The Emergence of a Progressive Aspect in Najdi Arabic

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Dedication

This is dedicated to my loving parents, Mohammed Al Aloula and Muneera Alghusoon. All of what I have achieved in this life is because of the grace of God and your unwavering love and support.

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Abstract

THE EMERGENCE OF A PROGRESSIVE ASPECT IN NAJDI ARABIC

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This dissertation provides insight into how progressivity is expressed in Najdi Arabic (NA) via the active participle [qaʕid] 'sitting'. Crosslinguistically, progressive constructions are known to originate from locative and postural constructions that tend to grammaticalize into aspectual markers of progressivity. Previous research on the use of [qaʕid] in NA to express the progressive aspect is limited and inconclusive. This dissertation aims to empirically examine native speakers' acceptability of the use of [qaʕid] as a progressive marker with different predicate types (activity, accomplishment, achievement, and state) in NA.

The studies in this dissertation are the first to empirically examine grammatical judgments of [qaʕid] in NA with native speakers. The studies focus on native speaker judgments of the use of [qaʕid] in NA as a progressive aspectual marker. The participation of native speakers of NA in grammaticality judgment tasks was used to investigate whether and how predicate type affects the acceptability of the active participle [qaʕid] as a

progressive marker in NA. The grammaticality judgment task allowed the assessment of the process of grammaticalization. In addition, it permitted the inclusion and analysis of a large group of native speakers of NA of different age groups and an investigation of potential age-related differences on the use of [qaʕid] in NA.

Results from the studies suggest the following: First, activity, accomplishment, and achievement predicates with [qaʕid] were rated as acceptable in NA. State predicates, both attested and unattested, were not rated as acceptable for NA speakers, but notably were also not rated as entirely unacceptable. That is, they were essentially judged to fall into a region in between.

This dissertation showed a negative relationship between age and acceptability of [qaʕid] as a progressive marker in NA. The results indicate that age predicted the overall acceptability ratings, with younger participants rating the progressive marker as more acceptable than older participants across all predicate types. Finally, the function of [qaʕid] as a progressive marker in NA appears to be undergoing grammaticalization. The results indicate that the use of [qaʕid] in NA to express the progressive aspect is at the desemanticization stage of grammaticalization, whereby the original lexical locative meaning is bleached out. Furthermore, the results suggest that [qaʕid] in NA is more strongly grammaticalized for younger native speakers compared to older native speakers, providing further support for the gradual process of grammaticalization across generations of native speakers.

Chapter 1. Introduction

1.1. [qaʕid] in Najdi Arabic

Najdi Arabic (NA), a modern regional dialect of Arabic, is one of several dialects that employ the expression [qaʕid] to indicate what would appear to be progressive aspect, as shown in (1).

(1) Qaʕid a:lʕab ku:rah.
sit.ACT.PTCP.3SG.M play.IPFV.3SG.M soccer
'I am playing soccer.'

The active participle [qaʕid] in (1) does not express the original lexical meaning of the verb it derives from '*to sit*', but rather has a grammatical function in NA. In Modern Standard Arabic (MSA), the literal meaning of the active participle is the 'doer' of an activity. Its name in the traditional grammars of Standard Arabic is [ism al fa:ʕil] '*the name of the actant.*' For example, the active participle derived from the verb [ktib] '*he wrote*' is [ka:tib] '*writer*'. [qaʕid], then, is the active participle of the postural verb [qʕid] '*sit*' (Ingham, 1994; O'Brien, 2013).

Indeed, according to Holes (1990), the progressive aspect in Gulf Arabic dialects of Saudi Arabia, Kuwait, Bahrain, Qatar, United Arab Emirates, Oman, and many other Arabic dialects is expressed by the imperfective form of the verb, often preceded by the active participle [qaʕid]. Bakir (2010) explained that the use of [qaʕid] in Gulf Arabic

"contains an independent aspectual particle indicating the continuity of the action" (p. 212). This apparent aspectual meaning of [qaʕid] is considered necessary to show that a verb can be progressive in certain Arabic dialects (Kaye, Mitchell, & Al-Hassan, 2006).

The use of [qaʕid] in NA and Tunisian Arabic to express an ongoing action has been compared to similar constructions in other languages. Saddour (2009) and O'Brien (2013) both claim that in NA and Tunisian Arabic, [qaʕid] expresses a notion of progressivity similar to the French *en train de*, which means '*to be in the midst of*' or '*in the process of*.' The expression '*être en train de* + infinitive verb' is used to emphasize actions in progress, similar to the present progressive in English. These constructions take a conjugated form of the verb *être* + *en train de* + infinitive verb. Copley and Roy (2013, p. 3) illustrate the use of *en train de* to indicate the progressive (2).

(2) French

Elle	*est*	*en train de*	*lire*	*un*	*livre.*
she	is	in the midst of	read.INF	a	Book

'She is reading a book.'

The verb *drive* in Norwegian is used to express progressivity; it can mean '*to be in motion*' or '*to be engaged in*' (Behrens, Flecken, & Carroll, 2013; Lødrup, 2017). It is described in the literature as "a purely aspectual verb" (Lødrup & Butt, 2014, p. 369). This Norwegian expression is comparable to the French *en train de* that is used to emphasize actions in progress. According to Lanza (2001), the use of the verb *drive* in sentence (3) "accentuates the notion of durativity" (p. 36).

(3) Norwegian (Lazana, 2001)

og så drev de og løp etter ham.

and so they engage.PST.in and ran after him

'and so they were running after him.'

Now consider (4) in Najdi Arabic:

(4) Qaʕid ʔamʃi:

sit.ACT.PTCP.3SG.M walk.IPFV.3SG.M

'I am walking. [Literally: "I am sitting walking"]'

If taken literally, this sentence would express the contradiction of sitting and walking at the same time. The fact that this need not be interpreted as a contradiction is an indication that this construction has undergone (or is undergoing) grammaticalization in Arabic dialects. According to Hopper and Traugott (2003), "[G]rammaticalization refers to that part of the study of language change that is concerned with such questions as how lexical items and constructions come in certain linguistic contexts to serve grammatical functions…" (p. 1).

An analogy can be made to the future-marking construction *going to* + verb in English. While *going to* is a future-marking construction and not a progressive construction, this construction is now fully grammaticalized (Bybee, Perkins, & Pagliuca, 1994). As Wulf (2013) notes, *going to* "originally meant movement towards, as it still does in such sentences as *I am going to the park*" (p. 109). However, the grammaticalization of *going to* caused it to lose its spatial movement meaning and take on a purely grammatical

function (i.e., future marking). Thus, consider the complete grammaticalization apparent in (5):

(5) I am going to stay.

(5) would not be regarded as contradictory by English speakers, although if the lexical meaning of *go* (the historical origin of this future-marking construction) is explicitly indicated to an English speaker, the contradiction between going and staying at the same time can be noticed. A sentence such as (5) is not contradictory in modern English simply because *be going to* + verb has been semantically bleached of the lexical meaning of *go* as the construction was grammaticalized. Matisoff (1991, p. 384), for example, describes the phenomenon of semantic bleaching as "the partial effacement of a morpheme's semantic features, the stripping away of some of its precise content so it can be used in an abstracter, grammatical-hardware-like way." In NA, [qaʕid] is undergoing such bleaching as part of a grammaticalization process that is turning a lexical element into what seems to be a marker of progressive aspect, though this process is perhaps not fully concluded. Therefore, the contradiction of sitting while walking that [qaʕid ʔamʃi] depicts is still noticeable to NA speakers.

Thus, it is worth noting that some native speakers of NA are aware of the contradiction that can arise when the [qaʕid] construction is used alongside a verb that describes bodily motion (Al-Aloula, 2017). Figure 1, a humorous cartoon, visually depicts the lexical contradiction between the progressive [qaʕid] when used with the main verb [ʔamʃi] '*walk*.'

Figure 1. qaʕid ʔamʃi: "sitting walking."
Note. Online image, 2015, retrieved April 6, 2017 from http://www.ejaaba.com.

The construction means that walking is in progress, but because this progressive has only been grammaticalized only very recently, speakers, such as the anonymous cartoonist who created this drawing, can still notice the paradox of walking while sitting (i.e., what the construction would mean if the original lexical meaning of [qaʕid] were retained). Indeed, an online search of [qaʕid] yields a large number of images, videos and blog entries in which the original meaning of [qaʕid] as sitting has been explicitly noticed. Results of the search included [qaʕid] also with many other dynamic verbs such as *showering*, *climbing, mopping,* etc.

While the use of [qaʕid] as a progressive marker is prevalent in the language of NA speakers, aside from Al-Aloula (2017), no empirical study has examined this construction

closely in NA. This dissertation addresses this gap by analyzing native speakers' acceptability of different instances of the progressive with [qaʕid] in NA.

Moreover, this dissertation explores the usage of [qaʕid] plus imperfective verbs as an aspectual marker in NA in terms of which predicate types (Aktionsarten) this construction may be used with. This dissertation aims to reveal what type of predicates are more accepted with [qaʕid] in NA and what this tells us about [qaʕid] as an apparent progressivity marker in NA. The results obtained from the studies in this dissertation indicate that [qaʕid] is indeed undergoing grammaticalization in NA. This is supported by the observed desemanticization and extension of [qaʕid] in NA with different predicate types. Thus, [qaʕid] has been developing from the original lexical meaning of 'sitting' into an aspectual marker of progressivity in NA, and its usage distribution with respect to predicate types can be shown to be expanding.

1.2. Outline of the Dissertation

The dissertation is organized as follows:

Chapter 2 provides background about Modern Standard Arabic and Najdi Arabic. The chapter presents information about the imperfective aspect and the progressive in Arabic, both in MSA and dialectal Arabic. Then it moves on to discuss the use of active participle as a progressive marker in dialectal Arabic and the use of locative constructions and postural verbs to express the progressive. Finally, the chapter presents Vendler's aspectual classification system as it relates to work on lexical aspect and predicate types.

Chapter 3 presents an overview of the use of [qaʕid] as a progressive marker in NA. Study 1 is designed to investigate whether the type of predicate (state, non-state) affects

the acceptability of the active participle [qaʔid] as a progressive marker in NA. 2,054 native speakers of NA participated in an online survey to judge the acceptability of the examined construction. The effect of other factors such as age and gender on the construction's acceptability are also investigated in Study 1. Finally, the participants' feedback was qualitatively analyzed.

Chapter 4 further examines our understanding of the use of [qaʔid] as a progressive marker in NA. Study 2 aims to investigate if predicate type (i.e., state (both attested and unattested), activity, accomplishment, or achievement) affects the acceptability of [qaʔid] as a progressive marker in NA. The difference between the acceptability of attested and unattested state predicates is examined in this chapter. Other factors such as age of participants and their use of social media is examined. This chapter presents data from 218 NA speakers who participated in an extensive grammaticality judgment task.

Chapter 5 provides a discussion of the results reported in Studies 1 and 2. Chapter 6 offers a conclusion by combining and summarizing the results of Studies 1 and 2 and by exploring possibilities for future research.

Chapter 2. Overview of the Progressive in Arabic

2.1. Modern Standard Arabic and Najdi Arabic

Arabic is a Semitic language of the Afro-Asiatic family. Modern Standard Arabic (MSA) is the variety of Arabic most widely used in education, print media, official documents, correspondence, and as a liturgical language in 20 countries in the Middle East and Africa where it is listed as the official language (Khalifa, Habash, Abdulrahim, & Hassan, 2016; Ryding, 2005). Even though MSA is not a native language for native speakers of Arabic, it is acquired as a second language through high exposure in the educational system, formal language used in broadcasts, religious practice, and print media (Holes, 2004; Language Profiles, 2014). MSA is considered the macrolanguage of all Arabic varieties spoken in the Arabic world (Simons & Fennig, 2017). Although native speakers of Arabic speak dialects specific to their region of origin, they are also typically educated in MSA, even though MSA is very rarely used in day-to-day communication. Nearly all Arabic speakers use some variety of Dialectal Arabic (DA) in everyday communication in both spoken and written forms (Ali & Stephan, 2014; Cotterell & Callison-Burch, 2014; Malmasi & Zampieri, 2016).

DA varieties differ phonologically, lexically, and morphologically from MSA. They also differ from each other from region to region and, to a lesser extent, from city to city in each region (Habash, Eskander, & Hawwari, 2012; Holes, 2004; Watson, 2007). A

situation such as this in which two or more dialects of a single language are used under different conditions is known as *diglossia* (Alqassas, 2017). Arabic diglossia is characterized by the existence of "low" regional varieties and the "high" MSA variety of Arabic (Al-Jarrah, 2002; Holes, 2004). The low language varieties refer to the various spoken dialects used for daily communication. The high language variety refers to MSA, which is used mainly in written texts and formal settings and which unifies the Arabic-speaking world (Al-Jarrah, 2002; Holes, 2004).

Najdi Arabic (NA) is one such "low" DA regional variety. According to Ethnologue, there are 9,977,000 speakers of NA; with 8,000,000 speakers living in Saudi Arabia, 900,000 in Iraq, 50,000 in Jordan, and 500,000 in Syria (Eberhard, Simons, & Fenning, 2019). According to Versteegh (1997), the dialects of the Arabian Peninsula are classified into four groups: the north-east Arabian dialects, the south-west Arabian dialects, the north-west Arabian dialects, and the Hijazi dialect (see Figure 2). NA belongs to the north-east Arabian dialects that include three subgroups: the 'Anazi dialects, the Shammari dialects, and the Syro-Mesopotamian dialects (Ingham, 1994; Johnstone, 1967; Versteegh, 1997).

NA is considered a "stable dialect" (Johnstone, 1967, p. 1) in the sense that it has retained more features from ancient Arabic dialects than many other modern-day Arabic dialects (Taqi, 2010). NA's stability results partly from the fact that there has not been, at least until recently, any substantial influence of other dialects from outside the area (Abboud, 1979; Johnstone, 1967). Abboud (1979), in an early study of NA, observed, "The dialects spoken in the Najd of Saudi Arabia have striking features which not only are

unknown or unreported in other dialects but also retain some characteristics of the ’Arabiyya and of ancient dialects of the peninsula reported by the Arab grammarians. On both these counts, they are of paramount importance for synchronic, comparative and historical dialectology” (Abboud, 1979, p. 467).

