have atelic and punctual onset features. The previous section 4.2.2 investigated the atelic aspectual property, and this section addresses the punctual feature. In the following discussion, the punctual property inherent to inceptive verbs is diagnosed with different adverbials. The manner adverbial *bišwayš* 'slowly' is used to diagnose non-dynamicity due to either punctuality or stativity. Additionally, the punctual adverbial *fajʾah* 'suddenly' is found useful at detecting punctual eventualities.

4.2.3.1 *bišwayš* 'slowly'

The first test used to establish the punctual nature of inceptive psych verbs is borrowed from Marín and McNally (2011) who use the manner adverb *lentamente* 'slowly' to diagnose the non-

dynamicity of Spanish Reflexive Psych Verbs (SRPVs). Recall, Marín and McNally (2011) split SRPVs into a punctual *enfadarse* class and a non-punctual *aburrirse* class (see 2.5.3). The main claim presented in their work is that the *enfadarse* class is non-dynamic because they are punctual, whereas the *aburrirse* class is non-dynamic because they are stative. Hence, both SRPVs are predicted to not accept the adverbal *lentamente* 'slowly' which is only supported by eventualities that denote some development over time. Spanish dynamic verbs are compatible with *lentamente* 'slowly' as exemplified in (73a). In contrast, stative verbs do not accept modification with *lentamente* 'slowly', as seen in (73b). Punctual events also do not allow *lentamente* 'slowly' to describe the speed with which the event takes place, but rather the speed of some ancillary event (Marín and McNally, 2011, p. 481), see (73c). The adverb *lentamente* 'slowly' in (73c) describes the speed of the rain falling and not the speed at which its beginning takes place.

(73) a. Juan camina lentamente
     Juan walks   slowly
     'Juan walks slowly.'

   b. *Juan detesta las acelgas   lentamente
     Juan   hates   the Swiss chard slowly
     [Juan hates Swiss chard slowly.] (Translation my own)

   c. Empezó a llover lentamente
     began   to rain   slowly
     'It began to rain slowly.'

                                     (Marín and McNally, 2011, pp. 480-481)

Importantly, Marín and McNally (2011) find that SRPVs do not allow *lentamente* 'slowly' modification on a reading where the adverb describes the speed of how the psychological state progresses. Of course, the *aburrirse* class of verbs, in (74a), do not accept such modification because they are stative and lack internal progress, while the *enfadarse* class of verbs, seen in (74a), block such modification because they are punctual.

(74) a. *Juan se aburre/se obsesiona/se preocupa lentamente
     Juan SE bores/ SE obsesses / SE worry   slowly

b. *Juan se asusta   /se enfada /se sorprende lentamente
Juan SE frightens/ SE angers/ SE surprises slowly

The punctual *enfadarse* class is equivalent to BA inceptive psych verbs, identified by both D-state roots and perfective morphology, while the non-punctual *aburrirse* class are similar to BA K-state root verbs in the imperfective form.[85] Following Marín and McNally's argument it should not be possible to allow *bišwayš* 'slowly' for BA psych verbs because they are either punctual inceptives or statives. First, we examine the data of how this modifier performs with canonical durative dynamic verbs (75), states (76), and punctual verbs (77) in BA in both their (im)perfective forms. Like the Spanish data seen above, only durative dynamic verbs allow modification with *bišwayš* 'slowly', while neither states nor punctual predicates support this modifier.

(75) a. qaraʾ   al-kitāb   bišwayš   DURATIVE VERB
    read.PFV.3SM DET-book slowly
    'He read the book slowly.'

b. yi-sūq   bišwayš
    IPFV.3SM-drive slowly
    'He drives slowly.'

(76) a. *ʿirif   al-ḥall   bišwayš   STATIVE VERB
    know.PFV.3SM DET-solution slowly
    'He knew the solution slowly.'

b. *yi-šbah   ʾaḵ-ūh   bišwayš
    IPFV.3SM-resemble brother-3SM slowly
    'He resembles his brother slowly.'

(77) a. *kaḥḥ   bišwayš   PUNCTUAL VERB
    cough.PFV.3SM slowly
    'He coughed slowly.'

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[85] It should be noted that Marín and McNally (2011) claim that all Spanish reflexive psych verbs are inceptive verbs (they use the term inchoative, see (2.5.3)), including the *aburrirse* class. This means that even though the *aburrirse* class is stative, a left-boundary is detected. Hence, I equate psych verbs derived from K-state roots in their imperfective forms to the *aburrirse* class only in terms of their stative quality for this discussion.

b. *yi-wṣal　　　bišwayš
　　IPFV.3SM-arrive slowly
　　'He arrives slowly.'

The argument presented here is that stative psych verbs derived from K-state roots in their imperfective forms should not allow modification with *bišwayš* 'slowly' because they are non-dynamic states that would generally prohibit manner adverbials due to the lack of an internal structure that may be modified. In contrast, inceptive psych verbs, verbs derived from D-state roots or into perfective forms, would not allow *bišwayš* 'slowly' due to their punctual nature.

As predicted, the examples in (78) show that the imperfective K-state root SubjExp verb rejects modification with *bišwayš* 'slowly'.

(78) a. *ti-ḥsid　　　ʾaḵū-ha　　　bišwayš
　　　　IPFV.3SF-envy brother-3SF slowly
　　　　'She envies her brother slowly.'

b. *yi-krah　　　as-samak bišwayš
　　IPFV.3SM-hate DET-fish　slowly
　　'He hates fish slowly.'

The following examples are of inceptive psych verbs that are also shown to prohibit *bišwayš* 'slowly'. Example (79) illustrates inceptive psych verbs derived from D-state roots, and (80) shows K-state root psych verbs in their perfective forms, all modified with *bišwayš*. In all their derivations, inceptive psych verbs disallow *bišwayš* on a reading which describes the slow onset of the emotion denoted by the verb.

(79) a. *yi-qlaq　　　/ ziʿil-it　　　　　bišwayš　　　　　D-STATE ROOT SUBJEXP
　　　　IPFV.3SM-worry / slowly angry.PFV-3SF slowly
　　　　'He becomes worried slowly.'
　　　　'She became angry slowly.'

b. *yi-ṭaffaš-nī   / ḳawwaf-ah   D-STATE ROOT OBJEXP
   IPFV.3SM-bother.CAUS-1SG.ACC / frighten.PFV.3SM.CAUS-3SM
   bišwayš
   slowly
   'He bothers me slowly.'
   'He frightened him slowly.'

(80) a. *ḥabba-hā   / ʾištāq-ū   l-ah   bišwayš   K-STATE ROOT SUBJEXP
      love.PFV.3SM-3SF / miss.PFV-3PL for-3SM slowly
      'He fell in love with her slowly.'
      'They missed him slowly.'

   b. *ʿa-ʿjab-nī   / saḫar-at-hum   K-STATE ROOT OBJEXP
      CAUS.3SM-please.PFV-1SG.ACC / enchant.PFV-3SF-3PL
      bišwayš
      slowly
      'He pleased me slowly.'
      'She enchanted them slowly.'

Considering that inceptive psych verbs should allow manner adverbial modification (see 4.1 for details), their prohibition of *bišwayš* 'slowly' is significant, and taken to indicate the presence of a punctual property. The manner adverbial *bisurʿah* 'quickly' was shown to be perfectly acceptable with inceptive psych verbs on a reading that the onset of the emotion denoted by the verb was very quick, almost instantaneous. Any greater duration of time used to describe the onset of the state is infelicitous as seen with the use of *bišwayš* 'slowly' above. This is not surprising if we accept that inceptive verbs are punctual and thus only allow punctual adverbials.

In sum, the restriction seen with the use of the manner adverbial *bišwayš* 'slowly' on all BA psych verbs supports their classification as non-dynamic verbs. Inceptive psych verbs are non-dynamic because they are punctual, while psych verbs derived from K-state roots in the imperfective form are non-dynamic because they are states. This finding supports data observed by Marín and McNally (2011) for Spanish SRPVs which split into punctual and non-punctual subclasses.

4.2.3.2 *fajʾah* 'suddenly'

The second diagnostic used as evidence for the punctuality of inceptive psych verbs comes from their compatibility with the punctual adverb *fajʾah* 'suddenly'. The *suddenly* adverbial suggests inceptive events and is usually incompatible with durativity (Smith, 1997, p. 25). Therefore, when used with stative verbs, should *suddenly* be acceptable at all, then it can only mean the sudden beginning of a state. In the literature it is referred to as a coerced inchoative (i.e. inceptive) meaning (Smith, 1997b; Koev, 2017), or as an achievement use of a state denoting the beginning of a state (Mittwoch, 2019), see examples in (81).

(81) a. He suddenly/quickly realized his mistake.   (Koev, 2017, p. 28)
    b. Suddenly I knew/realized/remembered …   (Mittwoch, 2019, p. 47)

This is a test utilized in the experimental study to test for the presence of a punctual feature for BA perfective psych verbs (see 5.2). Let us examine how *fajʾah* performs with the different (non-psych) event types in BA in their imperfective forms first. Consider the examples in (82). The punctual adverbial is allowed for punctual achievements so the acceptability of (82a) is not unusual. However, of all the durative verbs in (82b-d), only the stative verb supports the adverbial *fajʾah* 'suddenly' albeit with a modification of using an overt inchoative verb *ṣār* 'become.PFV'.

(82) a. fajʾah   yu-ḍrub-hum   ACHIEVEMENT
      suddenly IPFV.3SM-hit-3PL
      'He suddenly hits them.'

    b. (fajʾah)   ṣār   yi-ʿrif   yi-ḥill   STATE
      (suddenly) become.PFV.3SM IPFV.3SM-know IPFV.3SM-answer
      'He suddenly began to know how to answer.'

    c. (*fajʾah)   ṣār   yi-bnī   bayt   ACCOMPLISHMENT
      (suddenly) become.PFV.3SM IPFV.3SM-build house.SG
      'He suddenly began building a house.'

    d. (*fajʾah)   ṣār   yi-mšī   fī al-ḥadīqah   ACTIVITY
      (suddenly) become.PFV.3SM IPFV.3SM-walk in DET-garden.SG
      'He suddenly began walking in the garden.'

Allowing that inceptive verbs are punctual, and that the semantics of some unbounded states permit inceptive readings evidenced by allowing perfective derivations (see 3.1.2.2), then the obligatory presence of *ṣār* 'become.PFV' in (82b) is not surprising since the unbounded state requires some form of morphosyntactic indicator of a left-boundary if a punctual adverbial is to be allowed. Thus, unbounded states allow modification with *fajʾah* only if an inceptive reading is present which is encoded either via perfective morphology or the inchoative verb *ṣār*.[86] The meaning of (82b) is that of a punctual onset of knowing how to answer something. Interestingly, accomplishments and activities do not support *fajʾah*, not even with an overt inchoative verb *ṣār*. This suggests that a punctual reading is not possible with these event types, as opposed to the stative verb provided certain conditions.

Additionally, the adverbial *fajʾah* displays a contrast between punctual and non-punctual verbs in the perfective form. The perfective is viewed as punctual regardless of whether a verb is durative or not (Ingham, 1994; Smith, 1997), therefore modification with *fajʾah* is expected to be possible for all event types. Yet, this is not the case in BA. Only the stative and achievement verb types support *fajʾah*, as shown in the following examples.

(83) a. fajʾah   ṭāḥ   ACHIEVEMENT
        suddenly fall.PFV.23M
        'He suddenly fell.'

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[86] Interestingly, K-state root verbs that do not allow perfective morphology also do not allow modification with *fajaʾah* 'suddenly' or *ṣār* 'become.PFV' in their imperfective form. Take the verb *yidānī* 'tolerate' for example. It cannot be used in the perfective form, see (i) below, nor does it allow punctual/inceptive modification in its imperfective form, see (ii).

> i. *dānā   jār-ah
>   tolerate.PFV.3SM neighbour.SG-3SM
>   'He tolerated his neighbor.'

> ii. (*fajʾah) (*ṣār)   yi-dānī   jār-ah
>   suddenly become.PFV.3SM IPFV.3SM-tolerate neighbour.SG-3SM
>   'He suddenly began tolerating his neighbor.'

I take this as further evidence that supports the claim that a group of K-state root verbs do not allow inceptive readings. Further investigation of such verbs is beyond the scope of this study. The focus here is only on those K-state roots that derive perfective forms.

b. fajʾah   ʿirif   ar-rijāl   STATE
   suddenly know.PFV.3SM DET-man
   'He suddenly knew the man.'

c. *fajʾah   liʿib   ACTIVITY
   suddenly play.PFV.3SM
   'He suddenly played.'

d. *fajʾah   qaraʾ   al-kitāb   ACCOMPLISHMENT
   suddenly read.PFV.3SM DET-book
   'He suddenly read the book.'

It appears that *fajʾah* is a strong indicator of punctual/durative lexical features in BA even when such features are altered via morphosyntax (e.g. perfective morphology).[87] Since I argue the perfective form encodes a punctual inceptive reading on the lexical stative verb, we find that the support of an inchoative verb *ṣār* 'become.PFV' is not required with the perfective as it was with the imperfective above.

As for the behaviour of BA psych verbs regarding modification with *fajʾah*, with those verbs derived from K-state roots, we expect to see patterns similar to those observed with the canonical states above. For psych verbs derived from D-state roots, since they are argued to be punctual events, then they are likely to pattern like achievements and readily allow *fajʾah*. The following discussion examines these assumptions.

K-state root psych verbs in their imperfective forms, seen in (84), require the presence of the inchoative verb *ṣār* for felicitousness. This is similar to the behaviour seen with canonical states earlier when modified with *fajʾah*. In contrast, their perfective forms, seen in (85), readily support *fajʾah* without *ṣār*.

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[87] It is interesting that perfective morphology alters the aspectual features of verbs but does not override some core properties. For example, perfective states are interpreted as inceptives but retain their inherent stative quality in not allowing iterative readings, or agents (see 4.2.1 and 4.4). Here also, perfective morphology assigns punctual readings on all verbs (Ingham, 1994; Smith, 1997), but inherently durative verbs like accomplishments and activities do not allow punctual modification in their perfective forms. It makes the punctual aspectual shift witnessed for perfective states all the more intriguing. This suggests that at least some aspectual features are encoded at the root level in BA and are highly significant in aspectual derivations.

(84) a. fajʾah *(ṣār-at)   tu-ḥubb   a-ddirāsah   SUBJEXP
       suddenly become.PFV-3SF IPFV.3SF-love DET-study
       'Suddenly, she began to love studying.'

   b. fajʾah *(ṣār-at)   ti-ʿjib-nī   OBJEXP
       suddenly become.PFV-1SF IPFV.3SF-please.CAUS-1SG.ACC
       'Suddenly, she began to please me.'

(85) a. fajʾah   kirih-ah   SUBJEXP
       suddenly hate.PFV.3SM-3SM
       'He suddenly hated it.'

   b. fajʾah   jannan-hum   al-walad   OBJEXP
       suddenly crazy.PFV.3SM-3PL DET-boy.SG
       'Suddenly, the boy drove them crazy.'

The examples above suggest that for those K-state roots that allow an inceptive reading, modification with *fajʾah* 'suddenly' is acceptable which gives rise to a punctual inceptive reading as expected of a stative verb when combined with this modifier (Mittwoch, 2019).

In the case of D-state root psych verbs, the examples show that they readily accept modification with *fajʾah* in both SubjExp and ObjExp forms in both imperfective and perfective. The following examples illustrate how D-state root psych verbs are compatible with the punctual adverbial *fajʾah* as predicted. To illustrate, the verb in (86a) carries the meaning that the subject becomes angry or afraid and the presence of the punctual modifier describes the instantaneous nature of the event.

(86) a. fajʾah   yi-zʿal   / yi-ḵāf   SUBJEXP
       suddenly IPFV.3SM-angry/ IPFV.3SF-fear
       'Suddenly, he becomes angry/afraid.'

   b. fajʾah   ziʿil   / ḵāf
       suddenly angry.PFV.3SM / fear.PFV.3SF
       'Suddenly he became angry/ afraid.'

(87) a. fajʾah   yi-qhar-nī   / yi-narfiz-nī   OBJEXP
       suddenly IPFV.3SM-frustrate-1SG.ACC / IPFV.3SM-irritate-1SG.ACC
       'Suddenly, he frustrates/ irritates me.'

   b. fajʾah   zaʿʿalnī   / narfaz-nī
       suddenly anger.CAUS PFV.3SM-1SG.ACC / irritate.PFV-1SG.ACC
       'Suddenly, he angered/ irritated me.'

In sum, the adverbial *fajʾah* is a successful diagnostic for distinguishing between punctual and non-punctual verbs in BA. It is also taken as a diagnostic for the presence of a left-boundary that is inherent in psych verbs of D-state roots and encoded via perfective morphology in all psych verbs. This is evidenced in how psych verbs derived from D-state roots readily allow *fajʾah* without the need for an overt inchoative verb (necessary for psych verbs derived from K-state roots in their imperfective form). The inceptive denoting property of the *fajʾah* diagnostic leads to the next section, where time reference adverbials can also detect the presence of a left-boundary for D-state rooted verbs.