Figure 2. Saudi dialectal map.
Note. Adapted from “Language Attitudes Toward Saudi Dialects,” by O. M. Aldosaree, 2016, p. 17.

NA is spoken in Najd, the middle region of Saudi Arabia. Najd is geographically divided into three major provinces: Riyadh Province, where the capital of the Kingdom of Saudi Arabia is located; Qassim Province; and Hayil Province (AlOboudi, 2015).

The term *Najdi* might be used in two ways. The first is as a linguistic reference, and the second combines both linguistic and geographical references (Al Motairi, 2015). The

above-mentioned classification is linguistically based because it labels groups as Najdi dialects, whether or not they are spoken in or around the Najd region. Ingham (1994) describes four regional subdialects of NA: central Najdi, northern Najdi, mixed northern-central Najdi, and southern Najdi. They are also relatively homogenous, but differ in some specific phonological features (Ingham, 1994; Johnstone, 1967; Taqi, 2010).

These subdialects have all influenced one another, but, because this region is not on any border of Saudi Arabia, linguistic features external to Saudi Arabia are not apparent in NA (Abboud, 1979; Ingham, 1994; Omar, 1975). For example, the Jizani dialect spoken in southern Saudi Arabia realizes the /l/ to /m/ in the definite article [ʔal] *the* to indicate definiteness when the referents are specific or unique. '*The seat*' [ʔalkursi] would be pronounced as [ʔamkursi] (Hamdi, 2015).

2.2. The Imperfective in Arabic

According to Ryding (2014), in general, Arabic is a more aspect-specific than tense-specific language. Ingham (1994) argues that "Arabic can be regarded as a language of the type showing aspect with tense implications" (p. 87). Arabic makes two basic aspectual distinctions: perfective and imperfective. The early Arab grammarians call the perfective [ʔal ma:dˤi] '*the past*', as in (6), and the imperfective [ʔal mu:dˤrʕ] '*that which is similar (to the noun)*', as in (7) (Hallman, 2019). In Arabic, the perfective describes a completed action, while the imperfective describes a situation not yet completed (Thompson-Panos & Thomas-Ružić, 1983). In Arabic, the two forms are distinguished morphologically as in (6) and (7). According to Gadalla (2000), "The perfect form is

obtained by the attachment of suffixes only, whereas the imperfect form is obtained via the addition of confixes, i.e., combinations of prefixes and suffixes" (p. 76).

(6) Qaraʔ-a ʔal-walad-u ʔal-kitaab-a.
read-PRF.3MS the-boy-NOM the-book-ACC
'The boy reads the book.'

(7) Ya-qaraʔ-u ʔal-walad-u ʔal-kitaab-a.
IMPF-read-3MS the-boy-NOM the-book-ACC
'The boy is reading the book.'

According to Comrie (1976), the difference between the Arabic perfective and imperfective cannot be purely one of aspect. He believes that Arabic perfective/ imperfective is a case of tense/aspect opposition. Comrie (1976) indicates that when there is no overt specification of time reference, the perfective has a perfective and past meaning and the imperfective has an imperfective and present meaning.

Hallman (2015) investigated the semantic content of the imperfective in Arabic and reached the conclusion that it makes no semantic contribution of its own. Benmamoun (1999) describes the imperfective's syntactic distribution, indicating that the Arabic imperfective occurs in contexts where tense is specified elsewhere in the syntactic context. This suggests that the imperfective meaning is not expressed by the bare imperfective verb form in Arabic. Hallman (2015) explains that the imperfective is the semantically basic form of the Arabic verb corresponding to the English infinitive. Therefore, "progressive readings typical of the imperfective cross-linguistically are derived in Arabic by applying overt progressive operators to this base form" (Hallman, 2015, p. 104).

Even though the Arabic verbal system was historically aspectual in nature, many modern Arabic dialects developed, it has been observed, into absolute tense systems (Holes, 2004). However, in many conservative Bedouin varieties of Arabic such as NA, this classical aspectual system has largely been preserved (Ingham, 1994). According to Ingham (1994), "Najdi exhibits an Aktionsart category dividing verbs into two classes (1) action and (2) state/motion verbs." (Ingham, 1994, p.87). The imperfective is used to describe the differences between the two classes. Ingham (1994) reports that when the imperfective is used in the action class with a time extent adverbial, it describes an event that is in progress or a continuous action extending up to the point of reference. When the imperfective is used in the state/motion class, it describes the continuous habitual occurrence of an event. With the state/motion class, the imperfective gives the meaning of an interrupted continuous action (i.e., habitual). Ingham (1994) explains that the use of imperfective in the state/motion class gives the meaning of a state with state verbs and a continuous action with the motion class.

Morphologically, the verb in NA shows two main aspectual forms: the perfective and imperfective. Perfective forms are used when the event is viewed as complete or punctual. The imperfective forms, on the other hand, focus on the internal structure of an event and present it as incomplete and ongoing.

Let us now consider how the active participle [qaʕid] appears to contribute grammatically when used in coordination with the imperfective aspect. In Arabic dialects, the active participle appears before the imperfective form of the verb to designate an action as ongoing at the moment (Agius & Harrak, 1987; Eksell, 1995; Li, 2009). Thus, we can

compare (8), without the active participle, and (9), which includes the active participle [qaʕid].

(8) ʕli ja:gra al-kitab.
Ali read.PFV.3SG.M DEF-book
'Ali reads the book.'

(9) ʕli qaʕid ja:gra al-kitab.
Ali sit.ACT.PTCP.3SG.M read.PFV.3SG.M DEF-book
'Ali is reading the book.'

O'Brien (2003) notes that in some cases the active participle occurs in a locative/posture construction to distinguish between an aspectually simple situation and a situation that is in progress. According to Procházka and Batan, "In the overwhelming majority of Eastern Arabic dialects, the active participle is used to express the result of an activity or a process which, at the moment of speech or at another reference point, is of ongoing relevance" (2016, p. 458). This dissertation examines the active participle [qaʕid] '*sit*', which seems to give a progressive meaning when combined with the imperfective in NA as in examples provided above in (1) to confirm that it is indeed a progressive marker and then, further, to determine the present extent of its usage distribution with respect to predicate classes (Aktionsarten).

2.3. The Progressive in Arabic

Before discussing the apparent [qaʕid] progressive in detail, it will be helpful to survey other ways that progressivity can be expressed in MSA and dialectal Arabic. According to Abdul-Raof (1998), in MSA, the Arabic copula verb [ka:na] '*to be*, *to exist*'

and [lajsa] '*to be.NEG*' or certain similar verbs, such as [ma: bariħa], [ma: za:la], [ma: infaka] and [ma: fatia], which all mean '*not ceased yet*', or '*is still*', can be used to express the imperfective aspect with respect to an ongoing action. (10) and (11) present examples of the use of [ka:na] and [laysa].

(10) Ka:na ar-rajul-u hazen-un.
COP.3SG.M DEF-man.3SG.M-NOM sad.3SG.M-ACC
'The man was being sad.'

(11) Lajsa ar-rajul-u hazen-un.
be.NEG.3SG.M DEF-man.3SG.M-NOM sad.3SG.M-ACC
'The man is not being sad.'

This way of expressing ongoing action in MSA can occur in the present or past tense and can occur with or without [ka:na] or one of the other forms noted, as shown in (12). The construction takes either an agentive subject or a non-agentive subject (Abdul-Raof, 1998), as shown in (13).

(12) Yaktubu Ali-un al-risalata.
write.IPFV.3SG.M Ali.NOM DEF.letter.ACC
'Ali is writing the letter.'

(13) Ma-fatia al-hajaru yatasaqatu min al-jabali.
NEG-stop.3SG.M DEF-stone.3PL.M.NOM fall.IPFV.3SG.M from DEF-mountain.3SG.M.GEN
'The stones keep on falling from the mountain.'

Present time reference in MSA is usually achieved by the imperfective form (Holes, 2004). According to Alotaibi (2014), there are three present time interpretations of the imperfective form in MSA: habitual present (14), present progressive (15), and present simple (16). In MSA, the difference between habitual present and present progressive is indicated by the use of an adverbial of frequency, such as [kula jawm] '*every day'* in (14). By contrast, the adverb [ʔal-a:n] '*now*' is used to convey a progressive interpretation (15).

(14) ʕamir yamʃi Kul jawm fi ʔal-ħa:diqati.
Amir.NOM walk.IPFV.3SG.M every.ACC day.GEN in DEF-garden.GEN
'Amir walks every day in the garden.'

(15) ʕamir yamʃi ʔal-a:na fi ʔal-ħa:diqati.
Amir.NOM walk.PRS.3SG.M DEF-now.ACC in DEF-garden.GEN
'Amir is walking now in the garden.'

(16) ʕamir yamʃi
Amir.NOM walk.IPFV.3SG.M
'Amir is walking.'

2.4. The Active Participle as a Progressive Marker in Dialectal Arabic

There are a number of prefixes that various dialects of Arabic use to express the progressive, and most of these apparently derive from active participle forms (Stewart, 1998). For example, in the Levantine and Egyptian dialects, the active participle of [ʔammal] '*to do*' means "actively or busily engaged in something" (Stewart, 1998, p. 108), as seen in (17).

(17) ʔammal Yibni mabani.

do.PROG.3SG.M IPFV.build.3SG.M PL.M.building

'He is building buildings.'

Use of the active participle in dialectal Arabic has been described in the literature as an important tool to express many temporal and aspectual values in different contexts (Al-Najjar, 1991; Boneh, 2010; Brustad, 2000; Cowell, 2005; Eades & Persson, 2013; Holes, 2004). For example, the prefixes [ʕamma-] and [ʕam-], which are used in the Levantine dialects (e.g. Syrian, Lebanese, Jordanian and Palestinian Arabic), derive from the active participle [ʕamal] '*to do*'. (18) illustrates the use of this prefix to express the progressive in Syrian Arabic (Boneh, 2010).

(18) Sami ʔam-yəktob ər-risaale.

sami.NOM PROG-write.3SG.M DEF-letter

'Sami is writing the letter.'

In addition, the use of verbal predicates in the active participle form is more frequent in Arabic spoken dialects than in MSA (Eades & Persson, 2013; Holes, 2004). According to Holes (2004), "The verbal value of the active participle was always a part, albeit a relatively minor one, of its range of uses in Classical Arabic, but this has become perhaps its main function in the dialects" (p. 153). This frequency is due to the temporal value of the active participle in which the progressive aspect is expressed (Eades & Persson, 2013; Eisele, 1990; Kinberg, 1992).

In Classical Arabic, employing the active participle is infrequent due to the use of *qad*-suffix conjugation which expresses the progressive (Kinberg, 1988, 1992). Ryding

(2005) explains that one of the uses of *qad* is to emphasize aspect where it is used to illustrate "whether or not an action has been completed and to what degree" (p. 450).

2.5. Progressive Constructions with Postural and Locative Constructions

Progressive constructions in many languages originate from locative constructions in which the agent is described as being positioned in the midst of an activity (Comrie, 1976; Joseph & Janda, 2003; Torres Cacoullos, 2000). According to Bybee et al. (1994), "The locative notion may be expressed either in the verbal auxiliary employed or in the use of postpositions or prepositions indicating location 'at', 'in' or 'on'. The verbal auxiliary may derive from a specific postural verb, such as 'sit', 'stand', or 'lie'." (p. 129). This view suggests that many languages have posture verbs that indicate locativity, suggesting the plausibility of the active participle [qaʕid] being used to indicate locativity and, thus, also the progressive aspect (AlShihry, 2017). That is, postural constructions are a variety of locative constructions that are no longer used to describe a physical posture but are used instead to indicate location and, from this, an aspectual meaning.

An extensive body of literature indicates that the progressive aspect in many languages has evolved from locative sources (Bertinetto, Ebert, & Groot, 2000; Bybee, Pagliuca, et al., 1994; Comrie, 1976). In English, the progressive was expressed by an overt locative form where a locative preposition, such as *at* or *on*, was used to express the progressive aspect (Comrie, 1976; Denison, 1993). Specifically, the construction *on* verb + *ing* was used earlier in English to express the progressive aspect, and it involved into the prefix *a-* + participle that is still used in modern dialectal English (Montgomery, 2009).

For example, *I was on hunting* evolved into *I was a-hunting* and then eventually into *I was hunting* in modern English (Elsness, 1994).

The progressive form with *a*-prefixing, as indicated, can still be found in dialectal English. This is a phenomenon whereby a prefix, *a-*, attaches to a verbal form inflected with the suffix *–ing* as in the following Appalachian English examples in (19).

(19) Appalachian English (Wolfram, 1976, p. 70)

as in to go a-fishing, daddy's gone a-hunting

'as in to go fishing, daddy's gone hunting.'

In Dutch, another Germanic language, the meaning of a progressive aspect has been described as being in/on/at a situation (Boogaart, 1991; Lemmens, 2005). A number of empirical findings for Dutch have shown a high frequency of use of the *aan het* construction to express that a situation is ongoing (Behrens et al., 2013). According to Flecken (2011), the *aan het* construction "is a periphrastic construction and it consists of the locative preposition *aan* 'at'/'on' and the definite article *het* 'the'" (p. 483). The *aan het*-construction '*at the*' consists of the locative preposition *aan* '*at*' that lost its lexical meaning (Behrens et al., 2013; Lemmens, 2005). In example (20), a form of the Dutch verb '*be*' is followed by the locative preposition *aan* '*at*' to express the progressive.

(20) Dutch (Lemmens, 2005, p. 184)

Ik was aan het lezen / aan het wachten / aan het slapen.

I was at the read.INF/ at the wait.INF / at the sleep.INF

'I was reading/waiting/sleeping.'

Icelandic has a regularly used progressive construction that incorporates a locative preposition (Comrie, 1976). In (21), a form of the Icelandic verb '*be*' is used with the proposition [að] '*in*/*at*' to express the progressive.

(21) Icelandic (Hewson & Bubenik, 1997, p. 340)

Hvað ertu Að gera? ég er að borða.

what are you At do.INF? I am at eat.INF

'What are you doing? I am eating.'

In Italian, Spanish, and Portuguese, the verb *stare* is used to express the progressive. This use of *stare* derives etymologically from the Latin verb *stare*, which means *to stand* / *to stay* (Bybee, Pagliuca, et al., 1994; Comrie, 1976). The verb went through a grammaticalization process in which it lost the original lexical meaning and came to be used to express the progressive aspect as (*stare* + verb to be) in Italian and (*estar* + verb to be) in Spanish (Squartini, 1995). According to Cerruti (2014, p. 293), the most commonly used construction to express the progressive in contemporary Italian is *stare* + verb *to be* as in example (22). Both Spanish and Portuguese use forms of the historically locative *stare* to express the progressive in (23) and (24).

(22) Italian (Cerruti 2014, p. 293)

Sto correndo.

I stay run-INF

'I am running.'

(23) Spanish (Comrie, 1976, p. 102)

Estoy cantando.

I stand sing-INF.3SG.M

'I am singing.'

(24) Portuguese (Comrie, 1976, p. 102)

Estou cantando.

I stand sing-INF.3SG.M

'I am singing.'

Using locative constructions to express the progressive aspect is also noted in a number of North Indian Languages (Comrie, 1976; Schmidt, 1999; Schubert, 2002). In Hindi-Urdu *raha* is the perfect participle of the *rahna* 'to stay, to remain'. Through a process of grammaticalization, the verb lost its lexical meaning and came to be used as a marker of the progressive aspect (Schubert, 2002). Schmidt (1999) illustrates in example (25) the use of *raha* in Hindi-Urdu to express the progressive (p. 122).

(25) Hindi-Urdu (Schmidt,1999, p. 122)

Vo kar raha hai.

he do to be.remain.PROG.3SG.M Is

'He is doing.'

In Mandarin Chinese, *zài* '(*be*) *in*' is a pre-verbal aspectual marker that indicates the progressive aspect (Hung, Guitart, Graves-Monroe, & Ludwig, 2016). *Zài* was originally a locative verb that was used to express being at/in a certain place, but after a long historical development has come to be used as a locative preposition that expresses

the progressive aspect in Mandarin (Comrie, 1976; Hung et al., 2016; Klein, Li, & Hendriks, 2000; Xiao & McEnery, 2004). In (26), Hung et al. (2016, p. 89) illustrate the use of *zài* to express the progressive aspect.

(26) Mandarin (Hung et al., 2016, p. 89)

Ta zài nian shu.

he in study.PROG

'He is studying.'

Heine, Claudi, and Hünnemeyer (1991) found over 125 African languages with locative sources for expressing the progressive. The reported progressive constructions are derived from grammaticalized locative expressions, such as location prepositions *at*, *in*, *on*, or postural verbs *sit* and *lie* (Benítez-Burraco, 2017; Bybee, Pagliuca, et al., 1994; Heine et al., 1991). For example, in Igbo the location preposition *na'* '*in*' is used to mark the progressive aspect as in (27).

(27) Igbo (Comrie, 1976, p. 101)

O' na' a'ga'.

he be-in go-INF

'He is going.'

As demonstrated in all previously mentioned examples, the grammaticalization of posture verb constructions with an aspectual value has been observed crosslinguistically (Bybee, Pagliuca, et al., 1994; Heine et al., 1991; Heine & Kuteva, 2002). The posture verb *sit* belongs to a class of verbs known as cardinal posture verbs along with *stand* and *lie* (Lemmens, 2005; Lichtenberk, 2002; Newman, 2009). The basic function of these three

posture verbs is to describe the posture of the subject. However, in some languages, posture verbs have a grammatical function such as progressivity (Heine & Kuteva, 2002; Lemmens, 2005).

NA is not the only Arabic dialect that uses the posture active participle [qaʕid] to express an ongoing action. Several Arabic dialects indicate progressivity through the employment of the active participle with posture verbs and locative constructions (O'Brien, 2013). It has been argued that locative and posture verbs in Arabic are the only verbs in the non-past form that have the ability to indicate a difference between aspectually simple (e.g., a habitual reading) and progressive situations, as in (28) and (29) (O'Brien, 2013; Thompson-panos & Thomas-ružić, 1983).

(28) ʕali yaktub.
ali write.IPFV.3SG.M
'Ali writes.'

(29) ʕali qaʕid yaktub.
ali sit.ACT.PTCP.3SG.M write.IPFV.3SG.M
'Ali is writing.'

Moreover, in some Arabic dialects different affixal progressive markers are used with locative verbs to express progressive forms (Saddour, 2009). For example, the affixal marker *bi-* '*in*' in Egyptian Arabic, as in (30).

(30) ʔuxt.i bi-tidris dilwaʔti ʔ.
sister.POSS in-study.IPFV.3SG.M Now

‘My sister is studying now.’ (ElSadek, 2016, p. 35)

This *bi-* ‘*in*’ prefix was originally a preposition of location ‘*in*’. The Cairene Dialect, spoken in Egypt, uses the durative prefix *bi-* to denote the present progressive or habitual reading (Stewart,1998). (31) illustrates the present progressive the prefix *bi-*.

(31) Bi-yi'ra.

in.PROG-read.3SG.M

‘He is reading’ (Stewart,1998, p. 107)

In Tunisian Arabic, the locative preposition *fi-* ‘*in*’ combined with the active posture participle [qaʕid] ‘sit’ is used to express the progressive. According to Saddour (2009), Tunisian Arabic has developed the use of *fi-* from a preposition that is used to designate location into an aspectual marker, as in (32).

(32) Qaʕid Yiktib fi jweb.

sit.ACT.PTCP.3SG.M write.IPFV. 3SG.M in.PROG INDF.letter

‘He is writing a letter.’ (Saddour, 2009)

These posture verbs and locative prefixes no longer express their original lexical meanings (i.e., *sit* or *in*). Rather, they have a specific grammatical function to express the progressive in the language or dialect.

2.6. Earlier Work on [qaʕid]

The literature on [qaʕid] as an aspectual marker has not examined its current use in NA. In addition, Vendler’s widespread classification of the four main predicate types (as discussed in the next section) has not been used as a framework for testing native speakers’ judgment of the construction with different predicate types. Other studies have briefly

reported the function of [qaʕid] as a progressive marker with no particular emphasis placed on the aspectual information encoded in [qaʕid]. For example, [qaʕid] has been noted to serve as a progressive marker in Kuwaiti Arabic (Saddour, 2009; Stewart, 1998). Al-Najjar (1991) simply identified [qaʕid] as "a grammatical marker of the progressive aspect when followed by an imperfective verb" (p. 669). Al-Najjar (1991) focused on the phonological reduction of [qaʕid] to [qaʕ] as an indication of the grammaticalization of [qaʕid]. This dissertation will argue that [qaʕid] is developing and undergoing a process of grammaticalization. Al-Najjar (1991) illustrates in (33) the grammaticalization of [qaʕid] into an affix that is attached to the verb and phonologically reduced from [qaʕid] to [qaʕ-] (p. 672). Al-Najjar (1991) does not examine the aspectual use of [qaʕid] in Kuwaiti Arabic.

(33) Qaʕ agul-lik nafs ishshayy.
I sit.ACT.PTCP.3SG.M say.IMPFV-to.you.3SG.M same thing
'I am telling you the same thing.'

To my knowledge, aside from Al-Aloula (2017), no empirical study has examined this construction closely in NA. This study was the first to address this gap in the literature. Al-Aloula (2017) reports the results of a questionnaire from 1,786 speakers of NA concerning the use of this construction with both state and activity predicates. The data analysis suggests that the use of [qaʕid] with different predicate types is being used by NA speakers. The study is discussed in more detail in Chapter 2 of this dissertation.

2.7. Vendler's Aspectual Classification System

Among analyses of predicate type (Aktionsart), Vendler (1957, 1967) has been particularly influential. Most recent work on lexical aspect makes reference to this

classification system. In discussing aspect, it is important to distinguish between lexical aspect and grammatical aspect. For lexical aspect, Vendler (1967) proposes four predicate classes that differ with respect to several semantic properties. Predicates are classified into states (e.g., *desire*, *want*, *love*, *hate*), activities (e.g., *run*, *walk*, *swim*, *push a cart*), achievements (e.g., *recognize*, *reach*, *find*, *win the race*, *start*, *stop*, *resume*) and accomplishments (e.g., *run a mile*, *paint a picture*, *grow up*, *graduate*).

States and activities differ from accomplishments and achievements with respect to telicity. Telic verb phrases have inherent endpoints, but in atelic verb phrases the endpoint is not explicitly identified. Duration plays an important role in this telic-atelic distinction. In atelic verb phrases, *for* adverbials are used to express the duration of an unbounded event. On the other hand, *in* adverbials are used with telic verb phrases to express the duration of a bounded event with an endpoint. Grammatical aspect, on the other hand, refers to aspectual distinctions marked by auxiliaries and/or inflectional and derivational morphology. For example, in English, *be* verb + *ing* encodes progressive aspect.

Predicate type (Aktionsart) and the inherent temporal properties of the lexical content in an utterance play a significant role in the use and meaning of the progressive form (Bardovi-Harlig, 2008; Vendler, 1967a). The Aktionsart tests for classifying a predicate according to its behavior with various kinds of temporal inference patterns can be considered in the examination of the progressive in Arabic (Bache, 1982).

Acceptability of the progressive in English is impacted by predicate type. Vendler notes, for example, that stative predicates such as English *love* and *hate* are unacceptable in the progressive form. Nonetheless, such verbs placed into the progressive can indeed be

acceptable because the progressive construction can often coerce a non-stative interpretation upon them. Consider (34) and (35).

(34) I am **loving** it. (McDonald's slogan)

(35) OK. I am really **liking** Windows 7. (Michaelis, 2011, p. 1375)

The slogan in (34) coerces a non-stative interpretation from the verb love so that this slogan is roughly synonymous with *"I'm enjoying it."* A similar analysis applies to (35).

It is helpful that we can refer to historical forms in English to discuss grammaticalization, such as by noting that a sentence like *I am in walking* would historically have had a locative preposition included, as with *I am 'in' walking* (Elsness, 1994). The stativizing function of the progressive is apparent with *walking*, which is an event of walking (an activity), and, in the progressive, this activity is stativized in *I am walking* because the progressive construction here describes the state of being located in the middle of the event of walking (Elsness, 1994).

Indeed, it has been argued that the progressive functions as a stativizer, converting a non-state predicate (e.g., *run*) into a state predicate (e.g., *is running*) (Farber, 2016; Herweg, 1991). Thus, Herweg (1991) notes that the progressive provides a dynamic interpretation in state predicates. Thus, putting *love* or *hate* in the progressive forces them to be interpreted as states of being in the midst of activities, and not as states directly, as in (34) and (35) above.

This chapter has presented information about Najdi Arabic and discussed previous studies of the progressive in MSA and dialectal Arabic. It also investigated the use of the active participle, postural verbs, and locative constructions as progressive markers in

dialectal Arabic. In addition, this chapter discussed Vendler's four predicate classes for lexical aspect. The following chapter presents Study 1, which tests the acceptability of a simple binary contrast of predicate types with the active participle [qaʕid] in NA functioning as a progressive marker in NA.

Chapter 3. Study 1

3.1. Introduction

Although there has been extensive research done on the progressive aspect in English (Dowty, 1977; Kearns, 1991; Ogihara, 1990; Vlach, 1981) and in other languages (Boogaart, 1991; Copley & Roy, 2015; Hung, Guitart, Graves-Monroe, & Ludwig, 2016; Jóhannsdóttir, 2011), the number of linguistic studies of the verbal aspect system in NA is scant, and no empirical study has examined the expression of what appears to be a progressive aspect in NA. This dissertation, however, provides insight into how the progressive aspect is arguably expressed in NA via the active participle [qaʕid].

This chapter describes a preliminary study investigating the use of the [qaʕid] construction in NA to determine if this construction indeed expresses the progressive (which should tend to avoid use with state predicates) or, more broadly, the imperfective (which should be acceptable with both state and non-state predicates). Given the aim of establishing the nature of the [qaʕid] construction, the study purposefully ignored any finer predicate contrasts. Henceforth, this preliminary study is called Study 1.

Study 1 was designed to address the following research questions:

1. Does the type of predicate (state versus non-state) affect the acceptability of the use of the active participle [qaʕid] in NA as a marker of verbal aspect and, if so, how?

2. Does the age of the informant affect the acceptability of the use of the active participle [qaʕid] with state and/or non-state predicates and, if so, how?
3. Does the gender of the informant affect the acceptability of the use of the active participle [qaʕid] with state and/or non-state predicates and, if so, how?

An online survey was distributed among native speakers of NA, designed to assess to what extent [qaʕid] is acceptable with different kinds of predicates (stative versus non-stative) in NA. A grammaticality judgment task was used to test whether a sentence was considered acceptable by native speakers of NA. In addition, the informants were asked to express their thoughts on the acceptability of the test items.

If [qaʕid] marks the progressive aspect in NA, we would expect informants to judge sentences with non-stative predicates to be acceptable and sentences with stative predicates to be unacceptable. However, if [qaʕid] rather just indicates the broader imperfective aspect in NA, we would expect informants to find sentences with either stative or non-stative predicates to be acceptable.

The informants were explicitly instructed before taking the survey to consider the test items as sentences they might say or hear in NA, not as sentences in MSA or Classical Arabic. Emphasizing a clear distinction between NA and MSA was critical to the study. Because MSA is a prestige dialect of Arabic, whenever NA differs from MSA, an NA sentence could be regarded as ungrammatical, in the sense of being stylistically too informal or conversational. Even though native speakers of Arabic speak dialects specific to their region of origin, they are educated in MSA and exposed to it in formal settings. However, nearly all Arabic speakers use some variety of Dialectal Arabic (DA) in everyday

communication in both spoken and written forms as their native language (Ali & Stephan, 2014; Cotterell & Callison-Burch, 2014; Malmasi & Zampieri, 2016). It is the grammar of one DA variety of Arabic (NA) that this study sought to examine, not MSA or any other DA variety.

A statistical test was used to analyze the acceptability of the use of state predicates versus non-state predicates with the [qaʔid] construction in NA. It is generally maintained that states are inconsistent with the progressive because they are not bounded due to their lack of changes or transitions (Lakoff, 1966). States are completely homogenous; every point is identical to the other in a state, which contradicts the notion of some sort of continuing change, as expressed by the progressive aspect. By contrast, non-state predicates are dynamic and consist of homogeneous, successive phases referring to processes with no inherent beginning or end point (Smith, 1999). This is compatible with the inherent features of the progressive (Filip, 1999). Lastly, as discussed above, if Herweg (1991) is correct that the progressive construction functions as a stativizer, which is a construction used to turn a non-state into a state, it would not make sense to stativize a predicate that is already a state to begin with.