4.2.4 Detecting a left-boundary

The adverbial *fajʾah* 'suddenly', alongside detecting punctual readings, is shown to diagnose an inceptive property inherent to verbs derived from D-state roots that is not present in verbs of K-state roots. Another piece of evidence that supports the inceptive reading present in D-state root psych verbs as well as assigned by the perfective form comes from interpretations with reference time adverbials (see 2.5.2 and 3.1.2). This is a diagnostic also used by Marín and McNally (2011), who use it to establish the inceptive nature of all Spanish Reflexive Psych Verbs (SRPVs). Marín and McNally (2011, p. 488) use predicate interpretations with different types of reference time adverbials such as *hace unos días* 'a few days ago', *mañana* 'tomorrow', and quantificational adverbials like *siempre que* 'whenever', to diagnose an inceptive reading. The same method is used to detect inceptive readings in BA psych verbs.

This test is based on the following logic. Reference time adverbials provide an interval of time for the interpretation of the clause they modifiy (Moens and Steedman, 1988). Stative predicates are understood in a such way that the interval of time over which the state holds can include the

reference time interval (Marín and McNally, 2011, p. 488). In the examples in (88), Moens and Steedman (1988, pp. 23-24) explain that the *when*-clause defines a focused temporal referent (called a nucleus) of some process that leads up to some culmination. The reference time of the main clause has to be situated within the nucleus for eventive predicates, whereas stative predicates merely indicate that a state holds at the time of culmination.

(88)   a. When they built that bridge, I was still a young lad.
       b. When Pete came in, I knew that something was wrong.

<div align="right">(Moens and Steedman, 1988, p. 24)</div>

In (88a), the stative verb in the main clause indicates that the state of being young held at the time the bridge was built. There is no causal or contingent relation between the *when*-clause and the stative predicate. However, in (88b), the stative predicate in the main clause receives an eventive interpretation due to the contingency relation between the two events, and the stative predicate then obligatorily refers to the onset of a state. Only when Pete came in did the subject come into the state of knowing something was wrong.

It is precisely this distinction that Marín and McNally (2011) observe for inchoative (i.e. inceptive) SRPVs that separates them from non-inchoative *estar* + past participle verbs. In (89a), there is a quantified relation between Ana having exams and the onset of her being worried; she begins to worry every time she has an exam (Marín and McNally, 2011, 488). In (89b), the non-inchoative predicate is infelicitous because the sentence tries to establish a pragmatically unlikely generalization where it coincides that Ana is in a state of worry every time she has an exam (Marín and McNally, 2011, 489).

(89)   a. Siempre que Ana tiene un examen, se preocupa mucho
          whenever   Ana has an exam,   SE worries   very much
          'Whenever Ana has an exam, she gets very worried.'

       b. ??Siempre que Ana tiene un examen, está muy preocupada
          whenever   Anan has an exam,   is   very worried
          'Whenever Ana has an exam, she is very worried.'

<div align="right">(Marín and McNally, 2011, 488-489)</div>

In BA, D-state root psych verbs are argued to have inceptive readings and are predicted to exhibit the same readings observed in (88b) and (89a) where the refence time adverbial serves as a contingent for the onset of a state. In (90a), the subject becomes angry only when he is late for work. It cannot be understood that he is angry before being late for work. The same interpretation is available in (90b) where the reference time adverbial signals the start of the emotion denoted by the D-state root ObjExp verb.

(90) a. lammā yi-taʾḳḳar   ʿan   ad-dawām yi-zʿal   SUBJEXP
      when   IPFV.3SM-late about DET-work IPFV.3SM-angry
      'When he was late for work, he became angry.'

   b. lammā yi-jī   yi-wattir-nī   OBJEXP
      when   IPFV.3SM-come IPFV.3SM.stress.CAUS-1SG.ACC
      'When he comes around, he stresses me.'

These examples show that D-state root psych verbs have an initial boundary that supports contexts where a reference time adverbial refers to the inception of the state denoted by the verb.

Psych verbs derived from K-state roots are unbounded states that are not believed to have initial boundaries. Although inceptive readings may be obtained through morphosyntactic manipulation, e.g. with perfective morphology (see 3.1.2.2) and the auxiliary ṣār 'become' (see 4.2.3.2), using reference time adverbials with K-state root imperfective psych verbs yields mixed results. In (91a, b) below, the sentences cannot mean that an emotion started at reference time. This shows that the imperfective verb in the matrix clause is an unbounded state and does not support a left-boundary implication with reference time adverbials. In contrast, example (91c) shows an acceptable use of a reference time adverbial with an imperfective K-state ObjExp verb where everytime the subject sings, she enchants me.

(91) a. *mitā mā   yi-jīb   ṭalab-āt-hā   t-ḥubb-ah   SUBJEXP
      when what IPFV.3SM-bring request-PLF-3SF IPFV.3SF-love-3SM
      'Whenever he brings her what she wants, she loves him.'

b. *lammā yi-ḏākir   yi-ʿjib-nī   OBJEXP
   when   IPFV.3SM-study IPFV.3SM-please.CAUS.3PL-1.SG.ACC
   'When he studies, he pleases me.'

c. lammā ti-ġannī   ti-sḥar-nī   OBJEXP
   when   IPFV.3SF-sing IPFV.3SM-enchant-1SG.ACC
   'When she sings, she enchants me.'

When K-state root psych verbs are used in their perfective forms, see (92), they are acceptable with reference time adverbial clauses. This is expected if the perfective form assigns inceptive aspect on psych verbs, so the refence time here indicates when the emotion started. For example, the sentence in (92b), while unacceptable in its imperfective form in (91b), is felicious in the perfective where the meaning is that I became pleased when he studied.

(92) a. mitā mā   jāb   ṭalab-āt-hā   ḥabb-at-ah   SUBJEXP
     when what bring.PFV.3SM request-PLF-3SF love.PFV-3SF-3SM
     'Whenever he brought her what she wanted, she fell in love with him.'

b. lammā ḏākar   ʾa-ʿajab-nī   OBJEXP
   when   IPFV.3SF-study CAUS-IPFV.3SM-please-1SG.ACC
   'When he studied, he pleased me.'

The reference time adverbial as well as the *fajʾah* 'suddenly' test both serve to establish the presence of an inceptive reading, or left-boundary, for psych verbs derived from D-state roots or containing perfective morphology.

4.3 Interim summary

So far in this chapter, we have applied Maienborn's (2005) event tests to distinguish between D-state root and K-state root psych verbs. We found that the distinction is most transparent in the imperfective form where D-state roots pass tests for inceptive events, whereas K-state roots behave as states. In their perfective forms, all psych verbs receive inceptive interpretations and pass Maienborn's event tests. However, a distinction remains between K-state root and D-state root psych verbs in their perfective forms. One example shown so far is the presence of an iterative

reading for D-state verbs in their perfective forms that is not supported for K-state verbs in their perfective forms (see 4.2.1).

It is useful to provide a summary overview of the various diagnostics used so far and how K/D-state psych verbs perform in them. The tables below are divided according to grammatical aspect (im/perfectivity) since the K-state root shows different aspectual properties that are affected by (im)perfective morphology. Table 4.3 presents a summary of the results obtained from the diagnostics used to discern the aspectual properties of the two stative root psych verbs as well as accomplishments and achievements in the imperfective form. Table 4.4 shows the same verb types and the results of their diagnostics in the perfective form. In Tables 4.3 and 4.4, the '+' value signifies that the indicated interpretation or modification is possible, and the '−' value indicates unacceptability. The '?' refers to an unknown value where the verb type was not tested in the indicated diagnostic in this study.[88]

Table 4.3 shows the greatest contrast between the two psych verb root types since in their imperfective forms, K-state roots are unbounded, atelic durative states, and the D-state roots are punctual, atelic, left bounded events. Both eventualities differ from right-boundary events, i.e. accomplishments and achievements, in their aspectual properties.

Table 4.3: Summary of results for K/D-state aspectual diagnostics in the imperfective form.

	Test	K-state	D-state	Accomplishment	Achievement
1	Habitual/iterative reading	-	+	+	+
2	Temporal adverbials				
	Delimiting adverbials	-	-	+	+
	Durative adverbials	+	+	-	-
3	Expansion test	+	+	-	-
4	Imperfective entailments	possible	possible	-	?
5	*bišwayš* 'slowly'	-	-	+	-
6	*fajʾah* 'suddenly'	*	+	-	+
7	Reference time interpretation	-/+	+	?	?

* Modification with *fajʾah* 'suddenly' is allowed for K-state verbs in their imperfective forms only if an overt

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[88] Space limitations were considered in the presentation of data in this chapter. It was not possible to investigate all event types in every diagnostic test used.

inchoative verb is present. Otherwise, this modifier is unacceptable. See (4.2.3.2) for discussion.

Table 4.4 below presents a summary of the results obtained from the diagnostics used to discern the aspectual properties of psych verbs in their perfective forms.

Table 4.4: Summary of results for K/D-state aspectual diagnostics in the perfective form.

	Test	K-state	D-state	Accomplishment	Achievement
1	Habitual/iterative reading	-	+	?	?
2	Temporal adverbials				
	Delimiting adverbials	-	-	+	+
	Durative adverbials	+	+	-	-
3	Expansion test	+	+	-	-
4	Imperfective entailments	possible	possible	-	?
5	*bišwayš* 'slowly'	-	-	+	-
6	*fajʾah* 'suddenly'	+	+	-	+
7	Reference time interpretation	+	+	?	?

As mentioned prior, perfective psych verbs are inceptive and have the same patterns observed for imperfective D-state verbs, themselves inceptive verbs, regarding the diagnostics used to ascertain aspectual features. Both root types indicate an atelic punctual aspectual profile in the perfective that sets them apart from the aspectual properties examined for accomplishments and achievements. The only distinction between perfective psych verbs derived from K-state roots and D-state roots lies in the absence of an iterative reading in the former.

4.4 Agentivity and eventivity in BA psych verbs

Cross-linguistically, the dominant view in the literature is that SubjExp verbs are uncontroversial stative verbs while ObjExp verbs exhibit ambiguous stative/eventive properties (see Chapter 2 for a literature review). The (non)acceptability of psych verbs in dynamic and agentive contexts, typically reserved for eventive verbs, are used as diagnostics that reflect the aspectual property of both SubjExp and ObjExp verbs (see Arad, 1998b; Pylkkänen, 2000; Rothmayr, 2009; Landau, 2010; Alexiadou and Iordăchioaia, 2014; Kailuweit, 2015; García-Pardo, 2018). BA data so far has shown that it challenges the claim that SubjExp verbs are all stative due to presence of the

stative root split that systematically yields stative verbs with K-state roots and eventive inceptive verbs with D-state roots based on Maienborn's event tests (see 4.1). BA's stative root dichotomy and the availability of overt causative morphology present an ideal testing ground for the claims made in the literature regarding the aspectual characterization of psych verbs.

In the following discussions, we show that the K-state root and D-state root distinction is as fundamental in explaining BA psych verb behaviour regarding compatibility with agentive and eventive contexts as it was when examining the general class of BA stative verbs in Section 3.1.2. Recall, that D-state roots derive Davidsonian events that have properties of both events and states (Silvagni, 2021). They share with states the property of being non-dynamic, and with events an event argument that allows them to pass various event tests. K-states on the other hand, are presumed to be inherent states that would not normally pass event tests that diagnose for agency or dynamicity which are properties states do not have (see 3.1.4).

The following discussions aim at utilizing the two types of tests commonly cited when discussing the semantics of psych verbs: eventive tests that essentially diagnose the presence of dynamic structure or *happening*, and agentivity contexts that are used to detect the presence of an agent that states do not possess (see Pesetsky, 1995; Biały, 2005; Verhoeven, 2010; Alexiadou and Iordăchioaia, 2014; Darby, 2016; Grafmiller, 2013; Hirsch, 2018). The two tests used to detect eventivity in this study are the progressive and event frame tests. Agency is tested using the imperative construction and compatibility with agentive adverbials like *deliberately* and *purposely* (see 2.1.2 and 3.1.2 for a review of these tests with respect to Arabic data).[89]

The predictions made here are built on the hypothesis developed in the previous chapter (Chapter 3) based on the patterns of behaviour seen for stative verbs in general. In their simple, non-causative forms, BA psych verbs of both D-state and K-state roots are predicted to be generally incompatible with agentive and dynamic readings because they are non-dynamic due to either being punctual, as is the case for inceptive psych verbs of D-state roots, or being stative, as is the

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[89] The discussions on the reasoning that motivate the tests explored in this section are presented in Chapter 3. The focus here is on applying these tests to BA psych verbs in light of our conclusions from the investigation on BA stativity.

case for stative psych verbs of K-state roots (see 4.2). We expect that D-state root SubjExp verbs will pass the event frame test while K-state root SubjExp verbs will fail them. In their causative forms, a split pattern of behaviour is expected where D-state ObjExp verbs are predicted to allow eventive and/or agentive formations given they encode Davidsonian event arguments, and K-state ObjExp verbs are expected to reject those constructions under the assumption that they are inherent states devoid of an event argument (see 3.1.4).

4.4.1 Eventive tests

There are two main tests used here to diagnose for eventive readings in psych verbs: the progressive, and the event frame test.

4.4.1.1 Compatibility with the progressive construction

The lack of progressive readings for SubjExp verbs is one of the tests that lead many to argue that all SubjExp verbs are stative while ObjExp verbs have ambiguous event/state status (Arad, 1998b; Biały, 2005; Verhoeven, 2010; Grafmiller, 2013; Temme, 2019). The BA data examined so far has shown that such a generalization might not be accurate for this language (see 3.1.2.1). The progressive test is used here as a diagnostic tool to test the dynamic property of psych verbs derived from the different stative roots in BA. It is also used in our native speaker acceptability study in order to assess the judgments obtained here (see 5.3).

In Section 3.1.2, we argued that simple (i.e. non-causative) inceptive states and unbounded states are non-dynamic verbs that are not expected to allow progressive structures. Following this line of argument, we predict that BA SubjExp verbs will not accept progressive constructions. In the following examples, both K-state root SubjExp verbs, seen in (93), and D-state root SubjExp verbs, shown in (94) bear this prediction out.

(93) *qāʿid   yi-ġār   / yi-bġā   yi-ṭlaʿ   K-STATE
     PROG.AP.3SM IPFV.3SM-jealous / IPFV.3SM-want IPFV.3SM-GO.out
     'He is being jealous.'
     'He is wanting to go out.'

(94) *qāʿid yi-ṭfaš / yi-ḳāf   D-STATE
     PROG.AP.3SM IPFV.3SM-bore / IPFV.3SM-fear
     'He is being bored/ frightened.'

ObjExp verbs show mixed behaviour depending on the root type involved in the derivation. K-state root ObjExp verbs do not allow the progressive as shown in the following examples:

(95) a. *qāʿid   yi-ḥabbib-nī   fī ad-dirāsah
        PROG.AP.3SM IPFV.3SM-love.CAUS-1SG.ACC in DET-study.SG
        'He is making me love studying.'

    b. *sārah qāʿid-ah   ti-ʿjib-nī
       Sara   PROG.AP-3SF IPFV.3SF-please.CAUS-1.SG.ACC
       'Sara is pleasing me.'

In contrast, D-state root ObjExp verbs allow the progressive construction as shown in (96). However, a current progressive reading is not allowed as illustrated by the prohibition of using *alḥīn* 'now'. For example, in (96), Sara is understood to worry me over and over again for an unspecified a period of time, i.e. progressive structures with D-state ObjExp verbs have an iterative (or continuous) reading.

(96) a. qāʿid   yi-zaʿʿil-nī   (*al-ḥīn)
         PROG.AP3.SM IPFV.3SM-anger.CAUS-1SG.ACC (DET-now)
         'He is angering me.'
         #'He is angering me now.'

    b. al-ʾaḳbār   qāʿid-ah   ti-ḳawwif-hum   (*al-ḥīn)
       DET-news.PLF PROG.AP-3SF IPFV.3SF-frighten-1SG.ACC (DET-now)
       'The news is making me frightened.'
       #'The news is making me frightened now.'

If we accept that D-state roots are punctual events (see 4.2.3), then like achievements, they should only tolerate a progressive construction with a special iterative reading or as referring to some preliminary process that is in progress and not the event denoted by the verb itself (see 2.1.3). However, K-state roots are argued to be static, non-dynamic states even with causative

morphology, therefore they are expected to be incompatible with progressive structures. These predictions are borne out by the data seen above for ObjExp verbs in progressive constructions.

As for SubjExp verbs, the hypothesis here is that they reject the progressive, as seen in (93) and (94), not because they are stative, but because they are non-dynamic. The distinction is important given our main hypothesis that D-state roots are non-dynamic events while K-state roots are non-dynamic states. BA SubjExp verbs derived from K-state roots are claimed to be non-dynamic because they are homogenous stative verbs that lack internal development and thus are predicted to disallow the progressive (Dowty, 1979). In contrast, SubjExp verbs derived from D-state roots are argued to be non-dynamic because they are punctual events (see 4.2.3). Therefore the progressive structure is found to be unacceptable since the progressive is generally prohibited with instantaneous events (Piñón, 1997).