Vendler (1967) classifies predicates according to their time schema. According to Smith (1999, p. 480), "[S]tates do not take place in time, although they hold for a moment or interval of time. What this means in terms of a temporal profile is that there is no mapping of times to stages of the state." By contrast, non-state predicates take place in time with arbitrary final endpoints (Smith, 1999). Therefore, non-state predicates, but not states, are compatible with the progressive. This difference is noted in many languages including

in DA varieties. Jarad (2015) explained that for the previously mentioned reasons, in Emirati Arabic, states do not occur with its progressive aspect construction, as in (36). In English, the use of states with the progressive is infrequent and usually considered unacceptable, as in (37) and (38) (Comrie, 1976).

(36) *Omar Yālis yi-krah maryam.
Omar sit.ACT.PTCP.3SG.M PROG-hate.3SG.M mariam
(Jarad, 2015, p. 102)

(37) *I am knowing the answer

(38) *Ali is hating his brother

However, as has been noted, it is also possible for a progressive construction to coerce a non-stative interpretation out of what is typically a stative predicate. As indicated above, because the McDonald's slogan *I'm loving it* is placed in the progressive, a construction used to stativize a non-state, the implication is that the verb *love* is a non-state predicate here, similar to the verb *enjoy*. Thus, *I'm loving it* is understood to mean something similar to *I'm enjoying it*.

In this study, the effects of age and gender on the acceptability of state and non-state predicates with the [qaʕid] construction were also statistically tested. Finally, the informants' feedback was qualitatively analyzed.

3.2. The Study

Study 1 examined the [qaʕid] construction using attested examples collected from online sources that had been generated by native speakers of NA. The use of online sources was necessitated by the fact that there are no available corpora for NA. In order to provide

a clearer picture of the [qaʔid] construction as a purported emerging progressive construction, an online survey of 1,786 native speakers of NA was conducted. Study 1 used a combination of qualitative and quantitative data analysis. This mixed methodology permitted full utilization of data.

3.2.1 Participants

A total of 3,112 informants responded to the online questionnaire. The analysis of the informants' demographic information revealed that 66.01% (2,054 informants) reported being a speaker of NA. The survey group was drawn from these respondents only. Data was not used from respondents who identified themselves as speakers of the following dialects: Hijazi (17.97%), Southern (9.92%), Eastern (3.67%), and Northern (2.46%). For Study 1, only data from NA speakers were included in the analysis. In addition, of the NA respondents, 11% failed to finish all test items, so these respondents were excluded from the analysis, leaving 1786 study participants. 82.47% of these were female, and 18.97% were male. The informants' ages ranged from 15 to 75 years.

To examine age as a possible factor in the suspected grammaticalization process, participants were aggregated into two groups of roughly equal size, with 960 participants in the younger group (15-40 years old) and 826 participants in the older group (41-75 years old).

3.2.2 Stimuli for Study 1

The online questionnaire consisted of a grammaticality judgment task. Linguists often formulate theories based on data involving grammaticality judgements, which are intuitive judgments of the well-formedness of utterances in a given language (Keller,

1998). In addition, grammaticality judgment tasks are the most commonly used experimental task in semantics research because they can often be informative for the purposes of investigating the grammatical system of a target language (Erlewine & Kotek, 2016; Schütze, Sprouse, Podesva, & Sharma, 2014).

Participants were presented with 11 sentences that included the [qaʕid] construction. They were asked to respond to each item in one of the following ways: 1) *this sentence is acceptable*, 2) *this sentence is unacceptable*, or 3) *not sure if this sentence is acceptable or not, and I will provide my opinion in the comments section*.

In order to avoid any confusion between NA and MSA, the Arabic adjective [maqubu:l] was used to describe if the sentence is acceptable in NA. In *A Dictionary of Modern Written Arabic*, the verb [qubu:l] in Arabic means 'to accept, to approve and to agree' (Wehr, 1994). The choice of [maqubu:l] encourages the participants to rely on their knowledge of NA as opposed to examining the accuracy of MSA grammar or syntactic style. In addition, Arabic adjectives that mean 'accurate' and 'grammatical' were not used in the judgment task to stress the use of NA and not MSA in the survey. The selection of non-state and state predicates used in Study 1 were tested by accepted diagnostic tests in the literature of predicate types in Chapter 5, as explained in Section 3.2.3 below. The 11 items are presented in Appendix A.

The stimuli were presented in a structure consistent with NA to eliminate any possible confusion with MSA, as shown in (39). The use of [qaʕid] in (39) depicts a very common use of the construction in NA, as has been discussed in Chapter 1. In addition, English glosses were not presented in the survey. All test items were presented in NA

orthography. Moreover, the recruitment message and the instruction that preceded the presentation of the stimuli explained that this survey was to be about dialectal Arabic spoken in Saudi Arabia, not MSA. The survey was designed and presented without time limits to allow participants as much time as needed to read and think about the stimuli before deciding to move on to the next sentence. Participants also had the opportunity to go back and change choices before finishing the survey.

(39) [ʔaħma:d: waink]? Ahmad: What are you doing?

[xa:lid: qaʕid ʔamʃi:] Khalid: Literally: I am sitting walking. (I am walking.)

Stimuli were selected from attested examples that resemble language that NA speakers might use to communicate via new technology such as instant messaging and email. McWhorter (2013) claims that in texting there is a tendency to "write as you speak." Moreover, the use of NA in electronic communication is so prevalent that it is recognized by developers of smart devices. NA is listed as a separate language setting for users in Macintosh laptops (see Figure 3) and iPhones (see Figure 4) (Apple, 2019). Thus, it is fair to say that the stimuli were designed and presented in a way that is consistent with the actual way the examined construction is used in NA.

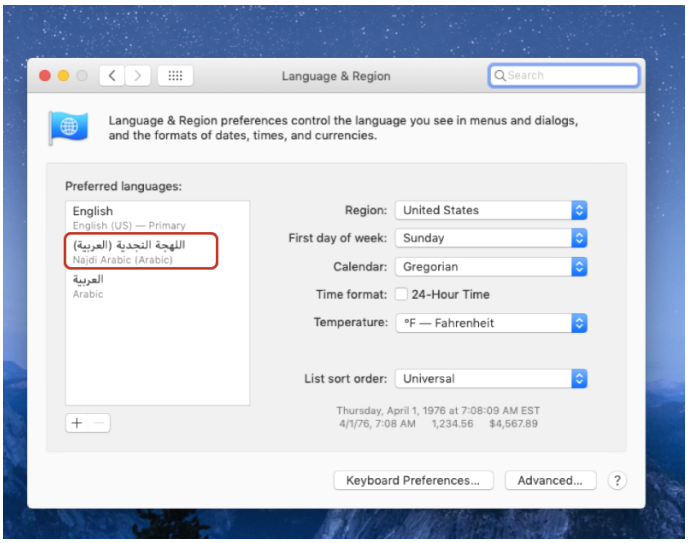

Figure 3. Screenshot of Language & Region settings of a Macintosh laptop. *Note*. Adapted from Apple Laptop (2019).

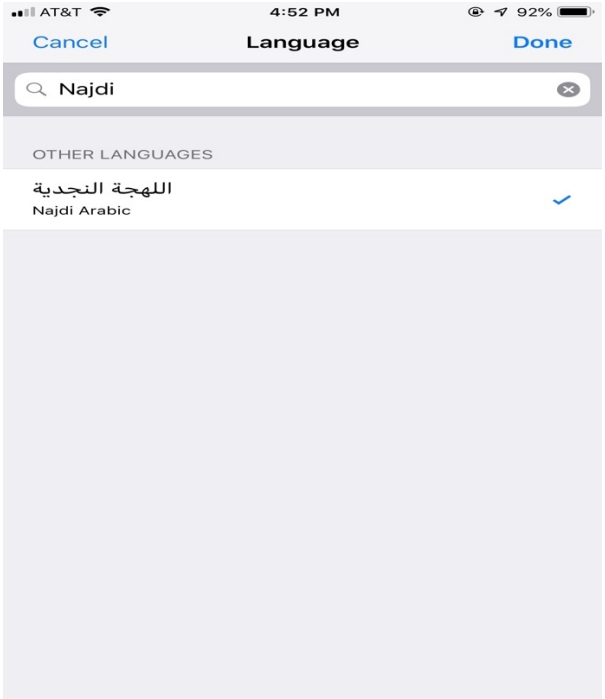

Figure 4. Screenshot of Language & Region settings of an iPhone. *Note*. Adapted from Apple iPhone (2019).

3.2.3 Classification of Stimuli for Study 1

Study 1 investigates the impact of predicate type (state, non-state) on the acceptability of the [qaʕid] construction in NA. This section describes how predicates used in the study passed diagnostic tests for state and non-state predicates in Arabic, thus allowing each predicate used in Study 1 either to be classified accurately as a state predicate or as a non-state predicate. The following section describes the diagnostic tests employed in the classification of the NA predicates used in Study 1. A variety of diagnostics have been proposed to determine aspectual classification. Many of these were first proposed for English, but a few Arabic-specific diagnostics have also been proposed. We may first consider diagnostics for English predicates, and then compare these to available Arabic diagnostics.

Eisele (1999) successfully applied some of Dowty's tests (1979) to test for Vendler predicate types in Arabic. Based on Eisele's (1999) successful application, the tests described in this section plausibly could also be used to test NA predicates in this study. Crucially, it should be acknowledged that, in general, predicate diagnostics are somewhat imprecise as there are various borderline cases, such as (34) and (35) noted above, for which not every diagnostic may provide a definitive judgment. Nonetheless, it is still possible to reference an assortment of diagnostic judgments to classify a particular predicate.

3.2.3.1 States

States are distinguished from non-states depending on their different interpretations with temporal adverbials, such as the modifier *in an hour*. According to Dowty (1979), *in*

an hour when used with a state will give an ungrammatical, semantically anomalous meaning. Eisele (1999) successfully applied the time adverbial fi saa 'in an hour' to classify Arabic state predicates. The time adverbial fi saa 'in an hour' gave an ungrammatical reading when used with all state predicates in Study 1. For example, in (40), the use of 'in an hour' with 'upset' makes the sentence ungrammatical.

(40) *Aħmad zaʕlan fi ʔal-ɣurfah fi saʔa
Ahmad upset.SG.M in DEF-room.SG.F in an hour
'*Ahmad is upset in his room in an hour.'

According to Dowty (1979), only non-states can co-occur with agentive adverbs like *carefully.* Eisele (1999) explained that agent-oriented adverbs such as *bihathar* 'carefully' are used to determine if a predicate can be classified as a state in Arabic. For example, the use of *bihathar* 'carefully' in (41) demonstrates that agentivity can play an important role in determining if a predicate is a state in NA by producing an ungrammatical sentence.

(41) *Nora mabsotˁah biħðar fi ʔal-ħflah
Nora happy.SG.F carefully at DEF-party.SG.F
'*Nora is carefully happy at the party.'

3.2.3.2 Non-states

Unlike states, non-states can be modified with agent-oriented adverbs such as *carefully.* This is based on the notion that only statives will occur with agent-oriented adverbs (Dowty, 1979; Lakoff, 1966). Eisele (1999) explained that agent-oriented adverbs such as *carefully* (i.e. *bihathar*) can be used to determine if a predicate can be classified as

non-state in Arabic. For example, in (42), the non-state predicate is considered grammatical when modified with *carefully* (i.e. *bihathar*).

(42) xa:lid: ʕamʃi biħðar fi ʔal-ħadiqa
Khalid walk.SG.M carefully in DEF-garden.SG
'Khalid carefully walks in the field.'

Another relevant diagnostic test in the literature is the habitual reading in the simple present tense. According to Slebakova (2001), non-states can be distinguished from states by the habitual interpretation they give in the simple present tense. Dowty (1979) explained that states in the simple present refer to the present and non-statives have a habitual interpretation in the simple present. The NA non-state predicates used in Study 1 in the simple present tense give a habitual reading as in (43).

(43) ʕali yalʕab PlayStation maʕ iχwanuh
Ali play.PRS.SG PlayStation with brother.PL.POSS
'Ali plays PlayStation with his brothers.' (habitual interpretation in the simple tense)

3.2.4 Procedure

The data for the online questionnaire was collected using SurveyMonkey Audience. Information on how respondents are recruited to SurveyMonkey is available at www.surveymonkey.com/mp/audience. Participants received the recruitment message with the link to the survey via instant messaging applications and email.

3.2.5 Analysis

As noted, participants could write in comments if they indicated that they were not sure whether a word was acceptable or unacceptable. These responses were analyzed, and in cases where their choice was made explicitly clear in the comments, the response was recoded as acceptable or unacceptable, as the case may be, and included in the final quantitative data analysis.

Using a coding scheme, the comments were interpreted to identify which sentences were considered acceptable. The construction was labeled as acceptable if a participant's comment stated that the sentence was acceptable in NA but not in MSA or if the sentence was acceptable in everyday speech but not in written form. However, the construction was labeled as unacceptable if the comment stated clearly that the informant does not use that construction.

For the quantitative data analysis, a mixed repeated measures ANOVA was used to analyze the acceptability of the use of [qaʕid] with state predicates versus non-state predicates. In addition, a mixed repeated measures ANOVA was used to investigate the effects of age and gender on the acceptability of state and non-state predicates with the construction.

For additional qualitative data analysis, the written feedback provided was analyzed on the basis of a systematic coding, following the approach suggested by Saldaña (2015). Each data item was assigned a code corresponding to a more general category. This identified relevant patterns by synthesizing the available data into the main categories. The final system used the following five categories:

1. The sentence is acceptable in NA but not in MSA
2. The sentence defies logic
3. The informant provided an alternative sentence
4. The construction is not compatible with the verb
5. Other

3.3. Results

3.3.1 Quantitative Results

To investigate the acceptability of state predicates and non-state activity predicates with [qaʕid], a mixed repeated measures ANOVA was used with each predicate type (state, non-state) as the within subject factor. Non-state predicates were rated as significantly more acceptable (M= 78.6%, SE=.006) than state predicates (M=40.9%, SE=.006), $F(1, 1784) = 3168.70$, $p < .001$, $\eta^2 = .640$ (see Figure 5).