In sum, the progressive test serves to distinguish a non-dynamic stative group of ObjExp verbs that are derived from K-state roots. This is taken as one form of verification that causative states exist in BA, contrary to Grafmiller (2013) who argues otherwise (see 2.3.3.5). The one drawback of this test is that it blurs the distinction between stative and eventive SubjExp verbs since they both reject the progressive. To investigate this further, we look to our next test.

4.4.1.2 Compatibility with the event frame

To test for eventive readings in the perfective form, the event frame *what happened* is used (Jackendoff, 1983). In Section 3.1.2.2, we showed how unbounded stative verbs fail this test for eventhood while inceptive states pass, suggesting an eventive status. Based on this pattern of behaviour, the prediction is that both SubjExp and ObjExp verbs derived from K-state roots should fail this test while those derived from D-state roots should pass. The following examples verify these predictions. Perfective K-state psych verbs are incompatible with the event frame in both SubjExp, see (97a), and ObjExp, see (97b).

(97) a. *ʾilli ṣār   ʾinn-ah   ḥabba-hā   / ḥasad-hum   / ʾistaḥā   SUBJEXP
       what happen.PFV that-3SM love.PFV.3SM-3SF / envy.PFV.3SM-3PL / shy.PFV.3SM
       'What happened was that he fell in love with her/ envied them / became shy.'

b. *ʾilli ṣār   ʾinn-ah ḥabbab-hā   fī al-kitāb /   OBJEXP
   what happen.PFV that-3SM love.PFV.CAUS.3SM-3SF in DET-book.SG
   ʿa-jab-hum   / saḥar-nī
   CAUS.3SM-please-3PL / enchant.PFV.3SM-1SG.ACC
   'What happened was that he made her love the book/ he pleased them/ he enchanted me.'

In contrast, psych verbs derived from D-state roots are perfectly acceptable in conjunction with an event frame as seen in the following examples.

(98) a. ʾilli ṣar   ʾinna-hā ṭifiš-it   / ziʿil-it   / ḳāfa-t   SUBJEXP
     what happen.PFV that-3SF bore.PFV-3SF / angry.PFV-3SF / fear.PFV-3SF
     'What happened was that she became bored/ angry/ frightened.'

   b. ʾilli ṣār   ʾinna-hā ṭaffaš-at-nī   /   OBJEXP
      what happen.PFV that-3sf bother.PFV.CAUS-3SF-1SG.ACC /
      zaʿʿal-at-nī   / ḳawwaf-at-nī
      angry.PFV.CAUS-3SF-1SG.ACC / fear.PFV.CAUS-3SF-1SG.ACC
      'What happened was that she bothered me/ angered me/ frightened me.'

This pattern of behaviour is not surprising if we accept that D-state roots are Davidsonian events while K-state roots are canonical states. This test supports the claim that a stative/eventive split is present in the class of BA SubjExp verbs, contrary to standard cross-linguistic descriptions of psych verb aspectual classification where all SubjExp verbs are viewed as stative (see e.g. Arad, 1998; Landau, 2010; Rozwadowska et al., 2020). The aspectual dichotomy is also evident in ObjExp verbs with this test where D-state roots derive eventive ObjExp verbs whereas K-state roots derive states that fail the event frame test as shown above.

4.4.2 Compatibility with agentive contexts

In the aspectual literature, stative eventualities are not assumed to be compatible with agentive interpretations. Thus, the presence of agentive interpretations in contexts that support the presence of an agent, like imperatives and agentive adverbials, are often used as a diagnostic for an eventive verb. The following section uses the imperative form and agentive adverbials to test the prediction that agentive readings are obtained only for D-state ObjExp verbs but not for K-state ObjExp

verbs. Both these tests are used in the native speaker experimental study presented in Chapter 5 (see 5.3).

4.4.2.1 Imperative

The imperative is used in the psych verb literature to test for the presence of agents in ObjExp constructions (Grafmiller, 2013; Verhoeven, 2010). Stative verbs do not normally accommodate agentive readings. For this reason, if a causative psych verb does not allow agentive interpretations, then it is taken as evidence for an underlying state (see e.g. Arad, 1998b). The prediction is that BA ObjExp verbs derived from K-state roots, by virtue of being Kimian states, will not allow agentive interpretations. Thus, the imperative structure should not be accepted. Psych verbs derived from D-state roots are expected to show split behaviour. In their SubjExp forms, they are predicted not to support agency due to their non-dynamic punctual nature, while in their ObjExp forms, agentive readings are expected to be possible given the presence of an animate subject (see Biały 2020 for similar arguments).

Examples of SubjExp imperative structures are presented in (99) illustrating verbs derived from both K-states and D-states. Neither stative root allows an imperative reading as predicted, indicating their non-dynamic nature.

(99) a. *ḥubbu-hum   K-STATE ROOT
       love.IMP.2SM-them
       'Love them!'

    c. *ḵāf   D-STATE ROOT
       fear.IMP.2SM
       'Be frightened!'

Conversely, a split pattern of behaviour is seen with ObjExp verbs. ObjExp verbs derived from K-state roots disallow imperative constructions, as seen in (100), whereas D-state ObjExp verbs are allowed in the imperative, as illustrated in (101).

(100) a. *ʾa-lhim-hum   K-STATE ROOT
          CAUS-inspire.IMP.2SM-3SPL
          'Inspire them!'

       b. *ʾisḥarī-h
          enchant.IMP.2SF-3SM
          'Enchant him!'

(101) a. ḳawwif-hum   D-STATE ROOT
          frighten.CAUS.IMP.2SM-3PL
          'Frighten them!'

       b. zaʿʿil-hum
          anger.CAUS.IMP.2SM-3PL
          'Anger them!'

One main argument made repeatedly in this thesis is that D-state roots are unique events in that they have properties of both events and states. In their simple non-causative forms, they are non-dynamic verbs that pass some event tests, like compatibility with manner adverbials, and fail others, like supporting agentive readings. In their causative forms, they can be coerced through syntactic context into allowing dynamic and/or agentive formations. If we grant that D-state ObjExp verbs allow for agentive interpretations within relevant morphosyntactic contexts, then it is not surprising to see the acceptable imperative formation above in (101). K-state ObjExp verbs however, prohibit the imperative derivation which is expected if we accept the inherent stative classification of K-state roots.

4.4.2.2 Agentive adverbials

Another test frequently used to tease out the presence of a stative eventuality in ObjExp constructions is through the use of volitional adverbials like *deliberately, intentionally* and *purposefully* (Arad, 1998b; 1999b; Biały, 2005; Verhoeven, 2010; Grafmiller, 2013). This is based on the fact that agency is a property of events. As with the imperative test, the non-availability of agentive readings in the context of agentive adverbials indicates that the verb is stative since states do not accommodate agentive readings. Here the agentive adverbials test is used to support the

claim that BA psych verbs are generally unacceptable in a context that supports agentive interpretations except for ObjExp verbs with D-state roots.

In Section (3.1.2), non-causative inceptive states were shown to behave like canonical states and reject agentive contexts with agentive adverbials. Psych verbs in their SubjExp form are either inceptive states or canonical states and are thus predicted to reject agentive adverbials. The examples in (102) are of SubjExp verbs derived from K-state roots while the examples in (103) are of SubjExp verbs derived from D-state roots.

(102) a. *mitʿammid   yi-krah   al-ʾaḵbār   K-STATE SUBJEXP
deliberate.AP.3SM IPFV.3SM-hate DET-news
'He deliberately hates the news.'

    b. *bi-lʿāni   yi-bġā   yā-kull
with-purpose IPFV.3SM-want IPFV.3SM-eat
'He purposely wants to eat.'

(103) a. *bi-lʿāni   yi-ṭfaš   D-STATE SUBJEXP
with-purpose IPFV.3SM-bore
'He purposely becomes bothered.'

    b. *mitʿammid   yi-zʿal
deliberate.AP.3SM IPFV.3SM-angry
'He deliberately becomes angry.'

As expected, all BA SubjExp verbs prohibit modification with agentive adverbials. In contrast, the agentive adverbial test reveals the asymmetric pattern of behaviour ObjExp verbs showed previously in eventive and imperative contexts. K-state ObjExp verbs do not allow the agentive adverbial, as demonstrated in the examples in (104), regardless of their morphosyntactic form, i.e. neither the inceptive aspect encoded by perfective morphology nor causative morphology alters the stative root's prohibition on agentive adverbials, see (104b).

(104) a. *ʿalī mitʿammid   yi-ʿjib-nī
Ali   deliberate.AP.3SM IPFV.3SM-please.CAUS-1.SG.ACC
'Ali deliberately pleases me.'

b. *bi-lʿāni   ʾa-lham-nī
with-purpose CAUS-inspire.PFV.3SM-1SG.ACC
'He purposely inspired me.'

In contrast, D-state ObjExp verbs in both (im)perfective forms allow agentive adverbials, as seen in (105).

(105) a. bi-lʿāni   ḳawwaf-nī
with-purpose frighten.PFV.3SM.CAUS-1SG.ACC
'He purposely frightened me.'

b. mitʿammid   yi-qliq-nī
deliberate.AP.3SM IPFV.3SM-worry.CAUS-1SG.ACC
'He worries me on purpose.'

The agentive tests presented in the above discussion show that BA psych verbs pattern like the general class of BA stative verbs in their compatibility with agentive contexts (see 3.1.2). In sum, in their SubjExp forms, all psych verbs are incompatible with agentive contexts regardless of the root type involved in the derivation. However, a clear distinction is observed between the two stative root types in their ObjExp derivations. ObjExp verbs derived from K-state roots never except agentive contexts as opposed to ObjExp verbs derived from D-state roots which do. This points to a clear distinction between stative and eventive ObjExp verb types in BA that are determined by the root involved in the derivation.

In sum, the tests in this section 4.4 show that BA may be classified as a Type 1 language (see Verhoeven, 2010) where two classes of ObjExp verbs are detected. One is always stative and the other is ambiguous according to dynamicity and agency tests. The stative root type in BA is essential in determining which verb belongs to which subclass of ObjExp verb. D-state rooted ObjExp verbs allow contexts where agentive and dynamic readings are supported, while K-state ObjExp verbs do not.

Table 4.5 shows the results of the agency and dynamicity tests where the '+' value indicates compatibility with the indicated context and a '-' value indicates incompatibility. The table here is

divided according to stative root type since it is the most important factor in determining agency and dynamicity of BA psych verbs. Grammatical aspect is not a consideration here as it has no effect on the results of agency and dynamicity tests.

Table 4.5: Summary of results for eventive and agentive diagnostics of BA ObjExp verbs.

Test	K-state root		D-state root	
	SubjExp	ObjExp	SubjExp	ObjExp
Progressive	-	-	-	+
Event frame	-	-	+	+
Imperative	-	-	-	+
Agentive adverbials	-	-	-	+

4.5 Simple vs complex events

In Chapter 2 a brief review was given on event structure as it pertains to psych verbs (see 2.1.3). To remind the reader, it is generally accepted in the literature that SubjExp verbs have simple event structure consisting of a single subevent reflecting their stative status (see e.g. Grafmiller, 2013). ObjExp verbs, on the other hand, have a complex event structure due to their causative nature. This is because causation itself is bi-eventive involving a causing subevent, represented by CAUSE, and a result state subevent, represented by BECOME. The lexical semantic structure of states and causatives are represented below with examples (fashioned after Rappaport Hovav and Levin, 1998).

(106) a. Simple event structure: [x *<STATE>* (y̲)]
        Example: *know* [x *<KNOW>* (y̲)]

     b. Complex event: [[x ACT$_{<manner>}$] CAUSE [BECOME [y *<STATE>]*]]
        Example*: anger* [[x ACT$_{<manner>}$] CAUSE [BECOME [y *< ANGRY>*]]

One fundamental distinction between simple and complex events lies in argument realization (Levin and Rappaport Hovav, 2013). Argument realization can be investigated by looking at the flexibility of distribution and interpretation of the object argument. As such, object omission, and flexibility in representation is taken as a diagnostic that separates simple events from complex

events (Levin and Rappaport Hovav, 1999; Biały 2020; Beavers and Koontz-Garboden, 2020). Based on this diagnostic, Biały (2020) radically claims that *all* Polish psych verbs, including ObjExp verbs, have simple event structure.[90]

This section picks up on Biały's argumentation with respect to BA data. The following discussion will mainly use the object omission test to examine the event structure of BA SubjExp and ObjExp verbs. The prediction is that SubjExp verbs should have simple event structures and allow object omission given their non-dynamic event properties. However, based on the data patterns observed so far regarding the aspectual behaviour of BA ObjExp verbs, we would expect D-state roots to yield complex causative events given their compatibility with dynamic and agentive readings (Levin and Rappaport Hovav, 2013), and we should see simple event structure patterns for K-state ObjExp verbs in keeping with their robust stative properties (see e.g. Pylkkänen, 1998; 2000). Given Biały's (2020) claim that all psych verbs have simple event structures it would be interesting to see how the data patterns in BA.

We begin with investigating the event structure status of BA SubjExp verbs. As mentioned prior, SubjExp verbs are argued to have simple event structures which require only one structural participant. If another argument is present, as is the case for transitive verbs, then it is flexible in its realization in that it may range from zero realization to non-subcategorized objects (Biały, 2020; Rappaport Hovav and Levin, 1998). Complex events do not allow such flexibility and are much more rigid in their realization of the object argument. The examples below demonstrate that transitive SubjExp verbs[91] of both K-state roots, see (107), and D-state roots, see (108), are flexible in the type of argument that may appear in object position, which may be realized by an NP, a PP, a clause, or may have zero realization. That the object may be dropped is indicated by the parenthesis that surround the second argument showing that stopping at the verb and omitting all within the parenthesis does not compromise the structural integrity of the sentence. This variability

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[90] See Chapter 2 for more details on Biały's discussions.

[91] I previously mentioned that the focus will be on emotion psych verbs, and I have not included mental psych verbs in the general discussions (see Chapter 1). However, there are very few transitive D-state root SubjExp verbs and thus I have borrowed from verbs of mental state as examples of D-state root psych verbs to supplement examples for the current discussion. Other authors use mental state verbs in discussions of psych verbs (see e.g. Arad, 1998b; Anagnostopoulou, 1999; Biały, 2005; Rothmayr, 2009; Alexiadou and Iordăchioaia, 2014; Fábregas and Marín, 2015; Kailuweit, 2015).

in the realization of the second argument supports the claim that SubjExp verbs have simple event status where there is only one subevent that requires one structural participant.

(107) a. maha tu-ḥubb   (al-masraḥiy-āt / ʾinn-ah   karīm)   K-STATE ROOT
         Maha IPFV.3SF-love (DET-play-PLF /   that-3SM generous)
         'Maha loves (the theatre/ that he is generous).'

     b. ʿalī yi-ʿānī   (al-faqr   / qillat al-ḥīlah   / min az-zaḥmah)
        Ali IPFV.3SM-struggle (DET-poverty/ lack   DET-opportunity/ from DET-traffic)
        'Ali struggles (with poverty/helplessness/ from traffic).'

(108) a. hum yi-fham-ūn   (fī aš-šaġlah   / aš-šuġul   /   D-STATE ROOT
          they IPFV.3-understand-PL (in DET-work.SG / DET-work.PL/
          kīf yi-tṣaraf-ūn)
          how IPFV.3-behave-PL)
          'They understand the work/ work/ what to do.'

     b. hū yi-ḵūn   (ṯiqat a-nnās   fī-h   / al-ʾamānah   /
        he IPFV.3SM-betray (trust DET-people in-3SM/ DET-entrusted /
        ʾilli yi-ḵūn-ah)
        that IPFV.3SM-betray-3sm
        'He betrays (people's trust/ the entrusted/ whoever betrays him).'

Canonical complex transitive verbs are much more rigid in their realization of the object. The first argument is the participant of the causing subevent and the second argument is a Patient (or Theme) which realizes the structural participant of the second subevent (Rappaport Hovav and Levin 1998, p. 117). Transitive verbs that entail a result or a change must realize the Patient argument, and it cannot be deleted (Beavers and Koontz-Garboden, 2020). This is illustrated in the examples below with the unacceptable omission of the object argument, indicated as *∅ in the examples in (109). What is also evident in the examples is the rigidity of the type of object argument allowed where only NPs are allowed, as demonstrated in the (a) examples, which stands in contrast to the flexibility shown in the previous examples with SubjExp verbs.

(109) a. hū yi-xirr   al-ʾašyāʾ   /*∅/ * ʾilli qudām-ah
          he IPFV.3SM-break DET-thing.PL/∅ /   that in.front-3SM
          'He breaks things/ # ∅/ # whatever is in front of him.'

b. ʾanā ʾa-ftaḥ al-bāb /*∅/ *ʾilli ʿalā aṭ-ṭāwlah
I IPFV.1SG.NOM-open DET-door.SG / ∅/ that on DET-table
'I open the door/ # ∅/ # what is on the table.'

c. al-ʿāmil yi-faḍḍī al-ʿulab /*∅ / * fī al-ʿulab /
DET-worker IPFV.3SM-empty.CAUS DET-container.PL / ∅ / in DET-container.PL /
*ʾilli hināk
that there
'The worker is emptying the containers/ # ∅/ # in the containers/ # that over there.'