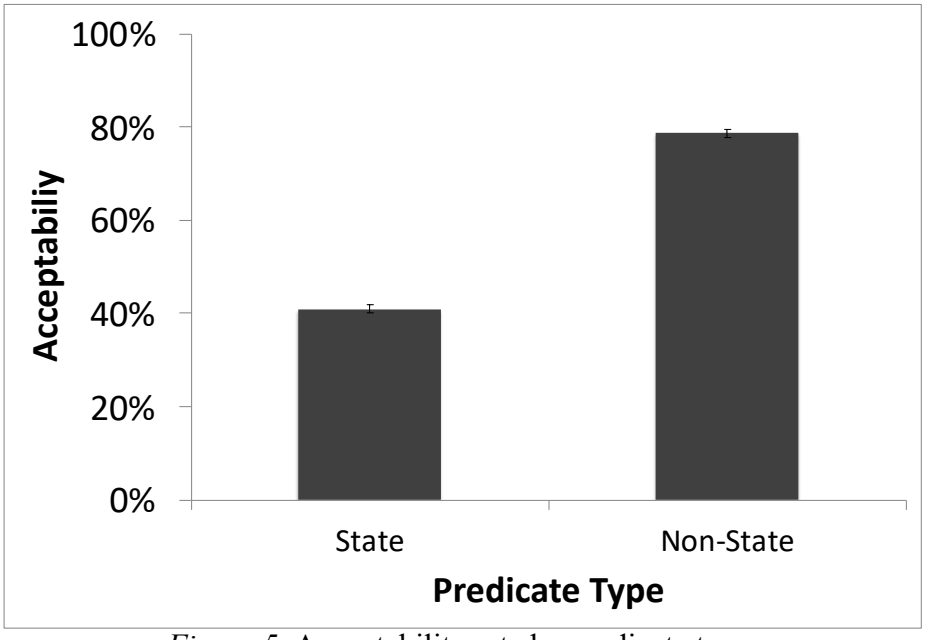

Figure 5. Acceptability rate by predicate type.

To investigate the effects of age, a mixed repeated measures ANOVA was used to analyze acceptability rates for state and non-state predicates for the younger and older informant groups. The analysis included age as the between subject factor, and word type (state, non-state) as the within subject factor. There was a significant interaction between age and predicate type, $F(1, 1784) = 22.03$, $p < .001$, $\eta^2 = .012$. The younger group rated non-state predicates as more acceptable (M=.83, SE=. 008) than the older group (M=.74, SE=.009), p<.001. The younger group also rated state predicates as more acceptable (M=.42, SE=. 009) than the older group (M=.40, SE=.01), p<.05. The effect of age is shown in Figure 6.

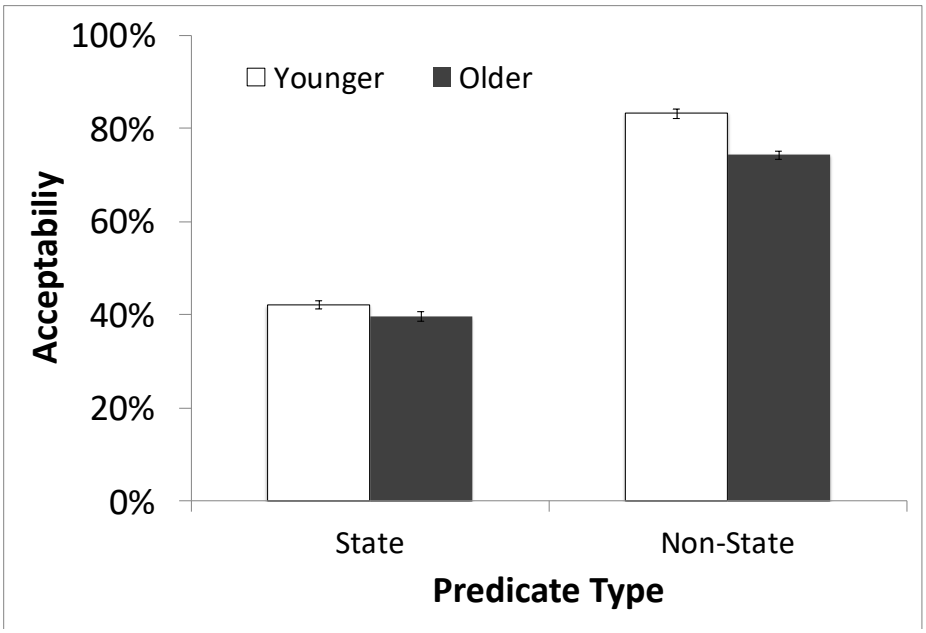

Figure 6. Acceptability rate for age group by verb type.

To investigate effects of gender on the acceptability of state and non-state predicates, a mixed repeated measures ANOVA was used with gender (male, female) as the between subject factor and predicate type (state, non-state) as the within subject factor. A total of 1,473 females and 313 males participated in this study. There was no significant interaction between gender and word type, $F(1,1784) = 0.042$, $p > 0.05$.

3.3.2 Qualitative Results

The coding for qualitative analysis revealed the following most important categories represented in Figure 7.

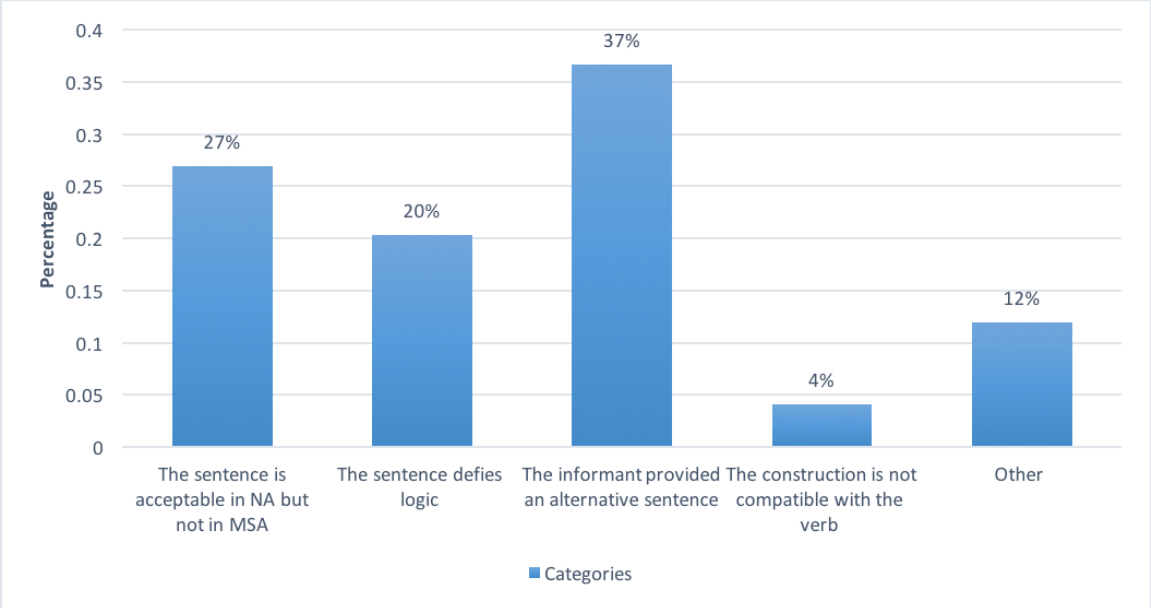

Figure 7. Feedback categories.

The most important categories were '*The informant provided an alternative sentence,'* '*The sentence is acceptable in NA but not in MSA,*' and '*The sentence defies logic.*' The largest percentage of the feedback was in the form of providing an alternative

sentence for the prompt because participants were not sure of the prompt's acceptability in NA. From a total of 821 comments, 37% of the informants provided an alternative sentence, which was the same sentence without [qaʕid].

On the other hand, 27% of participants reported that such sentences are acceptable and widely used in NA but are not accepted in MSA. Such a comment can be the result of confusion between NA and MSA since MSA is the variety that is used mainly for written communication. For example, one informant stated in her comment: "The sentence is only acceptable auditorily." Another informant stated, "This sentence is grammatical in our colloquial spoken dialect, but it is ungrammatical in Classical Arabic." Such comments show that there was a conflict between the prescriptive grammar (describing how one should speak) and the descriptive grammar (focuses on describing the language as it is used).

Two other categories that are relevant to the research question were *'The sentence defies logic*' and '*The construction is not compatible with the verb.*' The comments showed that 20% of participants reported that [qaʕid] makes the sentence illogical. Commenting on the construction *sitting walking* [qaʕid ʔamʃi:], one informant stated, "Two contradicting verbs at the same time, sit and walk!!" Another informant stated a similar observation: "Do not be silly. He is walking and how can he walk while he is sitting?"

In addition, 4% of the comments expressed a certain understanding of the role [qaʕid] as an important component of the tense/aspect system. An informant noted this by commenting on the sentence 'Alnaser team is sitting winning the game,' stating, 'I don't think sitting winning is grammatical but if you say sitting scoring a goal that would work.'

In addition, an informant commented on the sentence that used "sitting thinking" by stating "I understand by the use of [qaʕid] you mean now." The fifth category '*other*' provided information that was irrelevant to the research question.

3.4. Discussion

Study 1 presented data relating to how [qaʕid] has come to be used as a verbal aspect marker in NA and was the first study to empirically examine this construction in NA. The data suggests that this construction, at least at the present time, is a marker of the progressive aspect rather than the broader imperfective aspect because [qaʕid] was judged far more acceptable with non-stative predicates than with state predicates. That said, the low level of acceptability of state predicates with the construction is also intriguing and a phenomenon for further investigation. The analysis is consistent with the claim that the progressive originates historically from a postural construction in which the agent is described as being in the midst of an activity.

This is consistent with Vendler's (1967) classifications of Aktionsarten (action types). However, Study 1 also found a certain level of acceptability of [qaʕid] with state predicates in NA. According to Vendler (1967), stative predicates in English are not compatible with the progressive (Mourelatos, 1978). Vendler (1967) used the progressive construction in English to analyze the Aktionsarten of English, whereas this study found a low level of acceptance of the [qaʕid] construction with state predicates.

Indeed, two state predicates, *be upset* and *happy*, received high rates of acceptability from respondents in Study 1 with the [qaʕid] construction. In the case of NA, it is possible that the active participle [qaʕid] provides a post-state of the underlying event.

Thus, the state predicates *be upset* and *happy* possibly received high rates of acceptability because they denote a more dynamic situation when they are accompanied with [qaʕid]. It is also possible that the [qaʕid] progressive construction can coerce a non-stative interpretation out of some stative predicates, as in *be upset* and *happy*, as can occur sometimes in English, as with *I'm loving it*. The English *be* + *-ing* construction is regarded as a progressive even though it does not completely disallow all predicates that pass various diagnostic tests for stativity. Another explanation could be that the [qaʕid] progressive construction is broadening to an imperfective construction, thus the noted importance of age in the data.

It should be emphasized that this construction is an emerging grammatical pattern in NA. As a relatively new construction to emerge in NA grammar, its usage distribution is plausibly still evolving. Indeed, the fact that younger participants rated state predicates as more acceptable than older participants supports the idea that there is ongoing desemanticization of [qaʕid] into an aspectual marker in NA.

As noted, desemanticization, which is also called semantic bleaching, is a grammaticalization process in which semantic reduction or loss in content meaning takes place (Bybee et al. 1994; Hopper & Traugott, 2003). According to Bybee et al. (1994) and Heine & Narrog (2010), one of the proposed methods to account for grammaticalization is semantic bleaching (Bybee et al., 1994; Heine & Narrog, 2010). In NA, [qaʕid] seems to be undergoing a grammaticalization process in which [qaʕid] has moved from a lexical meaning (making literal reference to sitting) to a grammatical meaning (as an indicator of verbal aspect only, without any literal reference to sitting). The higher acceptability rates

of state predicates with the active participle [qaʕid] in NA by younger speakers supports the proposed weakening of the postural meaning of [qaʕid] and the strengthening of the aspectual meaning in the grammaticalization process.

While the active participle [qaʕid] has apparently not yet been fully grammaticalized for all NA speakers, the results of Study 1 provide support for the notion that a process of grammaticalization is underway. [qaʕid] has undergone some level of semantic bleaching in order to no longer express sitting but rather just to express the verbal aspect in NA. The grammaticalization process is complex and consists of other linguistic changes such as extension, decategorialization, and phonetic reduction (Heine, 2003). Even though the active participle [qaʕid] retains its full phonetic content in NA in the expression of verbal aspect, the process of grammaticalization cannot be doubted. According to Heine & Kuteva (2007), "Phonological erosion is usually the last to apply in grammaticalization processes, and it is not a requirement for grammaticalization to happen" (p. 42). Although no phonological reduction of this construction is found in NA yet, recall that Al-Najjar (1991) found in Kuwaiti Arabic that [qaʕid] has been phonologically reduced to an affix [qaʕ-] on the verb (p. 672). Thus, phonological reduction of [qaʕid] in NA could be anticipated possibly to occur in the future.

3.5. Conclusion

Study 1 was the first to provide an analysis of the [qaʕid] construction in NA based on native speakers' input. The quantitative and qualitative analyses of the data point to the conclusion that the [qaʕid] construction is indeed best analyzed as a marker of a progressive aspect in NA and not an imperfective aspect, at least not yet. However, this construction is

broadening its usage distribution and is thus continuing to undergo a process of semantic bleaching. [qaʔid] thus has growing acceptability for NA speakers with both state and non-state predicates. The reported use of the construction, where some predicates are more acceptable than others, provides support to the grammaticalization process. The data indicates either that the construction may be gradually broadening into an imperfective marker or, perhaps more plausibly, that this NA progressive marker has some influence on coercing a non-stative interpretation from what would ordinarily be a stative predicate in much the same way that the English be+-*ing* progressive can operate.

Although Study 1 sheds some light into the expression of progressivity in NA, Chapter 4 presents a larger study that further develops our understanding of the use of the [qaʔid] progressive. Study 1also had a number of limitations that were addressed in this follow-on study.

Chapter 4. Study 2

4.1. Introduction

Aside from addressing certain limitations of Study 1, Study 2 provides more context, depth, and explanation of the findings observed in Study 1. In Study 2, the aim was to provide a more in-depth investigation of the [qaʕid] construction with more predicate types than just a simple binary division as in Study 1 or even as proposed for NA by Ingham (1994). It was therefore decided to use the widely recognized four-way categorization of Aktionsarten from Vendler (1957, 1967): states, activities, accomplishments, and achievement. Study 2 sought to examine the difference in acceptability between these different kinds of predicates in NA, motivated by the interaction between grammatical and lexical aspect. Lexical aspect involves the inherent temporal meaning of a verb, whether it characterizes a situation as having a temporal boundary or a result.

As was mentioned previously, the Aktionsart tests for classifying a predicate according to its behavior with various kinds of temporal inference patterns can be considered in the examination of the progressive in Arabic (Bache, 1982). In Study 2, state predicate examples include those attested in online examples as well as unattested examples. A set of filler items was also included that did not employ the expression [qaʕid]. Study 2 includes 40 test items and 8 fillers as opposed to 11 in Study 1.

All test items in Study 2, except for unattested state predicates, were attested examples collected from various online sources. However, because usage patterns of the [qaʕid] construction are apparently still in transition for the community of NA speakers, attested examples could perhaps be acceptable to some speakers of NA, but not acceptable to others. The test items were rated by native speakers of NA before distributing the survey. In addition, the methodology was refined to increase the reliability and precision of the results. For instance, age was changed from discrete 5-year range responses to a continuous variable, acceptability was changed from a binary scale to a 7-item Likert scale, and response time was added as a measure.

4.2. Study 2

Study 2 sought to answer these three research questions:

1. Does the type of predicate (i.e., state (both attested and unattested), activity, accomplishment, or achievement) affect the acceptability of the active participle [qaʕid] as a progressive marker in NA?
2. Is there a difference in the acceptability between attested state predicates and unattested state predicates with [qaʕid] as a progressive marker in NA?
3. Does the age of informants affect the acceptability of [qaʕid]?

To answer these questions, this study implemented an online survey distributed among 218 native speakers of NA. The survey was designed to assess if the active participle [qaʕid] would, on average, be rated as acceptable for activities, accomplishments, and achievements, but would be rated as unacceptable for attested state predicates and/or unattested state predicates. It was predicted that participants will be more accepting of the

construction with activities, accomplishments, and achievements, than with state predicates (attested and unattested).

In addition, this survey examined whether activity predicates would be rated as more acceptable than accomplishment and achievement predicates with [qaʕid]. It was predicted that activity predicates would receive the highest rating of acceptability because they are dynamic with an inherent endpoint (atelic). Study 2 also considered whether state predicates that are attested would be more acceptable than state predicates that are unattested. It was predicted that attested state predicates would be more acceptable, because they are currently used by NA speakers. Moreover, age as a variable is predicted to have a negative linear relationship with acceptability such that older informants would rate [qaʕid] as less acceptable compared to younger informants.

4.2.1 Participants

Participants were asked to indicate their Saudi dialect (Najdi, Hijazi, Southern, Eastern, or other), exact age, gender, education level, information about their social media use and sub-NA dialect. In order to identify the NA variety, the participants were asked to provide information on which part or city of Najd they hail from. Ingham (1994) provided a classification of different groups who speak varieties that can be labeled as NA. Ingham (1994) labeled NA varieties based on geographical and shared linguistic features into four groups: 1. Central Najd (dialects of both sedentary people and Bedouin tribes), 2. Northern Najd (which includes the dialects of the Shammar tribes of Northern Najd), 3. Mixed Central and Northern Najd (dialects of Qasim), 4. Southern Najd (dialects of Najran and Gahtan tribe). According to Ingham (1994), the NA varieties "are fairly homogenous and

which we can term the Najdi dialects" (p. 4). The similarities between NA varieties is supported in research on NA, where the reported differences between varieties of NA are mainly phonological (Al-Rojaie, 2013; Ingham, 1994).

A total of 623 participants responded to the online questionnaire with 272 of the participants finishing the entire survey. 85% reported being native speakers of NA. Of the other respondents, 7% were native speakers of the Hijazi dialect, 2% were native speakers of the Southern dialect, 2% were native speakers of the Eastern dialect, and 5% speak other dialects. 86% of participants indicated that they were from Najdi speaking locations, 9% indicated they were from non-Najdi speaking locations, and 5% did not report a location (see Figure 8). For Study 2, participants that reported they were native speakers of NA were included in the analysis even if they currently live in a non-Najdi speaking location. Also, NA participants who failed to finish all test items were excluded from the analysis. With these criteria, a sample of 218 informants was created.

In this sample, 163 (75%) of the informants were female, and 55 (25%) were male. The informants' ages ranged from 18 to 65 years. The median level of education was a graduate degree. The median level of social media use (Twitter, Instagram, or Facebook) was 2-3 hours per day.

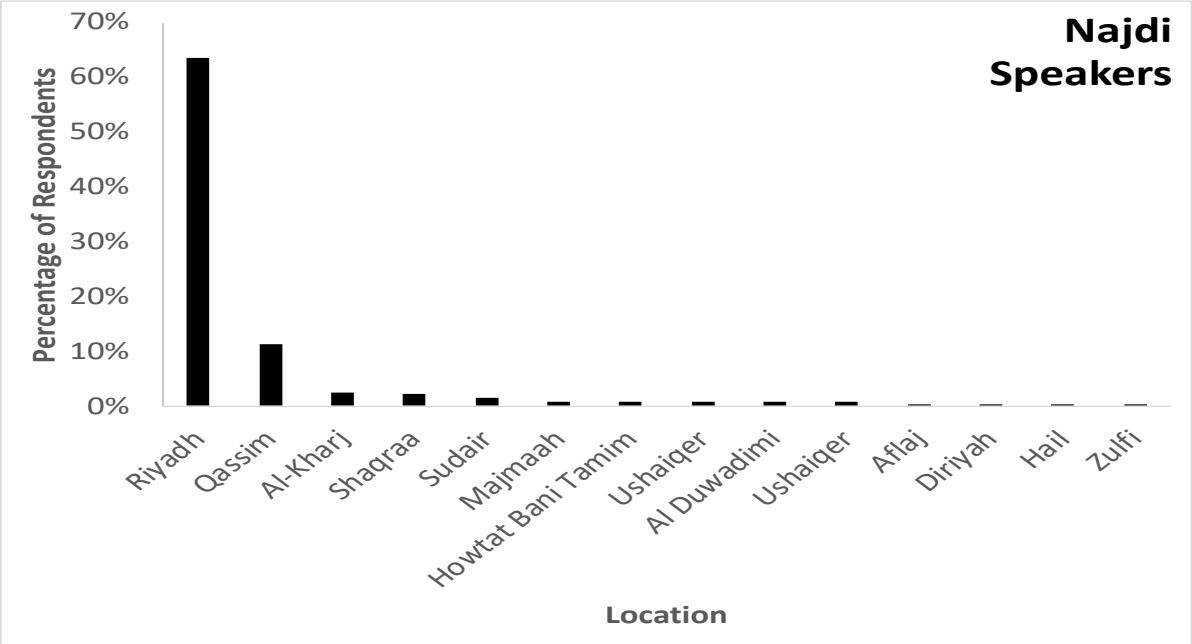

Figure 8. Percentages of respondents who are either from Najdi-speaking regions (left) or non-Najdi speaking regions.

4.2.2 Selection of Stimuli

The online survey consisted of a grammaticality judgment task. The test items chosen for this task were found in naturally occurring data of speakers of NA from various social media outlets (such as Twitter and Instagram). Naturally occurring data have the advantage of reflecting actual language use. Labov (1972) described authentic data as coming from observing people using language while they are not aware of being watched. Moreover, it is argued that naturally occurring data enables the researcher to study how language is organized and realized in natural settings (Golato, 2003; Migdadi, 2003). Investigation of such data was motivated by the findings from Study 1, in which the use of state predicates with [qaʕid] to express the progressive were accepted to a lesser degree than activity predicates.

Stimuli were selected from attested examples of [qaʕid] used by NA speakers on social media. The choice of social media as a source for naturally occurring data has been motivated by the difficulty to control for the different social variables involved in natural language use (Beebe & Takahashi, 1989; Hartford & Bardovi-Harlig, 1992). Social media provides a virtual network that is of great interest for linguistic analyses simply because such digital outlets are solely based on verbal, linguistic cues (Bergs, 2006).

Therefore, many studies have used social media for dialect research (Ali & Stephan, 2014; Alshutayri & Atwell, 2017; Arshi Saloot & Thorleuchter, 2014). Of course, language used on social media is a sampling of the language NA speakers use to communicate via new technology such as instant messaging and email. Thus, we can argue that the stimuli were designed and presented in a way that is consistent with the actual way [qaʕid] is used in NA.

Furthermore, by sampling language from social media exchanges, it is possible to avoid the difficult and time-consuming task of waiting for occurrences of a particular construction, such as [qaʕid], to arise spontaneously in recorded conversations of naturally occurring speech (Beebe & Takahashi, 1989; Hartford & Bardovi-Harlig, 1992; Migdadi, 2003). Finally, the lack of a corpus of NA makes the use of social media platforms a useful tool to collect data on [qaʕid] in NA (Almeman, Lee, & Almiman, 2013; Alshutayri & Atwell, 2017).

As noted in section 3.2.1, the test items were rated by native speakers of NA prior to distributing the survey. The stimuli were all considered to be native-like by speakers of NA. This step was included to account for native linguistic intuition, which could have

eliminated any test items that are not considered native-like. Coulmas (1981) notes when it comes to "intuition applied to linguistics, this means the intuition pertains to rules of language, or criteria by which behavior, i.e. either speech or evaluation of speech, is judged to be correct or incorrect" (p. 129). The role of linguistic intuition in linguistic inquiry is important, because intuitions provide evidence of a linguistic behavior (Maynes, 2012).

Participants were presented with a total of 40 sentences that included the progressive [qaʔid]. The stimuli consisted of six main categories (attested state predicates, unattested state predicates, activity predicates, accomplishment predicates, and achievement predicates) plus fillers. The selection of predicates used in Study 2 were tested for stativity by accepted diagnostic tests in the literature of predicate types in Chapter 5. Since state predicates are unlikely to be accepted with the progressive, testing the acceptability of both attested and unattested state predicates can provide further proof of the process of grammaticalization. Each category contained eight test items. The unattested state predicates were crucially included in the stimuli in order to measure the extent to which [qaʔid] has spread in NA grammar and investigate the possible desemanticization, a.k.a semantic bleaching, of [qaʔid].

As has been noted, desemanticization is a grammaticalization process in which the semantic content of a lexical item is immensely reduced. That is, it is bleached of its lexical meaning (Bybee, Pagliuca, et al., 1994; Hopper & Traugott, 2003). According to Heine (2003), "Desemanticization results from the use of forms for concrete meanings that are reinterpreted in specific contexts as more abstract, grammatical meanings. Having acquired grammatical meanings, these forms tend to become increasingly divergent from their old

uses: they are used in new contexts (extension)" (p.583). Study 2 would be looking for evidence of this sort of extension of the [qaʕid] construction

Finally, fillers were included in the stimuli to act as distractor items and to avoid presenting only sentences that contained [qaʕid]. The fillers were added to obtain reliable results; their purpose is to distract the participants' attention from the real test items (Ingo, Arndt-Lappe, Braun, & Schramm, 2015).

All items were divided into four blocks and randomized within the block. Each block contained two items of each of the six categories for a total of 12 items. The presentation order of the four blocks was also randomized. The 40 test items are presented in Appendix B.

Each test item was followed by a 7-point Likert scale.[1] Participants were instructed to respond to each item by choosing one of the following responses: The sentence is: 7. perfectly acceptable, 6. acceptable, 5. Slightly acceptable, 4. neutral, 3. slightly unacceptable, 2. unacceptable, 1. totally unacceptable. Likert scales are commonly used to measure attitude, providing a range of responses to a given question or statement (Jamieson, 2004).

In addition, Likert scales are designed to provide information about the size of difference in the results (C. Schütze et al., 2014). A 7-point Likert scale, in particular, allows for finer-grained results than a binary or 5-point Likert scale while still being easily understandable by the participants. Research confirms that data from Likert items becomes

[1] According to Bertman, a Likert scale is "a psychometric response scale primarily used in questionnaires to obtain participant's preferences or degree of agreement with a statement or set of statements" (2011, p. 1).

significantly less accurate when the number of scale points drops below five or above seven (Johns, 2010; Miller, 1955; Preston & Colman, 2000). Another advantage of using the 7-point Likert scale is that it includes a neutral midpoint, 'Neither agree nor disagree'. According to Johns (2010), "The purpose of this option is evidently to avoid forcing respondents into expressing agreement or disagreement when they may lack such a clear opinion. Not only might this annoy respondents, but it also risks data quality" (p. 6).

The term *acceptable,* as opposed to *grammatical,* was deliberately used to remind the participants to judge the stimuli according to what they actually consider to be a native NA sentence and not a grammatical MSA or classical Arabic sentence. According to Chomsky (1956), the term *acceptable* should be used to refer to "utterances that are perfectly natural and immediately comprehensible without paper-and-pencil analysis, and in no way bizarre or outlandish. Obviously, acceptability will be a matter of degree along with various dimensions" (p. 10).

Schütze (1996) pointed out that "[A]ll that a linguistically naive subject can do is judge acceptability" and an acceptable sentence is consciously accepted by the speaker as part of his or her language upon seeing it (p. 26). For that reason, an acceptability judgment of stimuli will explicitly prompt speakers to spontaneously judge whether a particular string of words is a possible utterance of their language (Chomsky, 1965; C. Schütze et al., 2014). Thus, the term *acceptable* was used in the 7-point Likert scale to provide the participants with a graded acceptability judgment paradigm to indicate the extent to which a particular sentence is acceptable or unacceptable in NA specifically. This graded scale

offers a clear view of what a participant would like to say about the acceptability of a sentence (Scallan, 2012).

4.2.3 Classification of Stimuli for Study 2

Study 2 investigates the effect of predicate type (state, activity, accomplishment, and achievement) on the acceptability of the active participle [qaʔid] as a progressive marker in NA. This section will verify that the purported predicate categorization used in the study passes the diagnostics for accomplishment, achievement in Arabic. The diagnostic tests will be applied to the NA test predicates used in Study 2 to verify that each of the predicates' type is classified correctly. The 40 test items are presented in Appendix B.

A variety of diagnostics have been proposed to determine aspectual classification. Dowty's diagnostic tests (1979) were developed to test for Vendler predicate types with English as the target language. Eisele (1999) successfully applied some of Dowty's tests (1979) to test for Vendler predicate types in Arabic. Based on Eisele's (1999) successful application, the tests described in this section can be successfully used to test NA predicates in this study.