As mentioned prior, complex event structure is associated with causation (Rappaport Hovav and Levin, 1998; Levin, 1999). Therefore, it is reasonable to assume that ObjExp psych verbs have complex event structure. However, in work by Arad (1998), Pylkkänen (1998), and Biały (2005; 2020), arguments are presented for the simple event status of at least some ObjExp verbs. This is the explanation assumed for the uniqueness of ObjExp verbs and why they are much debated; the juxtaposition of them being causative verbs and yet potentially having simple event structure. In the case of BA ObjExp verbs, we have two delineated subgroups, where one exhibits robust stative behaviour and the other patterns like events. It follows that D-state ObjExp verbs should pattern like canonical causatives and have complex events structures that would require two structural participants while K-state ObjExp verbs should have simple event structures requiring only one structural participant.[92] Thus, it should be possible to omit the object argument of K-state ObjExp verbs without resulting in unacceptable structures.

Yet, we find that the object argument, the Experiencer, is optional in all BA ObjExp structures. This is the case for ObjExp verbs derived from both K-state roots, shown in (110), as well as D-state roots, shown in (111). Also, the animacy of the Stimulus argument does not mandate a complex structure that disallows object dropping. Consider the following examples.

(110) a. al-hadāyā ti-sʿid (al-ʾaṭfāl) K-STATE ROOT
DET-gift.PLF IPFV.3F-please.CAUS (DET-child.PL)
'Gifts please (children).'

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[92] See Biały (2005) for similar arguments for Polish. A brief summary of his work is presented in (2.3.3.3).

b. sārah ti-karrih   (maha) fī al- bisās
  Sara   IPFV.3SF-hate.CAUS (Maha) in DET-cat.PL
  'Sara makes (Maha) hate the cat.'

(111) a. ḵālid   yi-zaʿʿil(-nī)   D-STATE ROOT
    Khalid IPFV.3SM-anger.CAUS(-1SG.ACC)
    'Khalid angers (me).'

b. haḏā al-filim   yi-ḵawwif(-nī)
  this   DET-movie.SG IPFV.3SM-frighten.CAUS(-1SG.ACC)
  'This movie frightens (me).'

According to the Argument-Per-Subevent Condition (Levin and Rappaport Hovav, 1999), the fact that overtly causative BA ObjExp verbs in their imperfective forms have only one structural argument supports the hypothesis that the two subevents are co-temporal and yield stative interpretations (see Arad, 1998b) (see also 2.1.3). BA ObjExp verbs may drop their object in a pattern contrary to the complex events seen in (109) where there is an obligatory presence of both arguments suggesting two independent subevents. Interestingly, even in agentive contexts, see (112), and dynamic contexts, see (113), imperfective D-state ObjExp verbs allow object omission.

(112) a. sārah ti-narfiz   (ʾaḵū-hā)   bi-lʿāni
    Sara   IPFV.3SF-irritate (brother-3SF) with-purpose
    'Sara is purposely irritating (her brother).'

b. hū yi-ḵawwif   (a-nnās)   bi-lʿāni
  he IPFV.3SM-frighten.CAUS (DET-people) with-purpose
  'He purposely frightens (people).'

(113) a. al-mawḍūʿ qāʿid   yi-wattir(-nī)
    DET-issue.SG PROG.3SM IPFV.3SM-stress.CAUS(-1SG.ACC)
    'The issue is stressing me.'

b. ʿumar qāʿid   yi-qhar   (sārah)
  Omar PROG.3SM IPFV.3SM-frustrate (Sara)
  'Omar is frustrating (Sara).'

In contrast, canonical complex events in agentive and dynamic contexts do not allow object drop as shown in the following examples where ∅ is unacceptable as an object.

(114) a. sārah bi-lˈāni   ti-qaffil   at-tilfizyūn   / *∅

Sara with-purpose IPFV.3SF-close.CAUS DET-television.SG /∅

'Sara purposely turns off the television/ #∅.'

     b. sārah qāˈid-ah   ti-xirr   al-luˈbah   /*∅

Sara   PROG-3SF IPFV.3SF-break DET-toy.SG/∅

'Sara is breaking the toy/ #∅.'

The fact that imperfective ObjExp verbs only require one structural argument in their event structure, alongside the evidence seen in (4.2.2) where a telic end point is not detected, suggests that BA psych verbs in their imperfective forms are not change of state verbs that would require a BECOME operator which is used to denote telic events. BA ObjExp verbs present a challenge for event structure representations because they are simple events and yet require a CAUSE operator to account for the presence of causative morphology but do not support the BECOME operator due to the lack of a change of state. Currently, the most widely cited and influential event structure representation presents CAUSE as a complex event that contains BECOME (Rappaport Hovav and Levin, 1998), see (106) above.

The data so far shows that BA SubjExp and ObjExp verbs in their imperfective forms have simple event structures that allow for a flexible realization of the object argument. However, we have yet to examine BA psych verbs in their perfective forms. We have argued that perfectivity introduces eventive readings on all stative verbs, therefore, it would be logical to assume, based on traditional event semantics, that a simple event reading is present for SubjExp verbs since there is only one subevent, and that a complex event is present for perfective ObjExp verbs due to CAUSE (Levin and Rappaport Hovav, 2005; Martin and Schäfer, 2014). However, we have already seen with the imperfective data that BA does not necessitate a complex event structure for eventive ObjExp verbs (those derived from D-state roots), which supports Bialy's (2020) claim that the standard reading for *all* psych verbs is a simple stative event. To investigate which prediction proves true

for BA perfective psych verbs we use the object deletion test to investigate the presence of a structural argument linked to a temporally independent subevent.

What is found is that only SubjExp verbs allow object deletion while ObjExp verbs do not. The following examples of SubjExp verbs in their perfective forms show where the omission of the object is perfectly acceptable.

(115) a. maha ḥabbat   (sārah)   K-STATE ROOT
          Maha love.PFV.3SF (Sara)
          'Maha fell in love (with Sara).'

      b. hū fihim   (addars)   D-STATE ROOT
          he understand.PFV.3SM (DET-lesson.SG)
          'He understood (the lesson).'

By contrast, ObjExp verbs in their perfective forms do not allow object deletion. Consider the following.

(116) a. hū ʾa-lham-nī   / *∅   K-STATE ROOT
          he CAUS-inspire.PFV.3SM-1SG.ACC/ ∅
          'He inspired me/∅.'

      b. hū ḳawwaf-nī   / *∅   D-STATE ROOT
          he frighten.PFV.CAUS.3SM-1SG.ACC/ ∅
          'He frightened me/ #∅.'

Object deletion is not possible for perfective ObjExp verbs derived from either root type, suggesting a complex event structure with two subevents that require two structural arguments. ObjExp verbs in their perfective forms exhibit the complex event structures predicted for causative verbs (see Levin and Rappaport Hovav, 1999; 2011; Levin and Hovav, 2005).

The assumption that ObjExp verbs, being causative verbs, should behave like canonical causatives and exhibit complex event structure is not born out by the data in the imperfective where object deletion is shown to be possible. However, in the perfective, a complex event structure is present

for these verbs. One question that arises is what is special about perfective morphology that it derives complex events of causative psych verbs? I suspect the answer lies in the existential event property inherent to the perfective form (see Alotaibi, 2019). Perfective morphology asserts that an eventuality has occurred, hence the existential event reading. Therefore, if a verb has both a causative subevent and is derived into an existential event form, i.e. the perfective form, then a complex event reading is necessary, and two arguments are structurally required. The CAUSE operator behaves as expected and yields a complex event in perfective derivations in BA. I leave this matter for future research.

4.6 Conclusions

The main aim of this chapter was to test the generalizations and claims made in the previous chapter through a battery of aspectual tests. As a reminder, we began this chapter with the following set of predictions:

(i) There are two types of states, and by extension psych verbs, in BA: inceptive and unbounded. Inceptive psych verbs, encoded by D-state roots and/or perfective morphology, are predicted to pass Maienborn's event tests. Imperfective forms of K-state roots, on the other hand, are expected to be canonical states and fail those same tests.

(ii) Inceptive psych verbs are a unique class of verbs that are punctual onsets of an atelic state. They encode a left-boundary but do not encode a change of state and an end point is not visible. Based on these properties, inceptive verbs are predicted to be distinguishable from states and right-boundary events like accomplishments and achievements.

(iii) Only D-state roots encode a Davidsonian event argument that allows them to support agentive and dynamic contexts in their ObjExp derivations. K-state roots do not encode an event variable and have robust stative properties that should prohibit agentive and eventive contexts.

(iv) ObjExp verbs derived from D-state roots are events that should have complex causative event structures and not allow object deletion. Those derived from K-state roots are expected to behave like simple events and allow flexible object realization.

In Section 4.1, we used Maienborn's (2019) event tests of compatibility with manner and locative adverbials and time span interpretations with the modifier *šuwayyah* 'a little' with respect to BA psych verbs data to test prediction (i). The predictions were confirmed where we found inceptive psych verbs, defined by D-state roots and perfective morphology, pass Maienborn's event tests, while imperfective K-state roots do not. This investigation establishes that eventive and stative designations crosscut SubjExp and ObjExp derivations in BA. If we accept that inceptive states are unique instances of non-dynamic events that have properties of events and states, then we must also accept that inceptive psych verbs, especially those encoded by D-state roots, derive eventive SubjExp verbs in BA. This finding contradicts the dominant view in the psych verb literature where SubjExp verbs are cross-linguistically taken to be states, and the state/event controversy is centred around ObjExp verbs (see Chapter 2). Yet, the BA data observed in this section points to a systematic distinction between stative and eventive SubjExp and ObjExp verbs that is determined by the stative root type involved in the derivation and (im)perfective morphology.

Section 4.2 uses multiple aspectual tests to verify prediction (ii). Firstly, the availability of habitual/iterative readings for psych verbs derived from D-state roots in their (im)perfective forms points to an essential distinction between them and psych verbs derived from K-state roots that do not have habitual/iterative readings. We found that K-state roots in their perfective forms, even though they receive the inceptive aspect D-state roots have, do not yield an iterative reading. This is taken as another piece of evidence that suggests an inherent lexical distinction between the two stative roots in BA. The evidence suggests that D-state roots encode a Davidsonian event variable that allows inceptive states to have eventive properties like allowing habitual/iterative readings. K-state roots are argued to be inherently stative, Kimian states in Maienborn's (2005) terms, that do not encode an event variable and thus retain stative properties even though some K-state roots may be coerced into an eventive reading with perfective morphology.[93] Other evidence for this argument is presented in Section 4.4.

The *in/for*-adverbial test, the expansion test, as well as imperfective entailments to verify that inceptive psych verbs do not have a telic endpoint. This supports the claim that inceptive events

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[93] See Chapter 3 for discussions on perfective gaps present for some K-state root verbs in BA and various other Arabic dialects.

are inherently atelic and must be distinguished from right-boundary events, which entail a telic end point. The tests show that contrary to the predictions of standard event structure theories (Dowty, 1979; Filip, 2011; Martin and Schäfer, 2014; Mughazy, 2015), neither causation nor perfectivity yield telic readings for inceptive events, represented here by perfective D-state ObjExp verbs. Essentially, even in traditionally robust telic environments like perfectivity and causation, BA inceptive psych verbs show atelic properties and do not behave like typical right-boundary causatives such as accomplishments and achievements.

Next, the punctual property claimed for inceptive psych verbs is verified via compatibility with the punctual adverbial *fajʾah* 'suddenly', and incompatibility with the durative adverbial *bišwayš* 'slowly'. Finally, the presence of a left-boundary in inceptive psych verbs is shown with their compatibility with reference time adverbials. The aspectual properties of inceptive psych verbs as being punctual, atelic left-boundary eventualities is confirmed with these aspectual tests in this section. Importantly, this section confirms that eventive BA psych verbs belong to a unique class of inceptive verbs that has also been observed in Polish (Rozwadowska, 2003; 2012; 2020; Willim, 2016; 2021; Biały, 2020), Spanish (Marín and McNally, 2005; 2011; Fábregas and Marín, 2015; 2017), and Korean (Choi, 2015a; 2015b; Machicao y Priemer and Fritz-Huechante, 2018) among other languages (see 2.5.2 for summary). This conclusion goes against Arad (1998b) and Biały (2005) who class eventive ObjExp verbs as accomplishments, Grafmiller (2013) who considers them activities, and Rothmayr (2009) or Landau (2010) who assign a possible achievement classification (see 2.4).

Section 4.4 uses compatibility with agentive and dynamic contexts as well as eventive frames to evaluate prediction (iii). This section shows that while such tests fail to differentiate between D-state root psych verbs and K-state roots in their non-causative forms, there is a systematic split pattern of behaviour displayed by the two roots towards these tests in their causative forms. ObjExp verbs derived from D-state roots allow agentive and dynamic contexts and event frames whereas those derived from K-state roots do not. Hence, ObjExp verbs derived from K-state roots are taken to be stative verbs while D-state root ObjExp verbs allow eventive readings, given proper context. This data points to a clear and definable state/event split within ObjExp verbs in BA. This finding provides evidence in support of the debate surrounding the existence of stative causative verbs

(see Pylkkänen, 2000; Arad, 2002; Landau, 2010; Grafmiller, 2013; Żychliński, 2016). BA K-state root ObjExp verbs are instances of stative causative verbs.

The final section in this chapter, Section 4.5, aims at verifying prediction (iv) through the object deletion diagnostic (Rappaport Hovav and Levin, 1998). It is found that all BA K/D-state (im)perfective SubjExp verbs have simple event structures as predicted in the literature. What is surprising is the split event structure profile seen in their ObjExp forms. In their imperfective derivations, ObjExp verbs of both K/D-state roots have simple event structures characterized by one event structure participant. In the literature, stative causative verbs are claimed to have simple event structures which accounts for why stative ObjExp verbs do not lead to a change of state (see Arad, 1998b; Pylkkänen, 2000). What is surprising in the data from BA is that even eventive/agentive D-state root ObjExp verbs are shown to have simple event structures. Such an event structure profile indicates that in their imperfective forms, all BA ObjExp verbs, like Polish psych verbs (Biały, 2020), have standard stative interpretations. This suggests that BA ObjExp verbs in their imperfective forms are not associated with change of state and thus do not license a BECOME operator, contrary to Rothmayr (2009).

In their perfective forms, BA K/D-state ObjExp verbs have two obligatory event structure participants yielding the complex event structure profile of canonical causative verbs. Further research is required to investigate what is unique about (im)perfective morphology in BA that such event structure patterns are observed. What this section has shown is that simple event structures may be obtained with verbs that have overt causative morphology, which is in line with their non-dynamic roots (Pylkkänen, 2000; Arad, 2002).

This chapter focuses mainly on presenting a comprehensive examination of the aspectual nature of psych verbs in different structures in an introspective study. Some of these diagnostic tests are used to substantiate, through empirical study, the claims made in this thesis. In the next chapter we present the results of a large-scale acceptability study gathering data from native speakers in Saudi Arabia. Formal sentence acceptability experiments have been an invaluable tool in theoretical linguistics studies in recent years. They serve to provide quantitative data to provide valuable insights into the grammar of a language (Meltzer-Asscher, 2021). While the necessity for

formal acceptability rating experiments is debated (see e.g. Phillips, 2010; Gibson et al., 2013; Linzen and Oseki, 2018; Goodall, 2021), they nonetheless serve to quell criticisms on the reliability of acceptability judgments made by individual linguists. For this reason, some of the hypotheses drawn in this chapter are evaluated quantitatively in the next chapter. BA presents an interesting case study due to the complex interactions between causation (sometimes overt causative morphology), stative root type, and perfective/imperfective forms that have been shown to result in systematic, predictable patterns of argument structure and aspectual status.

Chapter 5 Experimental Study

In the previous chapters, the landscape for the various treatments psych verbs receive in the literature is reviewed and an analysis is made of BA psych verb data patterns and where they might be placed within the cross-linguistic literature. This chapter presents the results of a large-scale native speaker acceptability rating study where native speaker judgments were gathered to assess the reliability of the acceptability judgments I make regarding some BA psych verb constructions discussed in Chapter 4. The chapter is organized in the following fashion. Section 5.1 presents the methodology used in the experimental study. Section 5.2 presents the results of the experimental study followed by a discussion in Section 5.3. Section 5.4 presents a brief sociolinguistic analysis conducted on the demographic data collected in the questionnaire to examine what effects sociolinguistic factors might have on the acceptability ratings gathered from native speakers. The chapter ends with a summary in (5.5).

5.1 Methods

5.1.1 Experimental hypotheses

This study gathers native speaker acceptability judgments for two major claims made in the previous chapters. The first regards the claim that in their perfective forms, psych verbs represent left-boundary events that have inceptive readings entailing a punctual and atelic aspectual property that should be distinguished from right-boundary events represented by accomplishment verbs that that are telic non-punctual events. Two tests are utilized from previous discussions in this questionnaire (see 4.2): punctuality is diagnosed via compatibility with the punctual adverbial *fajʾah* 'suddenly', and atelicity is diagnosed with the expansion test. The first hypothesis tested in this experiment is that perfective psych verbs should have a higher acceptability rating than accomplishment verbs in punctual contexts. The second hypothesis is that in unbounded contexts using an expansion phrase, perfective psych verbs should have a higher acceptability rating than accomplishments verbs. For ease of reference, I refer to these hypotheses and the claim they test as the perfective condition.