4.2.3.1 States (Attested and Unattested)

A variety of diagnostics have been proposed to determine what is considered a state. Kearns (1991) notes that "the general observation is that states have no essential changes or transitions, from which it follows that they are continuous and are not essentially bounded" (p.116). Specifically, states are distinguished from non-states depending on their different interpretations with temporal adverbials, such as the modifier *in an hour*.

According to (Dowty, 1979) *in an hour*, when used with a state, will give an ungrammatical, semantically anomalous meaning. Eisele (1999) successfully applied the time adverbial *fi saa* 'in an hour' to classify Arabic state predicates. The time adverbial *fi saa* 'in an hour' gave an ungrammatical reading when used with all state (attested and unattested) NA predicates in Study 2. For example, in (46), the use of 'in an hour' with 'love' made the sentence ungrammatical.

(46) *Hind taħib Zamylat ʕal-fasˁal ʕal-ʒa:did fi saʔa
Hind love.SG.F classmate.Pl.F DEF-class.S.M DEF-new in an hour
'*Hind loves her new classmates in an hour.'

According to Dowty (1979), only non-statives can co-occur with agentive adverbs like *carefully.* Eisele (1999) explained that agent-oriented adverbs such as *bihathar* 'carefully' are used to determine if a predicate can be classified as a state in Arabic. The use of *bihathar* 'carefully' in (47) can show that agentivity plays an important role in determining if a predicate is a state in NA by producing an ungrammatical sentence.

(47) *Ana aʔrif Biħðar tˁariq muχtasˁar li-ʕal-bait
I know.SG.M carefully route.S shortened to-DEF-house.S
'*I carefully know a shortcut to the house.'

4.2.3.2 Activities

Activities are non-states that involve change (Dowty 1979, Kearns 1991, McClure 1994). Unlike states, activities are dynamic events that express an iterated change. According to Dowty's (1979) tests for aspectual verb categories, the time adverbial *for an hour* distinguishes telic from atelic predicates. Eisele (1999) applied *li saa* 'for an hour' to

distinguish Arabic activities. This test could thus be used to distinguish NA activities in Study 2. This diagnostic test is used to distinguish activities from other non-state predicates (accomplishments and achievements). According to Dowty (1979) and Eisele (1999), only activity predicates can be modified with the time adverbial *li saa* 'for an hour'. All activity predicates used in the study produced grammatical sentences when used with the modifier *for an hour* as in (44).

(44) ʕali mʃa: fi ʔal-ħadiqa li saʔa
Ali walk.SG.M in DEF-garden.SG for an hour
'Ali walked in the garden for an hour.'

Eisele (1999) explained that agent-oriented adverbs such as *bihathar* 'carefully' are used to determine if a predicate can be classified as an activity in Arabic (45).

(45) Xalati raqsˤat Biħðar ʔala ʕal-uɣniya
Aunt.SG.F.POSS dance.SG.F Carefully to DEF-song.S
'My aunt danced carefully to the song.'

4.2.3.3 Accomplishments

Both achievements and accomplishments indicate a change of state. However, accomplishments involve a complex change of state. Unlike achievements, accomplishments are both durative and dynamic. Dowty (1979) presents the ambiguity with the *almost* test to distinguish between achievements and accomplishments. The modifier *almost* gives an ambiguous meaning only when used with accomplishments Dowty (1979). Eisele (1999) and Dobaian (2018) used *kaada* 'almost' to distinguish between accomplishments and achievements in Arabic. When the modifier *kaada* 'almost'

was used in the study to test the predicates, the predicates gave an ambiguous meaning as in (48).

(48)	Kaada	Naif	yabini	Bait	Hatði	ʕal-sanah
	Almost	Naif	build.SG.M	house.INDF.S	This	DEF-year

'Naif almost built a house this year.'

In (48), *kaada* causes this sentence to be ambiguous. The predicate has two possible interpretations with *kaada* 'almost' test. The first possible interpretation would be that the building event almost began but did not happen for some reason. The second possible interpretation could express an incomplete event, in which Naif started to build some parts of the house, but not the entire house. The NA predicates in Study 2 produced ambiguous sentences with the *kaada* test, which indicates that these predicates are accomplishments.

Dowty (1979) explains that only accomplishments can be used as complements to *finish*. Eisele (1999) argues that accomplishments can be distinguished by the use of *khalas 'finish'* in Arabic. For example, the use of *khalas 'finish'* is applied in (49) as an aspectual diagnostic of accomplishments in NA.

(49)	Maha	χalasˤat	rasm	Rasmah
	Maha	finish.PST.S.F	paint.SG	painting.INDF.S

'Maha finished painting a painting.'

4.2.3.4 Achievements

Unlike accomplishments, an achievement is an abrupt form of a dynamic event that is not durative. Achievement predicates will not pass the time adverbial test *for an hour* that was proposed by Dowty (1979) and applied to Arabic achievement predicates by Eisele

(1999). The achievement predicates used in this study produced sentences that are semantically anomalous when used with the time adverbial *li saa 'for an hour'*. For example, the use of *li saa* (50) produces an ungrammatical sentence.

(50) *Ahmad Laqa miftaħa: li saa
Ahmad find.S.M key.SG.F.POSS for an hour
'*Ahmad found his key for an hour.'

Furthermore, Al-Dobaian (2018) argues that in Arabic *kaada* 'almost' will produce an unambiguous interpretation with achievements. The use of *kaada* 'almost' will express an event that almost happened but it did not occur. In (51), *kaada* gives a single possible interpretation of the predicate in which dying almost happened but did not take place.

(51) Kaada ʔali yamout ʕal-bariħa
Almost Ali die.SG.M DEF-yesterday
'Ali almost died yesterday.'

The 40 test items are presented in Appendix B. Table 1 shows a summary of the diagnostic tests applied to the predicates used in the study.

Table 1. *Results of Diagnostic Tests with NA Predicate Simuli*

Predicate Type	**Diagnostic Test**	**Criterion**	**Predicates Satisfying Criterion**	**Arabic Diagnostics**
States (attested and unattested)	*fi saa* 'in an hour'	ungrammatical, semantically anomalous	9-24	Eisele (1999)
	bihathar 'carefully'	ungrammatical	9-24	Eisele (1999)
Activities	*li saa* 'for an hour'	grammatical	1-8	Eisele (1999)
	bihathar 'carefully'	grammatical	1-8	Eisele (1999)
Accomplishments	*kaada* 'almost'	ambiguous reading	33-40	Al-Dobaian (2018)
	khalas 'finish'	grammatical	33-40	Eisele (1999)
Achievements	*kaada* 'almost'	unambiguous reading	25-32	Al-Dobaian (2018)
	li saa 'for an hour'	ungrammatical, semantically anomalous	25-32	Eisele (1999)

4.2.4 Procedure

The online survey for this study was developed using Qualtrics survey software ("Qualtrics," 2019). An electronic link to a Qualtrics survey was sent to participants via instant messaging applications or email and was also posted on social media (Instagram and Twitter). Participants received the recruitment message with the link to the survey. The survey began by stating that the purpose of the study was to examine NA. The introduction made it clear that participation was voluntary, and any personal information would not be collected. In addition, the survey contained six items on demographics: age, native dialect, gender, education, location in KSA, and social media use. Participants' anonymity was ensured by not collecting any identifiers or personal information. Participants who had already taken the survey in Study 2 were excluded by limiting the number of participation attempts to one per Internet Protocol (IP) address.

A form of snowball sampling was used to recruit participants. That is, the survey was distributed to individuals in the NA-speaking population, who were then asked to share the survey link with participants from the same population (Bhattacherjee, 2012; Nilsson, 2015). As Nilsson (2015) describes, "This process is repeated, with participants continuing to recruit other population members; the sample thus "snowballs" to an increasing size" (p. 13).

The language used in the survey was presented in a structure consistent with NA to eliminate any possible confusion with MSA. The survey was designed and presented without time limits to allow participants as much time as needed to read and think about the stimuli before deciding to move on to the next sentence. Participants had the opportunity to go back and change choices before finishing the survey.

4.2.5 Analysis

The statistical program JAMOVI Version 0.9 ("The Jamovi Project," 2019) was used for all analyses. A mixed repeated measures ANOVA was used to analyze the effects of age and predicate type on the acceptability of sentences with the progressive [qaʔid]. Post-hoc analyses were conducted for all effects and p-values were corrected with Tukey honestly significant differences. A linear mixed effects analysis was used to examine the overall relationship between age and acceptability across all predicates.

To further examine age as a possible factor in the proposed grammaticalization process, participants were aggregated into two groups of roughly equal size, with 114 participants in the younger group (18-34 years old) and 104 participants in the older group (35-65 years old). The two age groups were then submitted to a repeated measures ANOVA

to examine the effects of age on the acceptability. Finally, a mediation analysis was conducted to examine the relationships between age, social media use, and acceptability.

4.3. Results

To investigate the acceptability of predicates with the examined construction in NA, a mixed repeated measures ANOVA was used with the predicate type state (attested and unattested), activities, accomplishments, and achievements) as the within subject factor. Results showed that predicate type significantly affected acceptability, $F(4, 864) = 135.61$, $p < .001$, $\eta^2 = .126$ (see Figure 2). Post-hoc analyses were conducted to compare the specific differences between the predicates. The results of these analyses are discussed in the context of each of the predictions in the following sections.

4.3.1 Acceptability of Activities, Accomplishments, and Achievements

It was predicted that activities, accomplishments, and achievements would on average be rated as acceptable (above 5). Consistent with this prediction, activities ($M = 5.62$, $SE = 0.07$), accomplishments ($M = 5.69$, $SE = 0.07$), and achievements ($M = 5.13$, $SE = 0.07$), were on average all rated 5 or above. The grey dotted line shows the Likert rating (5) at which the sentence was rated acceptable (see Figure 9).

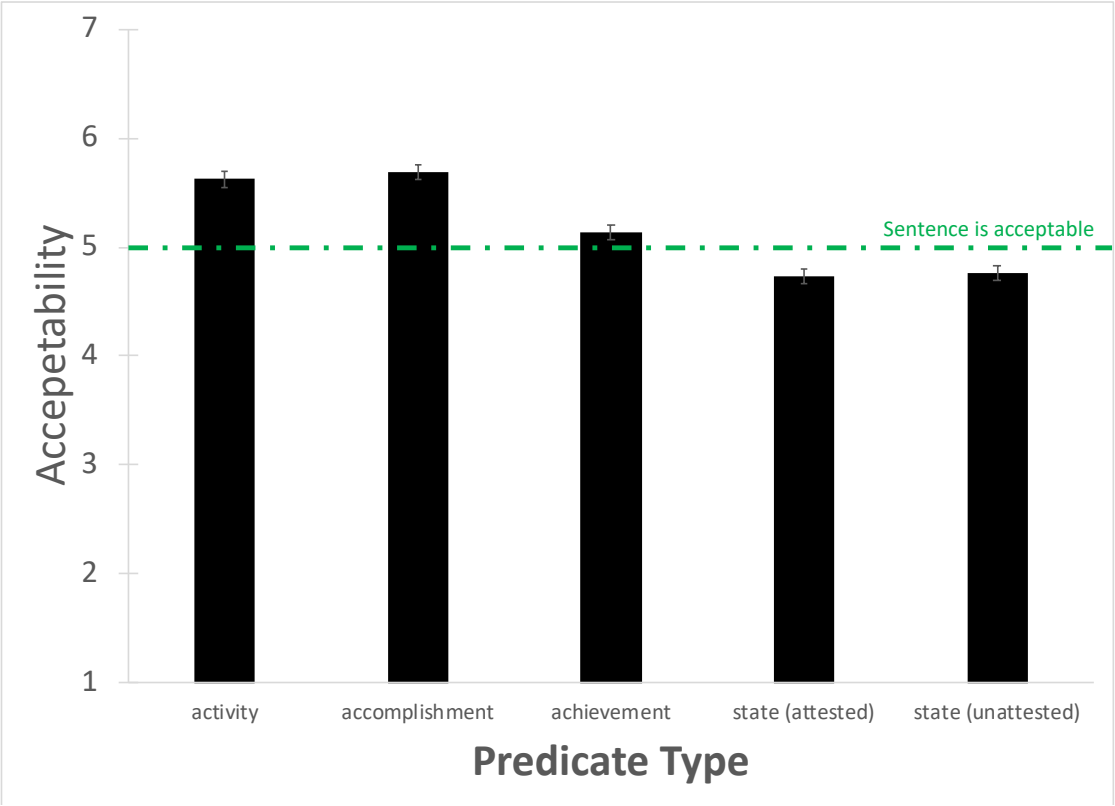

Figure 9. Acceptability rate by predicate type.

To provide more detail about how many respondents rated the activity, accomplishment, and achievement predicates with the value 5 and above, a histogram for each of these predicates was created (see Figure 10). This analysis shows the total percentage of respondents that on average rated the item with a value of 5 (acceptable) or above. For activity predicates, 77% of respondents rated the item 5 or above. For accomplishment predicates, 78% of respondents rated the item 5 or above. For achievement predicates, 59% of respondents rated the item 5 or above. Thus, for these predicate types, a majority of respondents rated the item 5 or above.

In Figure 10 the x-axis shows the Likert scale from 1 to 7, and the green vertical line indicates the value 5 on this scale, which corresponds to the response that the sentence is acceptable. The green highlighted bars show all the respondents that rated the sentence 5 or above. The percentages below the x-axis show the percentages of respondents that rated the sentence 5 or above (to the right of the green vertical line) and those respondents that rated the item on average below 5 (to the left of the green vertical line).