The second claim investigated in the experiment concerns the presence of a stative causative verb class represented by ObjExp verbs derived from K-state roots. Essentially, we have claimed that K-state roots derive stative ObjExp verbs that are incompatible with agentive and dynamic contexts as opposed to D-state root ObjExp verbs that allow such contexts provided proper conditions are met. Following Verhoeven (2010) and Grafmiller (2013), three diagnostics are utilized to test for this claim. The presence/absence of dynamic readings is tested with the progressive construction, and the acceptability of agentive readings is diagnosed with the imperative construction and compatibility with agentive adverbials (see 4.4 for discussions). We hypothesize a higher acceptability rating for ObjExp verbs derived from D-state roots than those derived from K-state roots in all of the following contexts: (i) agentive adverbial modification, (ii) the imperative, (iii) and the progressive. These three hypotheses and the claim they test are referred to as the ObjExp agentive/dynamic condition.

5.1.2 Materials

For the perfective condition, the semantic features of punctuality and atelicity are used as sentential frames (i.e. contexts) for contrasting the experimental items, psych verb perfectives, from the control verbs, accomplishment perfectives. In the experiment, three psych verbs and three accomplishment verbs were used in each of the two contexts with no repeated verbs resulting in a total of 12 stimuli sentences. The verbs used in the stimuli are presented in (1). Only D-state root ObjExp perfectives were used.[94]

(1) a. Experimental group: psych verbs

ʾa-qlaq	'CAUS-worried'	qahar	'frustrated'
wattar	'stressed.CAUS'	zʿʿal	'angered.CAUS'
ʾa-rbak	'CAUS-discomposed'	ṭaffaš	'bothered.CAUS'

b. Control group: accomplishment verbs

ʾa-kkal	'CAUS-fed'	lʿʿab	'played.CAUS'
darras	'taught.CAUS'	kattab	'wrote.CAUS'
šarrab	'drank.CAUS'	maššā	'strolled.CAUS'

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[94] It is believed that K-state roots in the perfective form would also present the same readings. See Chapter 4 for discussion. The D-state root restriction was used here to present uniform data variables.

In (2), an example of the two contexts with the two verb types as they are presented to participants is given (only the first line in Arabic text is given to respondents) (see Appendix A for all lexical data given in the questionnaire). The psych verbs in the (i) examples were hypothesized to receive a higher acceptability rating than the accomplishments in (ii).

(2)   a. **Punctuality:**

        i. فجأة قهرني عمر

         fajʾah   qahar-nī   ʿumar

         suddenly frustrate.PFV.3SM-1SG.ACC Omar

        'Omar suddenly frustrated me.'

        ii. فجأة لعّبتها في الملاهي

         fajʾah   laʿʿab-ta-ha   fī al-malāhī

         suddenly play.CAUS.PFV-1SG.NOM-her in DET-playground

         'Suddenly, I had her play in the playground.'

    b. **Atelicity:**

        i. علي زعّلني أمس وأنا لسى زعلان منه

         ʿalī zaʿʿal-nī   ʾams   wa ʾanā lissā zaʿlān   minn-ah

         Ali anger.CAUS.PFV.3SM-1SG.ACC yesterday CONJ I   still angry.AP.3SM from-him

         'Ali made me angry yesterday and I am still angry with him.'

        ii. أنا شرّبتها المويه ولسى شاربته

         ʾanā šarrab-ta-hā   al-muyah wa lissā šārbi-t-ah

         I   drink.CAUS.PFV-1SG-3SF DET-water CONJ still drink.AP-3SF-3SF

         'I made her drink water and she still is in a state of having drank it.'

For the ObjExp agentive/dynamic condition, since the hypothesis deals only with the sub-categorizations of ObjExp verb event types in BA, and to keep the task at a manageable size we did not include constructions for canonical transitive events nor statives for comparison.[95] Allowing that the perfective in BA is argued to introduce its own aspectual interpretation (see 3.1.2.2 and 4.1.2), all verbs in this set of stimuli were used in their imperfective forms. Two verbs of each ObjExp root type were used in each context without repetition. The verbs used in the

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[95] The absence of canonical transitive verbs like *yiḍrub* 'hit' and *yiksir* 'break', and stative verbs like *yiʿrif* 'know' in the experimental study makes it impossible to judge how BA ObjExp verbs compare to standard events or states. This is an interesting question that is left for future research.

experiment are presented in (3). I refer the reader to (3.1.2 and 3.1.4) for the reasoning behind the classification of BA verbs presented in (3) into D-state or K-state eventualities.

(3) a. Control group: D-state root ObjExp verbs

yi-qliq	'worry.CAUS'	*yi-zaʿʿil*	'anger.CAUS'
yi-qarrif	'disgust.CAUS'	*yi-qhar*	'crush'
yi-ṭaffiš	'bother.CAUS'	*yi-faššil*	'embarrass.CAUS'

b. Experimental group: K-state root ObjExp verbs

yi-lhim	'inspire.CAUS'	*ti-bhij*	'cheers.CAUS'
yi-sʿid	'please.CAUS'	*yi-farriḥ*	'happy.CAUS'
yi-ǧib	'please'	*yi-ḥubb*	'love'

The combination of two verbs of each type with the three semantic contexts results in 12 stimuli. An example is provided in (4) of the ObjExp types in each context as presented to participants (onl the first line of Arabic text is shown in the questionnaire) (also see Appendix A for a list of all sentences used in the study).

(4) a. **Volitional Test**

i. هي متعمده تبهجني اليوم   K-STATE

hī mi-tʿammid-ah ti-bhij-nī   al-yum
she AP-purpose-3SF IPFV.3SF-impress-1SG.ACC DET-day
'She cheers me up on purpose today.'

ii. هم متعمدين يقلقونا   D-STATE

humm mi-tʿammid-īn yi-qliq-ū-nā
they AP-purpose-3PL IPFV-worry.CAUS-3PL-1PL
'They worry us on purpose.'

b. **Imperative Test**

i. إعجبني بُكرَه   K-STATE

ʾiʿjib-nī   bukrah
please.CAUS.IMP.2M-1SG.ACC tomorrow
'Please me tomorrow!'

   ii. فشّلهم   D-STATE
     faššil-hum
     embarrass.IMP.CAUS.2SM-3PL
     'Embarrass them!'

   c. **Progressive Test**
     i. علي قاعد يسعِد الأولاد   K-STATE
      ʿalī qāʿid   yi-sʿid   al-ʾawlād
      Ali PROG.3SM IPFV.3SM-please DET-child.PL
      'Ali is pleasing the children.'

     ii. عمّاني قاعدين يِقهروني   D-STATE
      ʿummā-nī   qāʿd-īn yi-qhar-ū-nī
      uncle.PL-my PROG-PL IPFV-frustrate.CAUS-3PL-1SG.ACC
      'My uncles are frustrating me.'

In all the stimuli animacy was controlled: human NP subjects and objects were used. All in all, there were 24 test items. We also constructed 48 fillers (i.e. 2 times the number of stimuli) half of which were ill-formed to various degrees.[96] All 72 items were pseudo-randomized.

5.1.3 Participants

A survey conducted by the Communication and Information Technology Commission (CITC) during the period between 2017-2019 reports that 95.2% of internet users in Saudi use social media (CITC, 2019, p. 6). Anecdotal observations suggest that WhatsApp is the most popular form of communication in Saudi Arabia. This is confirmed in a recent survey conducted during the month of February 2022 by the Saudi Centre for Public Opinion Polling which sampled 1220 Saudi adults. The results of the survey are presented in Figure 5.1 where WhatsApp is shown to dominate app awareness, preference, and usage in Saudi Arabia.

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[96] Fillers consisted of various sentence types, e.g. statements, questions, imperatives, etc., as well as different tenses and aspects, e.g. future, imperfective, and perfectives. The ill-formed sentences contained errors in gender or number agreement, aspectual mismatch, use of non-existent lexical items, and ordering errors.
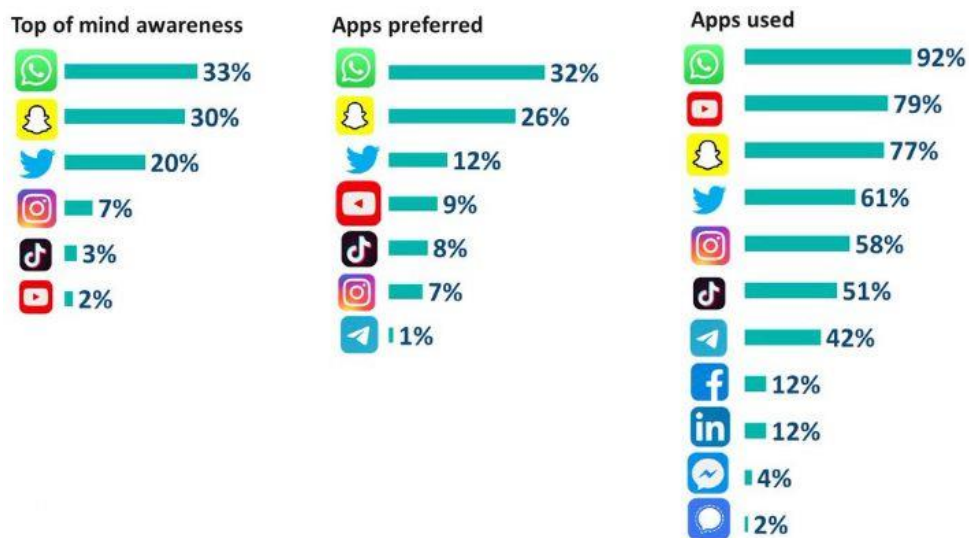
Figure 5.1: Preference ranking for social media apps in Saudi (Saudi Center for Public Opinion Polling, 2022)

Thus, the chosen method for circulating the experimental study's questionnaire was via WhatsApp due to its wide reach within Saudi society, especially during times of social restrictions due to Covid-19 when this study was carried out. A total of 548 respondents took part in the study. Both males and females in ages ranging from 18 to over 50 years old (m= 44) participated. We also gathered demographic information (age, gender, education, and dialect) from the participants.

After providing their consent and proceeding to provide their demographic information, participants were presented with the instructions on completing the questionnaire. They were presented with a stimulus and under it the scale on which to rate the sentence. They were then able to scroll down to the next stimulus until the list was complete and they could submit their response. The questionnaire was built in a way that no participant could proceed to the next step without completing all required elements on the page. Thus, all participants that submitted their responses had provided their consent and answered all the questions provided. 13 responses were removed because three were incorrectly completed and 10 gave the same response too often. The resulting data set is of 24 (stimuli) x 535 (responses) = 12,840 observations made in this questionnaire.

5.1.4 Procedure

The questionnaire was formulated in Google Forms and distributed online through WhatsApp using a snowball method of recruitment where the message attached to the link provided for the questionnaire clearly stated the purpose of the research and who could participate. Native speakers of Arabic in any of the Saudi Arabian dialects were asked to rate each of the 71 sentences on a scale of 1-5, with 1 being 'very bad' and 5 being 'very good' with specific instructions to rate each sentence on how likely they were to say or hear the sentence as it is presented. A rating of 5 would mean that the sentence is very natural and does not flag as being odd. A rating of 1 would mean that the sentence is very bad and would not be used by native speakers of their dialect. It would follow that a rating of 2 to 4 would ascend from being less acceptable, to neutral, and more acceptable. Participants were also clearly instructed to rate the sentence based on their initial intuitive judgment and not judge the item based on MSA grammar or judge 'what' is being said in the sentence. It was made explicit that there were no correct or incorrect answers. All script in the WhatsApp recruitment message and the Google questionnaire was presented in a neutral Saudi dialect meaning that no unique morphological, lexical, or syntactic items were used that are typically associated with a particular dialect.

The data was analysed using SAS and data visualization is formulated with Tableau. For statistical analysis using t-tests and/or analysis of variance (ANOVA), underlying assumptions related to normality and homogeneity of data have been maintained in using either analysis.

5.1.5 Ethics and approvals

The data in this study was designed and collected with the approval of the Arts, Humanities, and Cultures Ethics Committee (approval reference LTSLC-122). All data was collected, and results recorded via Google Forms on December 2020 and handled in compliance with the 1998 Data Protection Act. No participant name, or other individual identifying information, was collected, so the data was anonymous from the start. Personal information was not gathered; therefore, the General Data Protection Regulation (GDPR) was observed for this study.

5.2 Results

5.2.1 The perfective condition

The research question was whether perfective morphology prescribes a punctual onset of an atelic eventuality for psych verbs that is in contrast to the aspectual features of accomplishment verbs that feature non-punctual telic events in the perfective form. We tackled this question by formulating contexts that are sensitive to punctuality and the presence of an atelic eventuality. The punctuality context is framed using a punctual adverbial *fajʾah* 'suddenly' in the main clause of the predicate. The atelic context is framed with the use of an expansion phrase which consists of *lissā* 'still' plus an AP form of the matrix psych verb. Both tests are discussed in more detail in Chapter 4. Table 5.1 presents the mean acceptability ratings of responses for each stimulus used in the test in the two contexts.

Table 5.1: Mean values of acceptability ratings for verbs in the perfective context.

Test	Verb Type	Mean	SD
	Experimental group: psych verbs	**3.11**	**1.34**
	ʾa-qlaq 'CAUS-worried'	2.92	1.27
	qahar 'frustrated'	3.22	1.41
Compatibility with a **punctual adverbial**	*wattar* 'stressed.CAUS'	3.20	1.33
	Control group: accomplishment verbs	**2.62**	**1.40**
	ʾa-kkal 'CAUS-fed'	1.87	1.13
	laʿʿab 'played.CAUS'	2.84	1.35
	darras 'taught.CAUS'	3.14	1.38
	Experimental group: psych verbs	**3.26**	**1.40**
	zaʿʿal 'angered.CAUS'	3.68	1.28
	ʾa-rbak 'CAUS-discomposed'	3.07	1.43
Compatibility with an **expansion phrase**	*ṭaffaš* 'bothered.CAUS'	3.01	1.38
	Control group: accomplishment verbs	**2.11**	**1.25**
	kattab 'wrote.CAUS'	2.13	1.30
	šarrab 'drank.CAUS'	1.92	1.17
	maššā 'strolled.CAUS'	2.28	1.24

Figure 5.2 presents a visual representation of the data shown in Table 5.1 on a Likert scale of 1-5 where the mean rating of each stimulus is illustrated on each scale. The responses in Figure 5.2 show a general trend of a higher acceptability rating for psych verbs than accomplishment verbs in both the expansion and punctual constructions in their perfective forms. Accomplishment verbs weigh more on the left end of the scale towards the lower values (1= very bad), whereas psych verbs lean more towards the acceptable end of the scale (5 = very good).
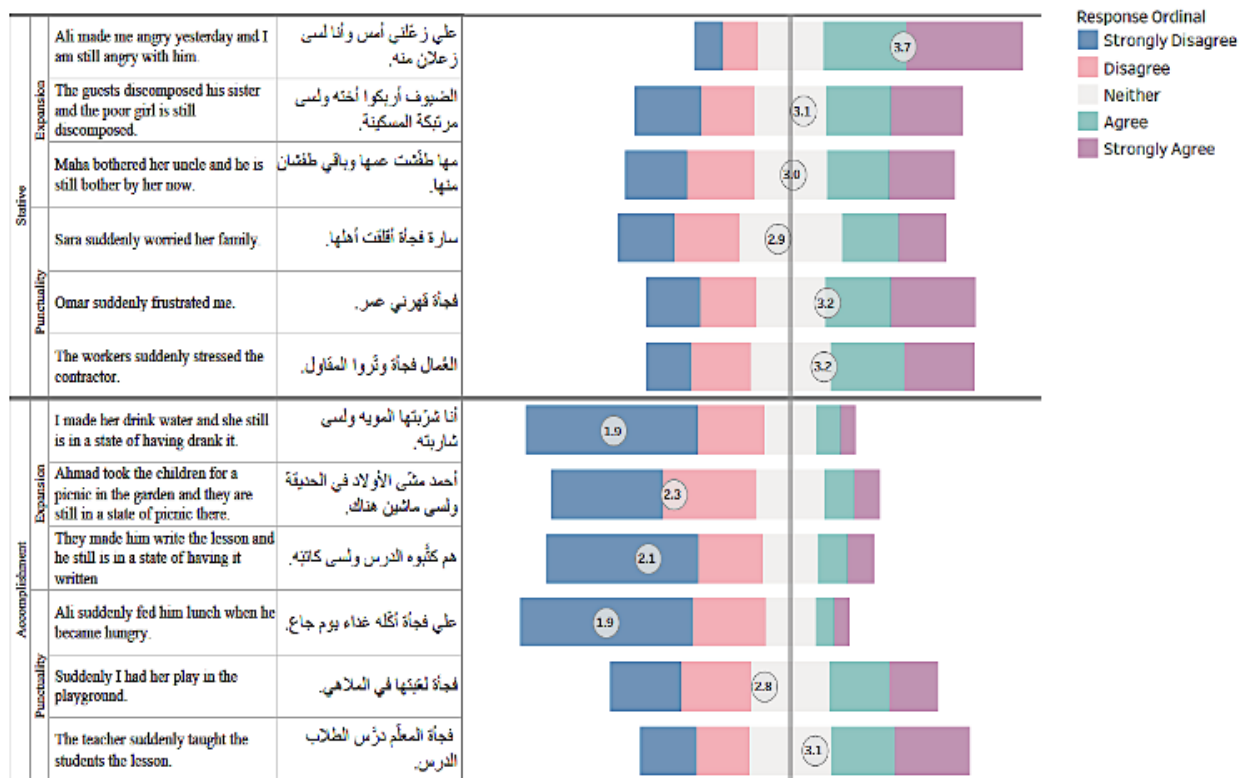
Figure 5.2: Ratings for each verb on a 5-point Likert scale rating in the perfective context.

Figure 5.3 represents the aggregated mean of each verb type in each context. Psych verbs in the punctual context ($m = 3.12$) have a higher acceptability rating than accomplishment verbs ($m = 2.62$) in the same context. In the expansion test used to determine the presence of an atelic context, psych verbs ($m = 3.26$) again rate higher in acceptability than accomplishments ($m = 2.11$) in the same context.
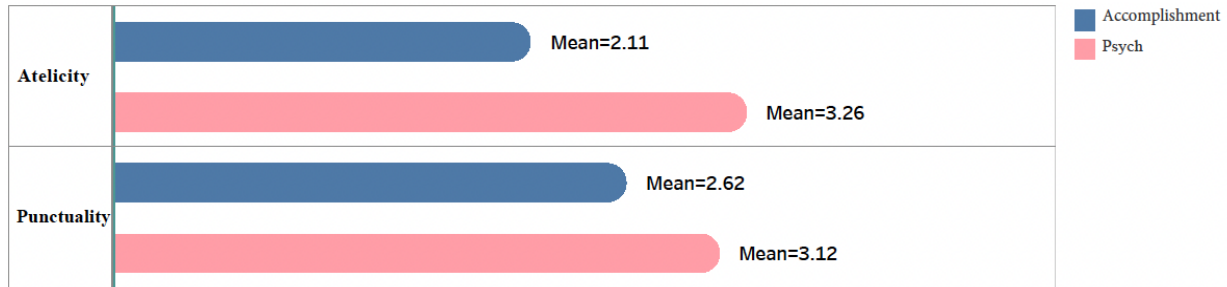
Figure 5.3: Mean acceptability rating by context in the perfective condition (n=535).

Figure 5.4 below shows the distribution of ratings by individual verbs within the atelic and punctual contexts. The data shows a clear divergence between the means of psych verbs and accomplishment verbs in the expansion test. Conversely, the punctuality context shows an overlap between the two verb types where the ratings congregate around a neutral response rating. While psych verbs are more on the higher end of the acceptability scale, accomplishment verbs show a much wider variation in their acceptability scores. The accomplishment verb ʾakkal 'feed.CAUS.PFV' is given the lowest acceptability (very bad) rating as was expected for all accomplishment verbs. Note that the y-axis representing the acceptability rating begins at 2 and ends at 4 to better visualize the differences between the verb types.[97]

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[97] The axis representing acceptability ratings are adjusted throughout the rest of the chapter to best showcase the differences between compared items.
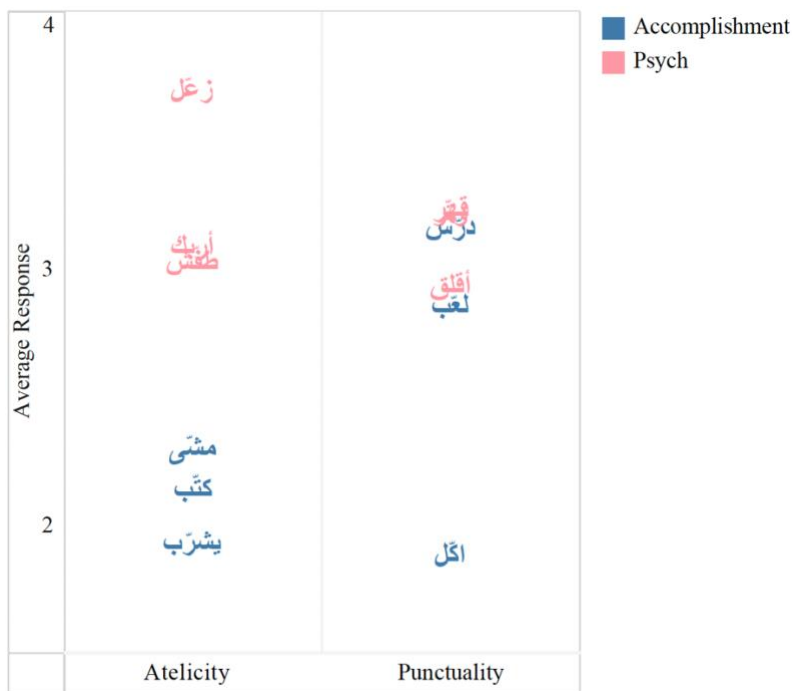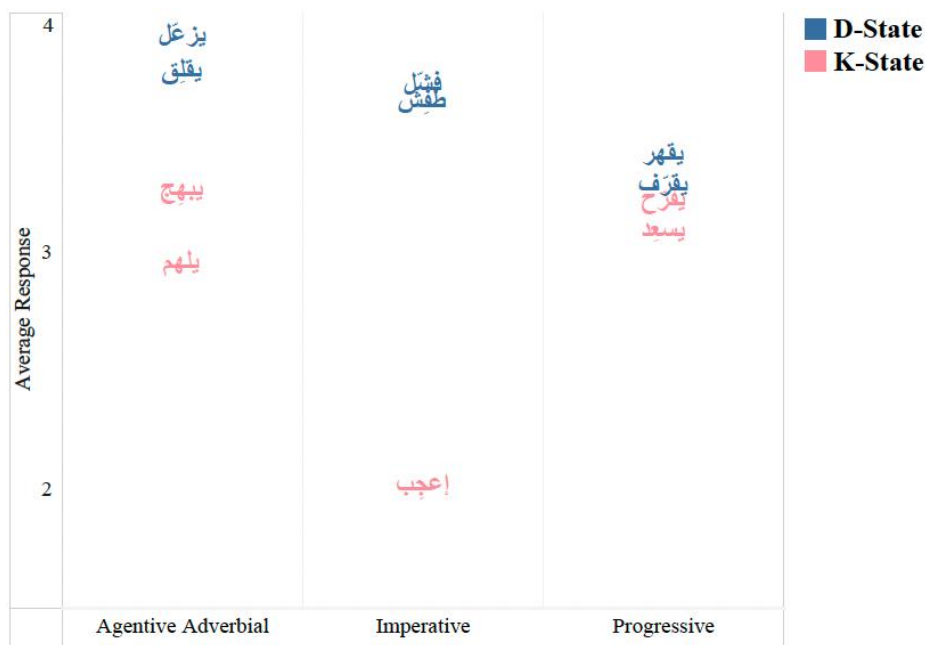
Figure 5.4: Mean ratings of individual verbs in each context in the perfective condition (n = 535).

A t-test is used to compare the aspectual properties of atelicity and punctuality of the two verb types in perfective contexts. The data shows a highly significant statistical difference between the means of psych verbs ($m = 3.11$, $sd = 1.34$) and accomplishment verbs ($m = 2.62$, $sd = 1.40$) in the punctuality context, $t(3208) = 10.18$, p-value $= < 0.0001$. Additionally, the analysis of the data shows a highly significant statistical difference between the means of psych verbs ($m = 3.26$, $sd = 1.40$) and accomplishment verbs ($m = 2.11$, $sd = 1.25$) in the atelic context using the expansion test construction, where the t-test results were $t(3208) = 24.46$, p-value $= <0.0001$. See Table 5.2 below for summary.

Table 5.2: Summary of two-samples t-test *p*-values per context in the perfective condition.

Context	df	*t*-value	*p*-value
Punctuality	3208	10.18	<.0001*
Atelicity	3208	24.46	<.0001*

* significant at α= 0.05

5.2.2 ObjExp agentive/dynamic condition

The second research question addressed in the experiment has to do with whether the root type of the ObjExp verb plays a role in determining the stative/eventive characterization of the verb. The argument made in Chapter 4 is that ObjExp verbs with D-state roots allow agentive and dynamic interpretations that K-state rooted ObjExp verbs do not, i.e. D-state ObjExp verbs allow more event-like behaviour as opposed to K-state ObjExp verb which are robust stative verbs. Therefore, K-state ObjExp verbs should rate lower in acceptability than their D-state counterparts in dynamic and agentive tests. Table 5.3 presents the average ratings provided by the participants in the study for the ObjExp stimuli used in the test.

Table 5.3: Mean values of acceptability ratings for ObjExp verb event tests.

	Test	Verb Type	Mean	SD
Agency	Compatibility with **agentive adverbials**	**Experimental group: K-state ObjExp**	**3.09**	**1.37**
		yi-lhim 'inspire'	2.94	1.37
		yi-bhij 'cheers'	3.25	1.35
		Control group: D-state ObjExp	**3.82**	**1.20**
		yi-qliq 'worry.CAUS'	3.74	1.20
		yi-zaʿʿil 'anger.CAUS'	3.90	1.90
	Compatibility with **imperative** structures	**Experimental group: K-state ObjExp**	**2.01**	**1.29**
		ḥubb 'love'[98]	2.75	1.34
		ʾiʿjib 'please'	2.01	1.29
		Control group: D-state ObjExp	**3.65**	**1.35**
		faššil 'embarrass.CAUS'	3.69	1.34
		ṭaffiš 'bother.CAUS'	3.62	1.36
Dynamicity	Compatibility with **progressive** markers	**Experimental group: K-state ObjExp**	**3.14**	**1.36**
		yi-farriḥ- 'happy.CAUS'	3.21	1.38
		yi-sʿid 'please'	3.08	1.35
		Control group: D-state ObjExp	**3.33**	**1.39**
		yi-qarrif 'disgust.CAUS'	3.27	1.37
		yi-qhar 'frustrate'	3.40	1.41

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[98] The verb *ḥubb* 'love' in the imperative condition was discovered to be problematic after concluding data collection and running the analysis. The K-state *ḥubbu-hum* 'love-them' was used for the imperative condition but it was not used in the causative form, i.e. this was not the imperative of the ObjExp but rather the SubExp. The stimuli in (ii) should have been used in the experiment and the intuition of the author is that (ii) is as unacceptable as (i).

i.   ḥubbu-hum
       love.IMP.2SM-them
       'Love them!'

ii.   ḥabbib-hum   fī-h
       love.IMP.2SM.CAUS-them   in-it
       'Make them love it.'

This item was removed from data analysis and henceforth will not be mentioned in the study on ObjExp event types. It must be noted, however, that the low acceptability of the SubjExp imperative in (i) with a mean result of ($M = 2.7$, SD = 1.34) provides a native speaker corroboration of own judgement for the unacceptability of statives in the imperative conjugation in BA. See Section 4.4.2.1. An accurate representation of the final data set in the experiment is 23 (sentences) x 535 (responses) = 12,305 observations.

In general, ObjExp verbs with D-state roots received higher acceptability ratings than K-state roots in the eventive contexts of agency and dynamicity. The distribution of participant responses in Figure 5.5 below shows the overall favourability of D-state root ObjExp verbs in agentive and dynamic contexts on a Likert scale of 1-5 where the mean rating of each stimulus is presented on each scale.
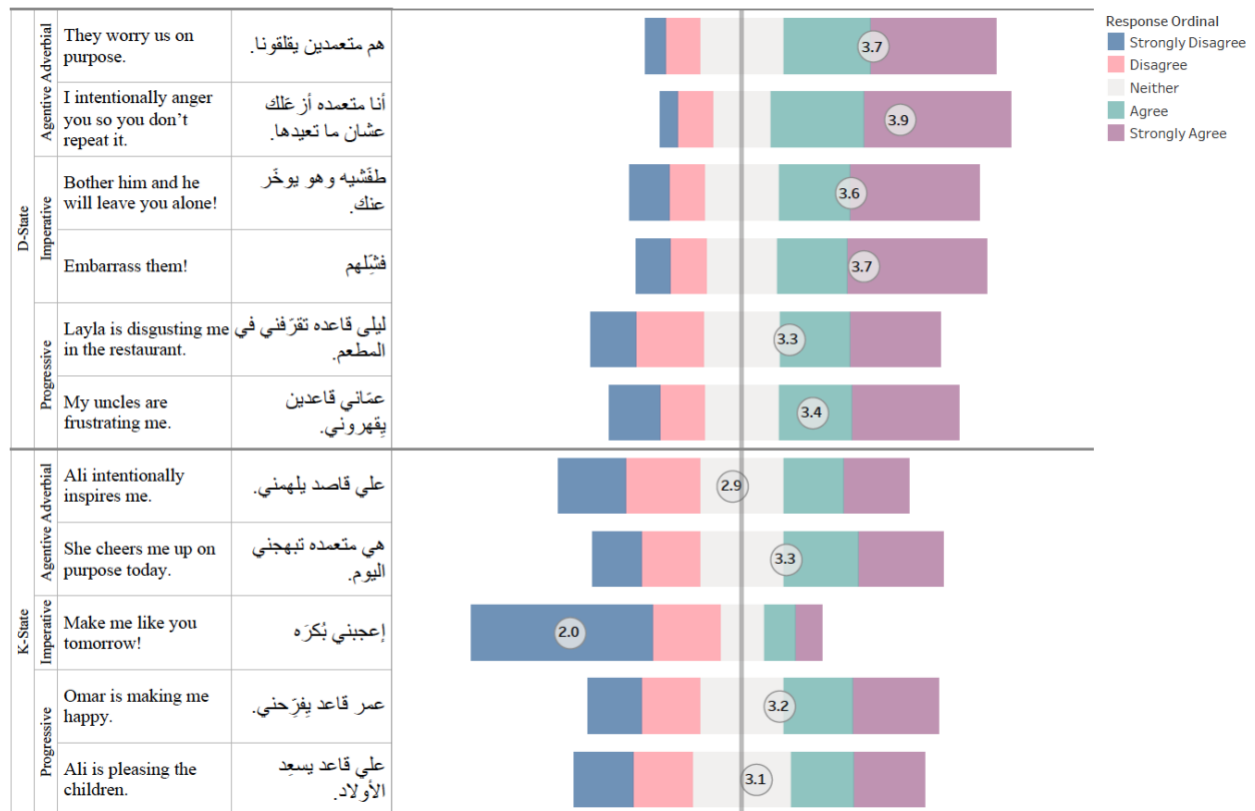
Figure 5.5: Ratings for each verb on a 5-point Likert scale rating for ObjExp agentive and dynamic contexts.

Figure 5.6 below shows the overall mean of each ObjExp root type in each of the three contexts. In the agentive tests, D-state root ObjExp verbs are more acceptable in both the agentive adverbial ($m = 3.83$) and imperative ($m = 3.66$) contexts as opposed to K-state root ObjExp verbs which received a lower mean acceptability rating of ($m = 3.10$) in the agentive adverbial context and ($m = 2.02$) in the imperative context. The dynamic feature detected with the progressive test again shows a higher mean of acceptability rating for D-state root ObjExp verbs ($m = 3.34$) than K-state root ObjExp verbs ($m = 3.15$).
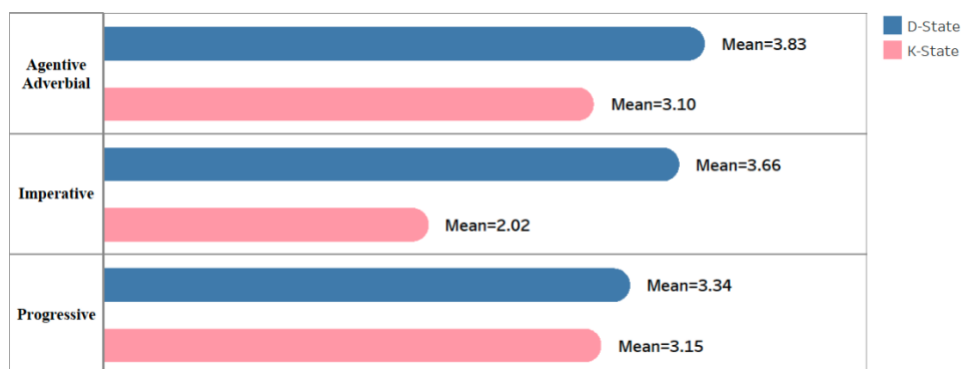
Figure 5.6: Mean acceptability rating by context in the ObjExp agentive/dynamic condition (n=535).

Figure 5.7 provides a clear illustration of the higher acceptability rating D-state root ObjExp verbs receive in all eventive contexts as opposed to K-state root ObjExp verbs which are rated lower on the acceptability rating scale. The divergence between both verb root types is clear in the agentive contexts. However, the progressive context shows a less clear distinction between D-state and K-state roots.

Figure 5.7: Mean ratings of individual verbs in each context in the ObjExp agentive/dynamic condition (n = 535).

A t-test is used to compare the effect of verb root type on the aspectual properties of ObjExp verbs in terms of allowing an eventive or stative interpretation. The data shows a significant effect of verb root in all contexts at α level = 0.05 (Table 5.4). There is a highly significant statistical difference between the means of D-state ObjExp verbs (m = 3.82, sd = 1.20) and K-state ObjExp verbs (m = 3.09, sd = 1.37) in the agentive context with the volitional adverb test where the t-test result is $t(2138)$ = 13.02, p = < 0.0001. Also, a highly significant statistical difference, $t(1603)$ = 23.18, p-value = < 0.0001, was found in the imperative context for the agentive context between the means of D-state ObjExp verbs (m = 3.65, sd = 1.35) and K-state ObjExp verbs (m = 2.01, sd = 1.29). Finally, the progressive context also showed a highly significant statistical difference between the means of D-state ObjExp verbs (m = 3.33, sd = 1.39) and K-state ObjExp verbs (m = 3.14, sd = 1.36), t-test result of $t(2138)$ = 3.16, p = <0.0016.

Table 5.4: Summary of two-samples t-test p-values per context in the ObjExp agentive/dynamic condition.

Context		df	t-value	p-value
Agency	Agentive adverbial	2138	13.02	<.0001*
	Imperative	1603	23.18	<.0001*
Dynamicity	Progressive	2138	3.16	.0016*

*significant at α= 0.05

5.3 Discussion

Part of the experimental study presented in this chapter focused on the perfective derivation of psych verbs, as a subgroup of stative verbs and the narrow focus of this thesis, to investigate the proposed aspectual features of punctuality and atelicity for inceptive aspect in BA. The result of the study shows that expansion phrases and the punctual modifier *faj'ah* 'suddenly' are more acceptable with perfective psych verbs than for perfective accomplishment verbs. The native speaker acceptability judgments support my own intuitions about the data as discussed in (4.2.2).

A comment is in order regarding the higher than expected acceptability ratings of the accomplishment verbs *la''ab* 'play.CAUS.PFV' (m = 2.84, sd = 1.35) and *darras* 'teach.CAUS.PFV'

(m = 3.14, sd = 1.38) in the punctuality context.[99] Theoretically, durative eventualities, like accomplishments, prohibit the presence of a time-point adverbial, like *suddenly* (Mittwoch, 2019). It is hypothesized that durative events in BA, even in their perfective forms, which are taken to be punctual and are projected from a single point (usually the endpoint), are incompatible with punctual adverbials like *fajʾah* 'suddenly'. Hence, the prediction for this study was that accomplishment verbs would receive lower acceptability ratings than psych verbs in punctuality contexts. The verb *ʾakkal* 'fed' (m = 1.87, sd = 1.13) exhibits the predicted low acceptability rating consistent with the hypothesis argued. Contrary to expectations, many respondents to the questionnaire did not rate the verbs *darras* 'teach.CAUS.PFV' and *lˁˁab* 'play.CAUS.PFV' towards the lower end of acceptability as mentioned above. Looking at the verb *darras* 'teach.CAUS.PFV' specifically, which has the highest acceptability rating of the accomplishment stimuli in the punctuality context, we examine the stimuli sentence provided for participants as well as the one for the verb *ʾakkal* 'feed.CAUS.PFV' in (5).

(5) a. *al-mudarris   fajaʾa   darras   aṭ-ṭullāb
        DET-teacher.SM suddenly study.CAUS.PFV.3SM DET-student.PL.*M*
        'The teacher suddenly taught his students.'

    b. *ˁalī fajʾah   ʾakkal-ah   ġadā yum   jāˁ
        Ali   suddenly eat.CAUS.PFV.3SM-him lunch when hungry.PFV.3SM
        'Ali suddenly fed him lunch when he became hungry.'

We speculate that a reading of a sudden start, or onset, of an accomplishment event in the perfective form is accessible for some respondents. This makes sentences such as (5a) acceptable for some respondents under an interpretation of *the teacher suddenly started teaching the lesson*, whereas the intended meaning in the experimental element was *the teacher suddenly taught the students the lesson* which is unacceptable based on my own intuition. Contrast (5a) with (5b), where this ambiguity is resolved with the use of a reference time adverbial which generates an inceptive reading (see 4.2.4) and acts as the trigger or stimulus for the onset of the event in the matrix clause which is understood to be instantaneous due to modification with *fajʾah* 'suddenly'. In such a context where a left-boundary is assigned and a punctual reading is forced with a punctual

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[99] Refer to Figure 5.4 for an illustration of these verbs' placement on the acceptability scale in relation to the other verbs in the study

adverbial, accomplishment verbs are less acceptable. It should be noted, that even with such ambiguity raising the average of the acceptability ratings of accomplishment verbs in the punctual context, there remains enough differentiation between the two verb types to reject the null hypothesis. In sum, the acceptability judgment results for the perfective condition provide evidence for a highly significant statistical difference in acceptability linked to verb type on the aspectual properties of punctuality and atelicity.

As for the findings in ObjExp agentive/dynamic condition, the study shows a clear difference between the behaviour of K-state and D-state roots in ObjExp verb constructions. There was a highly significant difference in speaker acceptability judgment ratings between ObjExp derived from K-state roots and D-state roots in the agentive and dynamic contexts. The hypothesis that K-state ObjExp verbs should rate lower in acceptability than their D-state counterparts in dynamic and agentive tests was supported. The present study suggests that two subgroups of stative and eventive ObjExp verbs may be identified in BA by the stative root type involved in the formulation of the ObjExp verb. The findings for BA lend support to theories that argue for a grammatically relevant aspectual distinction between ObjExp verbs such that they do not present a uniform class of verbs (Arad, 1998b; Pylkkänen, 2000; Rothmayr, 2009; Fábregas and Marín, 2015; García-Pardo, 2018).

5.4 Sociolinguistic analysis

It was mentioned prior that demographic information was gathered from the participants in the study. Although the thesis is not focused on the sociolinguistic aspect of BA psych verbs, some interesting results were obtained which are worth mentioning. The aim in presenting the following results from the demographic data analysis is to provide insight into sociolinguistic factors that may be relevant in the grammatical patterns of Saudi speakers. The section starts out with a general description of the demographic data collected in Section 5.4.1. The following section 5.4.2 provides the results of the analysis on the demographic variables, specifically dialect, as they pertain to the two main queries the study investigates: the aspectual reading of the stative perfective, and the presence of an ObjExp verb contrast.

5.4.1 Demographic analysis

There were four major categories of demographic information gathered in this study: dialect, age, gender, and education. For dialect, participants were asked to choose from a list of provided dialects which one they identified as using. The choices were Albaha (or BA; the primary dialect under study in this thesis), Najdi, Hijazi, Hasawi or Eastern, Northern, and Southern dialects. The majority of responses were from Albaha, Najdi, and Hijazi speakers whereas the other dialects represented less than 10% of overall responses. Therefore, those dialects that had <10% were aggregated into an 'Others' category which amounts to 73 responses (14%) of all 535 respondents. Figure 5.8 shows the percentages of respondents for the major dialects which feature a much higher number of respondents.
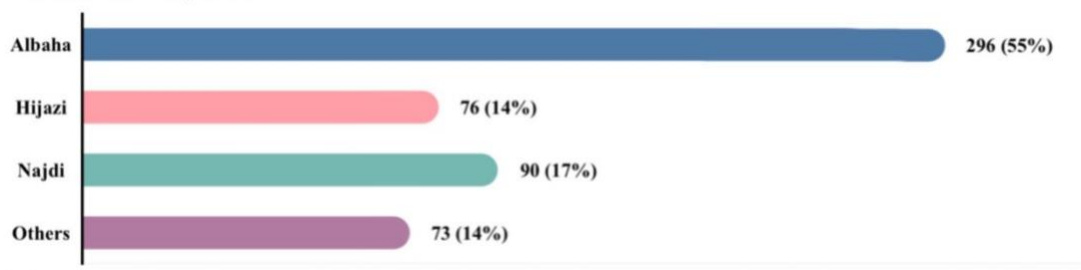
Figure 5.8: Distribution of responses by dialect (n = 535).

Figures [5.9 - 5.11] show the distribution of the sample according to age group, gender, and education. Overall, all the categories of the different variables are well represented by the data.
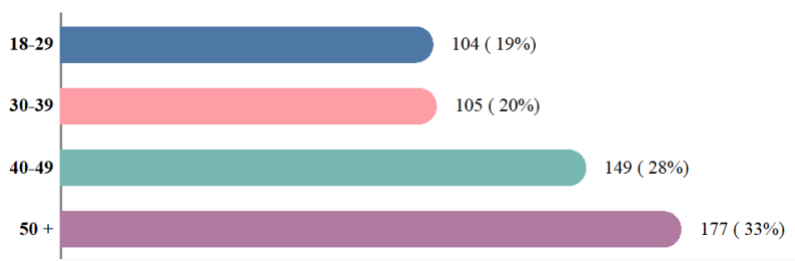
Figure 5.9: Distribution of responses by age (n = 535).
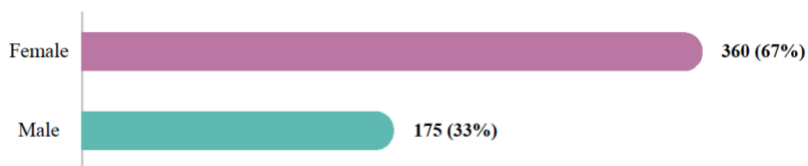
Figure 5.10: Distribution of responses by gender (n = 535).
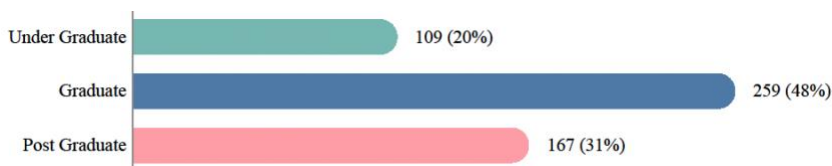
Figure 5.11: Distribution of responses by education (n = 535).

5.4.2 Results and discussion

An analysis of variance (ANOVA) was used to test the differences of the means of responses among the dialects according to verb type (psych vs accomplishment) in the perfective context. The data shows no significant statistical differences between the means of responses according to dialect within the group of psych verbs $F(3,3206)= 2.42$, p-value = 0.06, and within accomplishment verbs, $F(3,3206)= 1.91$, p-value = 0.12 at α level = 0.05, see Table 5.5. Figure 5.12 visualizes the same inferences. The data shows that respondents across dialect groups have relatively stable judgments regarding the acceptability ratings of the verbs, which suggests that speakers across various regions in Saudi Arabia share the same intuitions as BA (Albaha) speakers with respect to the semantic opposition between psych verbs and accomplishment verbs in their perfective forms. This lends support to the claim that psych verbs in the perfective form are more compatible with atelic and punctual readings than accomplishment verbs.
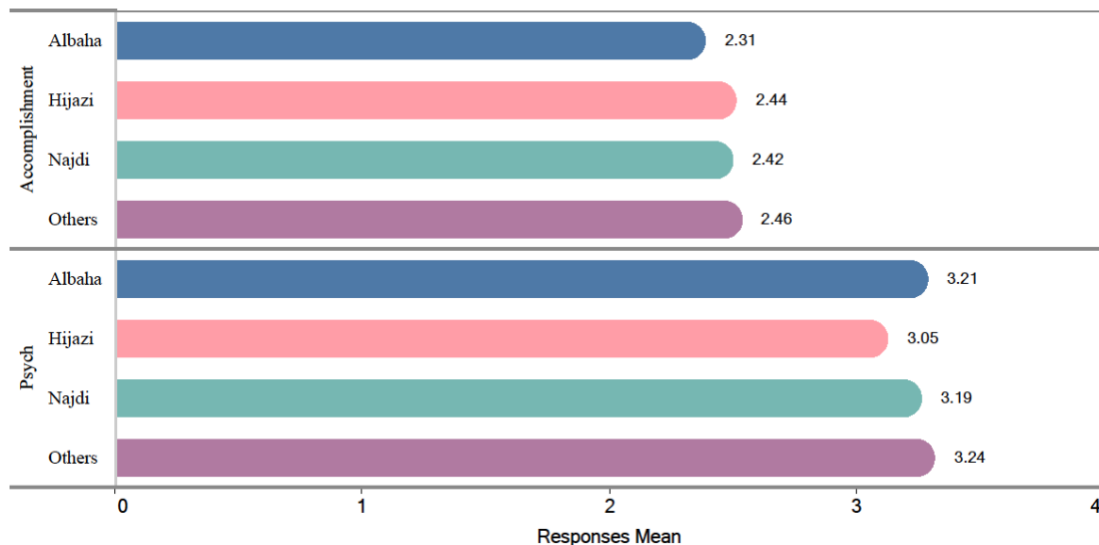
Figure 5.12: Comparison between means of responses for each verb type distributed by dialect in the perfective context.

Table 5.5: ANOVA outcome of the differences of means between dialects within verb types in the perfective context.

Dialects	Psych verbs		Accomplishment verbs	
	Mean Difference	p-value	Mean Difference	p-value
Albaha * Hijazi	0.16	0.11	0.12	0.29
Albaha * Najdi	0.02	0.98	0.11	0.32
Albaha * Others	0.02	0.98	0.14	0.16
Hijazi * Najdi	0.13	0.40	0.01	0.99
Hijazi * Others	0.18	0.16	0.02	0.99
Najdi * Others	0.05	0.933	0.03	0.97

* significant at $\alpha = 0.05$

An analysis of variance was used to determine if significant differences are detectable between the mean responses for the K-state and D-state root verb types in the ObjExp agentive/dynamic condition based on speakers' dialect. Figure 5.13 shows that within the group of D-state root ObjExp verbs, speakers of Hijazi ($m = 3.54$) and Albaha ($m = 3.48$) dialects provided similar acceptability ratings for D-state ObjExp verb items which are lower than those provided from speakers of Najdi ($m = 3.96$) and Other ($m = 3.78$) Saudi dialects who rated those same items with

a higher acceptability rating. In the case of K-state root ObjExp verbs, the acceptability ratings are similar across all dialects.

The acceptability ratings between dialects in the ObjExp agentive/dynamic condition shows a highly significant statistical difference for ratings of D-state verbs, $F(3,3206)= 21.63$, p-value = <0.0001, in dynamic and agentive contexts as opposed to the K-state root ObjExp verbs which showed no statistical significance, $F(3,2671)= 0.90$, p-value = 0.43.
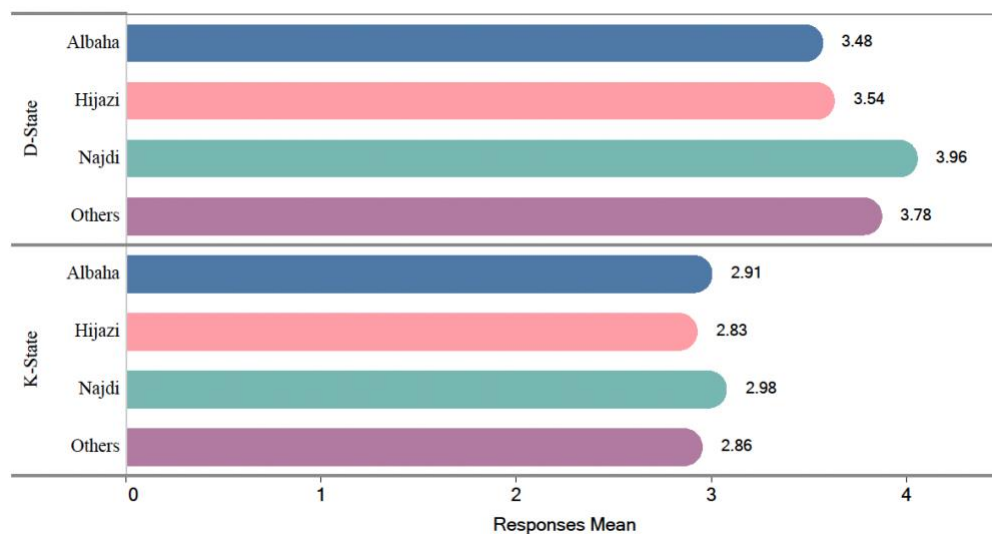
Figure 5.13: Comparison between means of responses for each verb type distributed by dialect in the ObjExp agentive/dynamic condition.

Table 5.6 below shows the results of post hoc Tukey pairwise testing within ObjExp verb types where significant p-values are obtained between all dialects except between Hijazi and Albaha (p-value = 0.83) and between Najdi and Other (p-value = 0.13) dialects within the D-state root ObjExp verb type ratings. K-state root ObjExp verb ratings show no statistically significant differences between dialects.

Table 5.6: ANOVA Outcome of the differences of means between dialects within verb types in the ObjExp agentive/dynamic condition.

Dialects	D-state ObjExp		K-state ObjExp	
	Mean Difference	*p*-value	Mean Difference	*p*-value
Albaha * Hijazi	0.05	0.83	0.07	0.78
Albaha * Najdi	0.48	<0.0001*	0.07	0.77
Albaha * Others	0.30	0.0001*	0.05	0.93
Hijazi * Najdi	0.42	<0.0001*	0.15	0.42
Hijazi * Others	0.24	0.0301*	0.02	0.99
Najdi * Others	0.18	0.13	0.12	0.60

* significant at $\alpha = 0.05$

A further analysis was conducted to determine if dialect is a factor in the highly significant statistical differences seen between verb types obtained in the perfective and ObjExp agentive/dynamic conditions (see 5.2) where all respondents ($n = 535$) were considered. Table 5.7 indicates that all dialects show a similar significant statistical *p*-value between verb types in both the perfective and ObjExp agentive/dynamic conditions. This is not surprising given the lack of significant differences between dialects in the mean acceptability ratings within verb types in the perfective condition and within the K-state ObjExp verb type in the ObjExp agentive/dynamic condition (see Tables 5.5 and 5.6). The only exception is in the significant differences found between dialects in the acceptability ratings of D-state verbs in the ObjExp agentive/dynamic condition. Even though Albaha and Hijazi speakers rated D-state verbs lower on the acceptability scale than other dialects, a highly significant statistical difference is maintained between the means of D-state root ObjExp verbs and K-state root ObjExp verbs for Albaha ($t = -11.57$, *p*-value = < 0.0001) and Hijazi ($t = -7.29$, *p*-value = < 0.0001) speakers.

Table 5.7: Outcome of t-test results of the experimental test based on dialect.

Condition	Dialects	Mean Difference	Standard Error of Difference	t Ratio	p-value
Perfective	Albaha	0.90	0.04	19.88	< 0.0001*
	Hijazi	0.61	0.09	6.59	< 0.0001*
	Najdi	0.76	0.08	9.21	< 0.0001*
	Others	0.77	0.09	8.34	< 0.0001*
ObjExp Agentive/ Dynamic	Albaha	-0.56	0.04	-11.57	< 0.0001*
	Hijazi	-0.70	0.09	-7.29	< 0.0001*
	Najdi	-0.97	0.08	-11.46	< 0.0001*
	Others	-0.92	0.09	-9.51	< 0.0001*

* significant at $\alpha = 0.05$

Similar tests were conducted for the other demographic groups (education, age, and gender). The results showed that there was no significant effect of any demographic section on the results obtained for the significance of verb type in experimental conditions. For all education levels, age groups, and for both males and females, a highly significant statistical effect of verb type was found in the perfective condition and an equally highly significant statistical effect of K-state vs D-state root in the ObjExp agentive/dynamic condition (p-value = <0.0001). See Appendix B for the outcome of the t-test analysis for these variables.

The experimental study presented here has shown that the hypothesis that psych verbs in the perfective form are more acceptable with punctual adverbials and expansion phrases than accomplishment verbs, and the hypothesis that ObjExp verbs derived from D-state roots are more acceptable in agentive and dynamic contexts than those derived from K-state roots, is supported not only by native speaker judgments from BA, but also from various dialects and demographics in Saudi Arabia.

5.5 Summary

This chapter presented the results of a large-scale native speaker acceptability rating experimental study used to test some of the hypotheses advanced in this study. The first argument is concerned

with perfective morphology and how psych verbs in their perfective forms are inceptive events with unique punctual and atelic features that distinguish them from right-boundary events like accomplishments. Accomplishments were chosen for comparison as ideal representatives for telic change of state events for whose class eventive psych verbs are often assigned to (see e.g. Arad, 1998b). The expansion phrase test (see 4.2.2.2) was used in the experiment to diagnose the presence of an atelic feature in inceptive psych verbs. Compatibility with the punctual adverbial *fajʾah* 'suddenly' was used as a test to diagnose the presence of a punctual property.

The hypothesis investigated in the experimental study is that psych verbs in the perfective condition in atelic and punctual contexts are more acceptable than accomplishment verbs which should receive lower acceptability ratings in the same contexts. The results of the experimental study found support for the hypothesis which confirms the punctual and atelic property of psych verbs in their perfective forms as opposed to accomplishment verbs.

The second argument tested in this experiment is concerned with the stative/eventive readings of ObjExp verbs. It was previously argued (see 4.4) that only ObjExp verbs derived from D-state roots may allow eventive readings in BA while those derived from K-state roots are always stative. The tests used to verify the eventive status of ObjExp verbs are dynamic contexts in the form of the progressive constructions, and agentive contexts using agentive adverbials and the imperative construction. The hypothesis is that D-state ObjExp verbs should be compatible with agentive and dynamic contexts while K-state ObjExp verbs are much less acceptable in those same contexts. The findings of the large-scale acceptability study support the claim that BA ObjExp verbs derived from K-state roots are examples of stative causatives as argued in Arad (1998b), Pylkkänen (1998), and Biały (2020) (see Chapter 2 for review).

Responses were gathered from a diverse population and support for the hypotheses was found not only from native BA speakers, but also from various other Saudi dialects, two of which form major Saudi dialects: Najdi and Hijazi. Other population segments, like age, education, and gender, also showed a highly significant effect of verb type on the means of acceptability ratings in the different contexts. The experiment is unique in presenting quantitative data from a complex language confirming not only the unique aspectual properties of ObjExp verbs and how they differ from

canonical causatives, but also, that ObjExp verbs form two distinct groups that have stative or eventive status depending on the root type involved in the derivation.

Chapter 6 Conclusion

This thesis is an exploration of the aspectual classification and event structure of psych verbs in BA. Many aspects of these verbs are highly controversial in the literature, and no consensus has been established with respect to their analysis or characterization of their properties. Their peculiar behavior regarding well recognized grammatical conventions has led to arguments that psych verbs are a special class of verbs that present distinct syntactic properties. Yet others argue that psych verbs are not different from regular non-Experiencer verbs and do not require special provisions in grammar to account for their diverse behavior. In the course of our discussions in this thesis that considers cross-linguistic evidence and based on extensive investigation of BA psych verbs, we find that BA psych verbs present a case for the grammatical uniqueness of this class of verbs that stems for the same patterns found within the general class of non-dynamic verbs in this language. Based on the findings in this work, this thesis makes three key contributions: (i) the identification of a unique class of non-dynamic eventive verbs represented by inceptive states, (ii) the verification of the existence of causative structures with simple event structures, i.e., causative states, and (iii) evidence that BA verbal roots interact with aspectual morphology to condition event interpretation. The following recapitulates the findings of this study and the implications the results have on the current assumptions in grammar.

The aim to describe the aspectual designation of BA psych verbs motivated an exploration of BA stativity in Chapter 3. The investigation found that similarly to other Arabic dialects, there exists a clear and systematic split within the stative verb class in BA. Essentially, the argument presented in Chapter 3 is that BA stative verbs are divided into canonical states displaying typical stative behavior, and inceptive states that display more eventive behavior. Adopting Maienborn's (2005) Davidsonian event typology, we argued that BA states are determined at the root level where canonical states are considered Kimian states (K-state roots) in Maienborn's terminology, and Davidsonian states (D-state roots) derive inherently inceptive states. It is found that the K/D-state distinction cross-cuts BA SubjExp and ObjExp verbs and makes it possible to classify their aspectual character based on the properties of the roots that derive the psych verb. D-state roots derive eventive psych verbs, while K-state roots derive stative psych verbs in both SubjExp and ObjExp forms. Thus, all D-state rooted psych verbs pass event tests like compatibility with manner

and locative adverbials, compatibility with habitual/iterative readings, and compatibility with the event frame, while K-state root psych verbs do not. This is contrary to the claim frequently found in the literature that *all* SubjExp verbs, cross-linguistically, are stative as reviewed in Chapter 2. Rather, the claim most appropriate for BA SubjExp verbs is that they are non-dynamic, non-agentive verbs split into stative or eventive verbs based on root type.

In analyzing the event structure and interpretations of non-dynamic verbs in their (im)perfective forms, it was found that perfective morphology aspectually shifts K-state root verbs into an inceptive reading. Crucially, although perfectivity creates an inceptive aspectual shift for states in BA resulting in them passing Maienborn's event tests, K-state root verbs in their perfective forms were not considered full Davidsonian events, unlike D-state roots which lexically encode inception. The difference between the two stative roots in their perfective forms shows up in tests such as compatibility with the event frame (see 3.1.2.2 and 4.4.1.2), and availability of iterative readings (see 4.2.1), which only D-state root verbs pass since they have an event argument and K-state verbs do not.

Having established the presence of a subclass of inceptive states in BA that is encoded either lexically via D-state roots or through perfective morphology, we assumed the aspectual properties of inceptives argued by Bar-el (2005), Kiyota (2008), Marín and McNally (2011), and Rozwadowska (2012; 2020), among others (see 2.5), where inceptive states are taken to be punctual onsets of atelic states. The rest of the thesis is devoted to investigating the validity of the D/K-state root split in accounting for BA psych verb data and examining the proposed aspectual properties of the two groups of psych verbs: standard states derived from K-state roots, and eventive inceptive states derived from D-state roots. Chapter 4 rigorously tests the proposed aspectual properties of the two classes of non-dynamic verbs in BA, with a specific focus on psych verb data. In the course of the analysis, several crucial conclusions emerged.

Firstly, the unique aspectual properties of inceptive states as punctual left-boundary atelic events are confirmed through various tests. The data supports arguments in the literature where inceptive events are seen as an autonomous class of verbs not formally acknowledged in traditional Dowty-Vendlerian event taxonomies that represent the widely recognized accomplishment, achievement,

activity, and state eventuality types (see e.g. Bar-el, 2005). The confirmation of a grammatically relevant punctual class of verbs that is distinct from achievements challenges those views that question the linguistic validity of punctuality as a necessary aspectual category (Mourelatos, 1978; Verkuyl, 1989; Parsons, 1990). In such views, achievments are not recognized as a separate type from accomplishments, and both are considered telic change of state events (Mourelatos, 1978). Inceptive states are problematic for such classifications because they are not telic, not even in environments traditionally thought to induce telicity like causation and perfectivity (see 4.2.2). The identification of this independent class of non-dynamic eventive verb represented by inceptive states is central in accounting for the properties and behavior of BA psych verbs derived from D-state roots and is the first major contribution of this thesis.

The second major finding that has come out of this work is the confirmation that causative constructions with stative readings are empirically evidenced in BA. This adds to several arguments presented in the literature from typologically diverse languages that advocate for the existence of such verbs (see e.g., Arad, 1998b; Pylkkänen, 1998; Landau, 2010). BA presents a unique set of data in that it encodes overt causative morphology and has two types of stative roots that yield predictable patterns of aspectual behavior. Importantly, this work finds that all imperfective BA ObjExp verbs have simple stative event structures. Evidence for the simple event structure of ObjExp verbs comes primarily from the object deletion test which indicates that the second argument of the causative structure is not a structural argument required for a bi-eventive event structure representation (Levin and Rappaport Hovav, 1999) (see 2.1.3 and 4.5).

The most robust evidence for causative stative structures in BA comes from ObjExp verbs derived from K-state roots since they reject all eventive constructions, whereas ObjExp verbs derived from D-states may receive agentive and eventive readings given proper context. Strikingly, even in apparently complex event structures like agentive causation where both a DO and CAUSE operators are expected in D-state ObjExp verb lexical event structure, as argued by Rothmayr (2009), BA exhibits simple event structures. The implication here is that even though aspectual readings may be altered through various layers of structure in the morphosyntax in BA, the lexical root carries grammatically relevant information that cannot be ignored. This leads to the third and final claim advanced in this thesis.

An intriguing finding came to light in support of a lexicalist approach to argument structure in BA where the lexical root was shown to constrain morphosyntactic structures. This is evidenced by the stative perfective gap where some verbs derived from K-state roots may not derive perfective forms. In Chapters 3 and 4 we argued that perfective morphology generates a boundary reading on all eventualities. For psych verbs, that boundary is a left-boundary that refers to the initial points of events, i.e., inceptive aspect. Some K-state roots, like *yidānī* 'to tolerate', *yi-stāhil* 'to deserve', by virtue of being inherently unbounded states, prohibit the assignment of a boundary because their semantics do not support an inceptive reading. It is believed that no such perfective gaps can be had with D-state roots since they are inherently inceptive verbs, although a thorough inventory has not been done to verify this conclusion as it is beyond the scope of this study. The stative perfective gap is evidence that grammatical behavior is governed by lexical semantics in BA, contrary to constructivist arguments (see e.g., Borer 1994 and Marantz 1997).

All the evidence presented so far points to a grammatically relevant distinction between two types of states, and by extension, two types of psych verbs, that is present at the lexical root structure in BA. The hypothesis in this dissertation is substantiated by a large-scale acceptability rating judgment study where native speakers across Saudi Arabia corroborated some of the findings of the theoretical study with highly significant statistical results presented in Chapter 5. I hope this work provides a small contribution to the ongoing exploration of event and argument structure in our natural languages.

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Abbreviations

1	first person	INCH	inchoative
2	second person	IPFV	imperfective
3	third person	M	masculine
ACC	accusative	NEG	negation, negative
ADJ	adjective	NOM	nominative
AP	active participle	OBJ	object
AUX	auxiliary	OBL	oblique
CAUS	causative	PFV	perfective
DAT	dative	PL	plural
DET	determiner	PRES	present
DU	dual	PROG	progressive
F	feminine	REFL	reflexive
HAB	habitual	SG	singular
IMP	imperative		

The transliteration that is followed in this thesis is DIN 31635'. All transcriptions were conducted in Intellaren (url: http://intellaren.com/intellibe). The glossing of examples follows the conventions set out by the Leipzig Glossing Rules. Other symbols used in the study include the following:

*	unacceptable
()	optional constituent
?	native speakers differ on acceptability

Appendix A

The following is a list of the Arabic sentences provided in the experimental study. The translation of the sentences and their categorizations are also provided.

Context	Condition	Arabic item	Translation
Perfective	Punctual	فجأة لعّبتها في الملاهي.	Suddenly I had her play in the playground.
		علي فجأة أكّله غداء يوم جاع.	Ali suddenly fed him lunch when he became hungry.
		فجأة المدرّس درَّس الطلاب.	Suddenly the teacher taught his students.
		فجأة قهرني عمر.	Suddenly Omar frustrated me.
		العُمّال فجأة وتَّروا المقاول.	The workers suddenly stressed the contractor.
		سارة فجأة أقلقت أهلها.	Sara suddenly worried her family.
	Atelic	أحمد مشّى الأولاد في الحديقة ولسى ماشين هناك.	Ahmad took the children for a picnic in the garden and they are still in a state of picnic there.
		هم كتَّبوه الدرس ولسى كاتبَه.	They made him write the lesson and he still is in a state of having it written
		أنا شرّبتها المويه ولسى شاربته.	I made her drink the water and she still is in a state of having drank it.
		علي زعّلني أمس وأنا لسى زعلان منه.	Ali made me angry yesterday and I am still angry with him.
		مها طفّشت عمها وباقي طفشان منها.	Maha bothered her uncle and he is still bother by her now.
		الضيوف أربكوا أخته ولسى مرتبكة المسكينة.	The guests discomposed his sister and the poor girl is still discomposed.

Context	Condition	Arabic item	Translation
ObjExp Verbs	Progressive	علي قاعد يسعِد الأولاد.	Ali is pleasing the children.
		عمر قاعد يِفرّحني.	Omar is making me happy.
		ليلى قاعده تقرّفني في المطعم.	Layla is disgusting me in the restaurant.
		عمّاني قاعدين يقهروني.	My uncles are frustrating me.
	Imperative	فشّلهم.	Embarrass them!
		طفّشيه وهو يوخّر عنك.	Bother him and he will leave you alone!
		إعجبني بُكرَه	Make me like you tomorrow!
		حُبَهُم	Love them!
	Agentive adverbial	هم متعمدين يقلقونا.	They worry us on purpose.
		أنا متعمده أزعّلك عشان ما تعيدها.	I intentionally anger you so you don't repeat it.
		علي قاصد يلهمني.	Ali intentionally inspires me.
		هي متعمده تبهجني اليوم.	She cheers me up on purpose today.

Appendix B

Outcome of T-test results of the experimental test based on the variables of age group, education level, and gender.

Condition	Education	Mean Difference	Standard Error of Difference	t Ratio	p-value
Age Group					
Perfective	18-29	0.75	0.08	9.09	< 0.0001*
Perfective	30-39	0.84	0.07	10.87	< 0.0001*
Perfective	40-49	0.67	0.06	10.46	< 0.0001*
Perfective	50 +	0.97	0.05	17.28	< 0.0001*
Agentive/ Dynamic	18-29	-0.68	0.08	-8.06	< 0.0001*
Agentive/ Dynamic	30-39	-0.97	0.08	-12.07	< 0.0001*
Agentive/ Dynamic	40-49	-0.64	0.06	-9.50	< 0.0001*
Agentive/ Dynamic	50 +	-0.60	0.06	-9.93	< 0.0001*
Education					
Perfective	Undergraduate	0.76	0.07	9.60	< 0.0001*
Perfective	Graduate	0.81	0.04	16.68	< 0.0001*
Perfective	Postgraduate	0.86	0.05	14.78	< 0.0001*
Agentive/ Dynamic	Undergraduate	-0.56	0.04	-11.57	< 0.0001*
Agentive/ Dynamic	Graduate	-0.63	0.05	-12.42	< 0.0001*
Agentive/ Dynamic	Postgraduate	-0.80	0.06	-12.60	< 0.0001*
Gender					
Perfective	male	0.75	0.05	13.07	< 0.0001*
Perfective	female	0.85	0.04	20.23	< 0.0001*
Agentive / Dynamic	male	-0.63	0.06	-10.42	< 0.0001*
Agentive / Dynamic	female	-0.74	0.04	-16.53	< 0.0001*