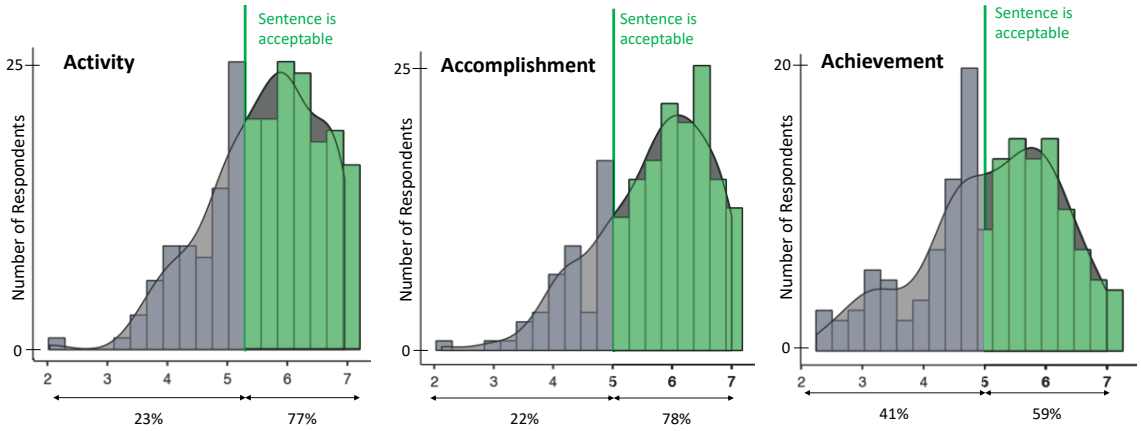

Figure 10. Histograms for each of the three predicate types: activity, accomplishment, and achievement.

To provide more detail about the histograms and the distribution of responses of the acceptability measure, each predicate's histogram was highlighted and decomposed separately. For activity predicates, 47% of respondents rated the item on average between acceptable (6) and perfectly acceptable (7) and 36% of respondents rated the item on average between slightly acceptable (5) and acceptable (6). In addition, 15% rated the activity predicates between neutral (4) and slightly acceptable (5). Finally, 2% of

respondents rated the activity predicate items between totally unacceptable (1) and neutral (4).

In Figure 11, the x-axis shows the Likert scale from 1 to 7. The green vertical line indicates the value 5 on this scale, which corresponds to the response that the sentence is acceptable. The green highlighted bars show all the respondents that rated the sentence 5 or above. The percentages below the x-axis show the percentages of respondents that rated the sentence 5 or above (to the right of the green vertical line) and those respondents that rated the item on average below 5 (to the left of the green vertical line). To provide more detail about the histograms and the distribution of responses of the acceptability measure, each predicate's histogram was highlighted and decomposed separately (see Figure 11). As illustrated in Figure 11, The x-axis shows the Likert scale from totally unacceptable (1) to perfectly acceptable (7). The y-axis shows the number of respondents in each of the acceptability ranges of the scale. Each bar reflects the number of respondents (indicated by the number above the bar) that rated the predicate in that specific range. Percentages below the bars indicate the proportion of respondents in these categories divided by the total number of respondents (218).

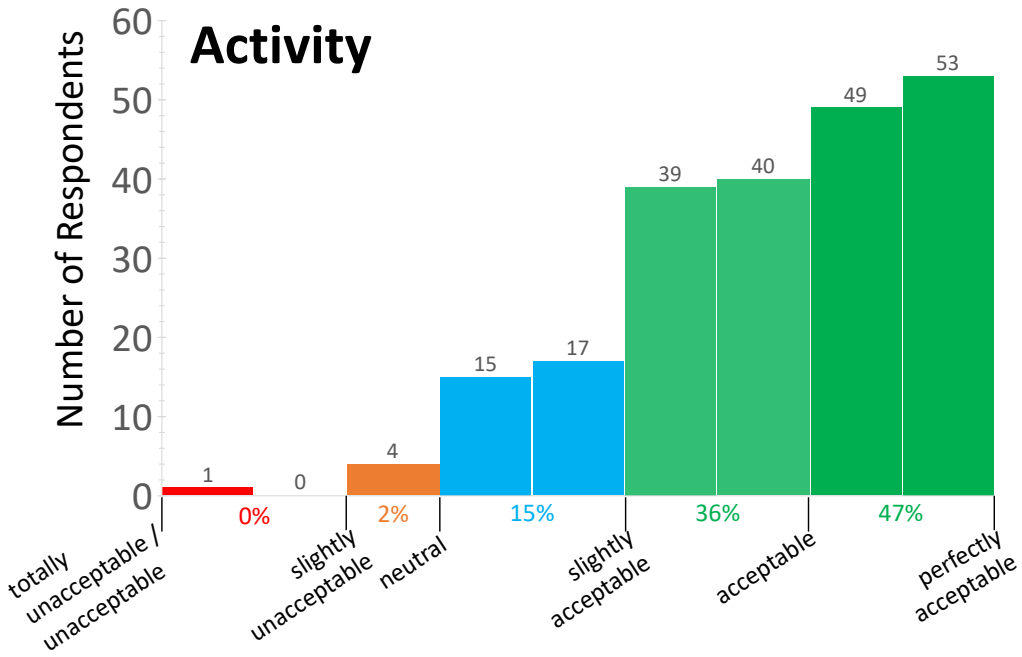

Figure 11. Detailed histogram for activity predicates.

For accomplishment predicates, 46% of respondents rated the item on average between acceptable (6) and perfectly acceptable (7) and 32% of respondents rated the item on average between slightly acceptable (5) and acceptable (6). In addition, 19% rated the activity predicates between neutral (4) and slightly acceptable (5). Finally, 3% of respondents rated the activity predicate items between totally unacceptable (1) and neutral (4). See Figure 12.

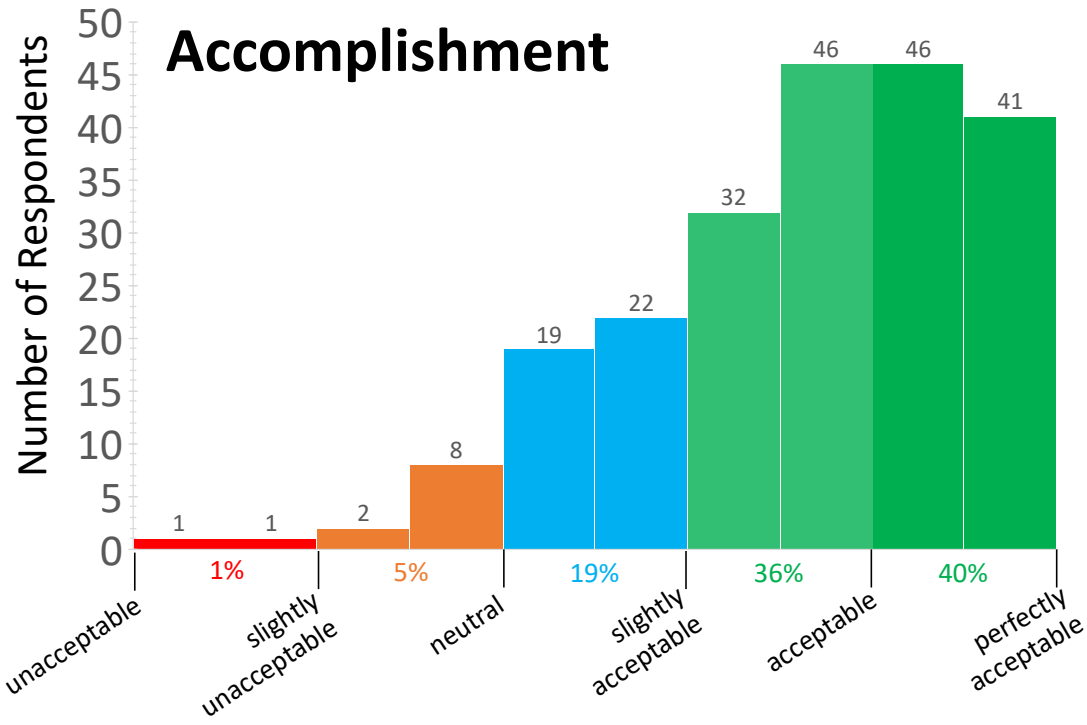

Figure 12. Detailed histogram for accomplishment predicates.

For achievement predicates, 22% of respondents rated the item on average between acceptable (6) and perfectly acceptable (7), 23% of respondents rated the achievement predicates between slightly acceptable (5) and acceptable (6), and 37% of respondents rated the achievement predicates between neutral (4) and slightly acceptable (5). In addition, 14% of respondents rated the predicate between unacceptable (3) and neutral (4). Finally, 4% of respondents rated the activity predicate items between totally unacceptable (1) and unacceptable (3). See Figure 13.

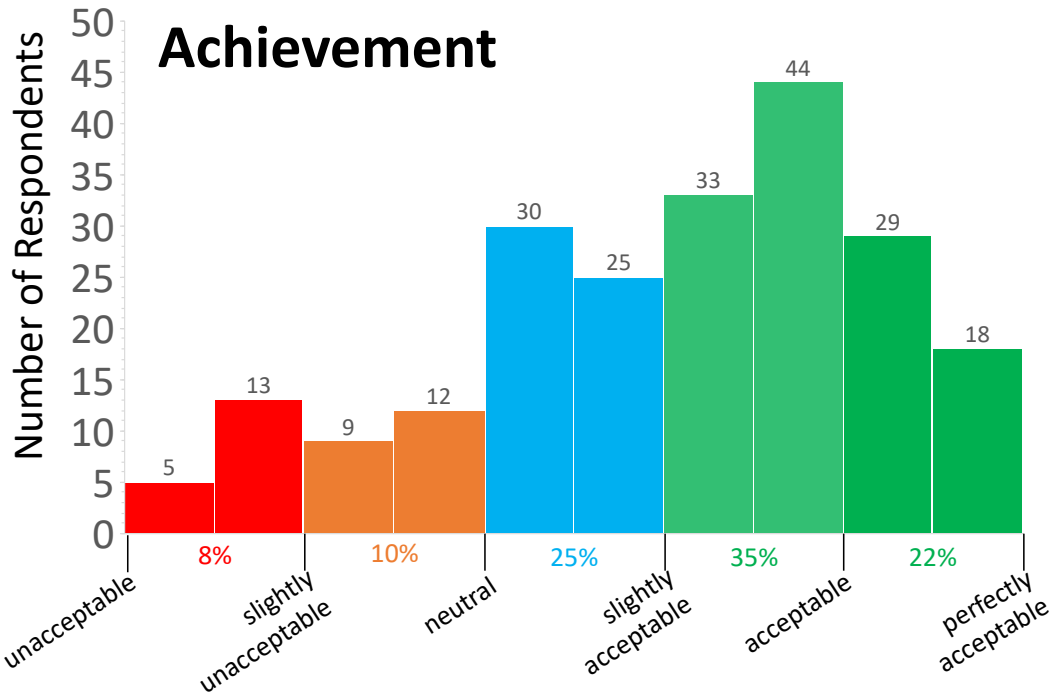

Figure 13. Detailed histogram for achievement predicates.

4.3.2 Unacceptability of Attested and Unattested State Predicates

It was predicted that both attested and unattested state predicates would on average be rated as unacceptable (3 or below). Inconsistent with this prediction, unattested state (M = 4.77, SE = 0.07) and attested state (M = 4.74, SE = 0.07) predicate types were rated on average between 4 (neither acceptable nor unacceptable) and 5 (acceptable).

To provide more detail about how many respondents rated the state predicates (attested and unattested) below 5, the histogram for each of these predicates was created (see Figure 14). This analysis shows the total percentage of respondents that on average rated the item with a value of below 5 (acceptable). For attested state predicates, 55% of respondents rated the item below 5. For unattested state predicates, 55% of respondents

likewise rated the item below 5. A number of respondents rated the item below 3 (unacceptable). For attested state predicates, 11% of respondents rated the item 3 or below. For unattested state predicates, 7% of respondents rated the item 3 or below. Overall, the data show that for both attested and unattested state predicates, a majority of respondents rated the item as below acceptable (5) but above unacceptable (3).

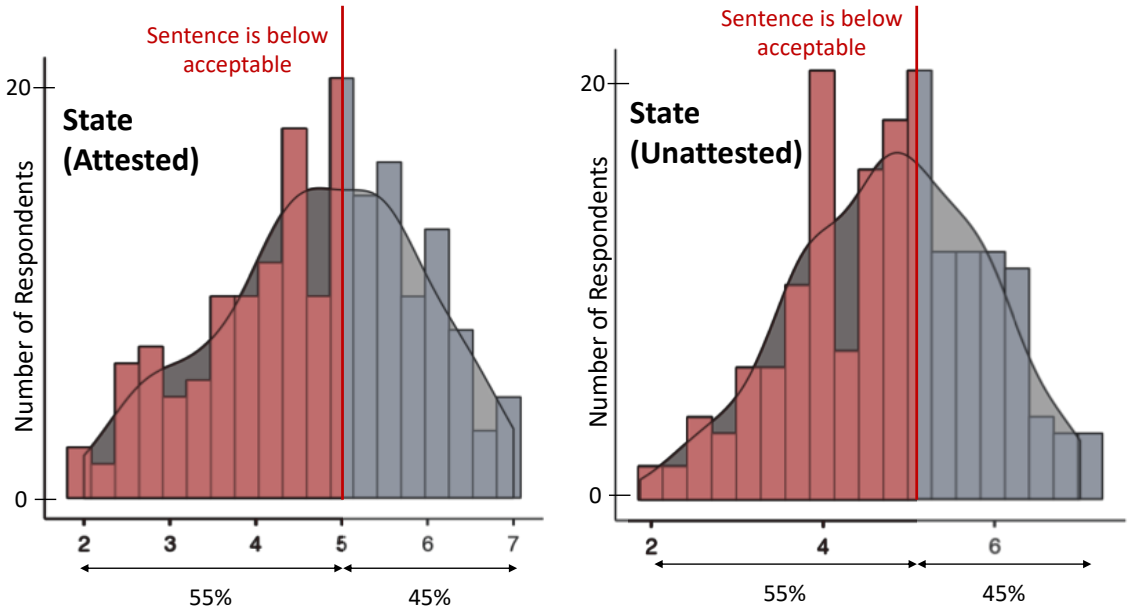

Figure 14. Histograms for state predicates (attested) and state predicates (unattested).

To provide more detail about the histograms and the distribution of responses of the acceptability measure, each predicate's histogram was highlighted and decomposed separately. For attested state predicates, 12% of respondents rated the item on average between acceptable (6) and perfectly acceptable (7). Furthermore, 39% of respondents rated the predicate between slightly acceptable (5) and acceptable (6). Additionally, 22% of respondents rated these predicates between neutral (4) and slightly acceptable (5).

Furthermore, 21% of respondents rated these predicates between unacceptable (3) and neutral (4). Finally, 6% of respondents rated them between totally unacceptable (1) and unacceptable (3). See Figure 15.

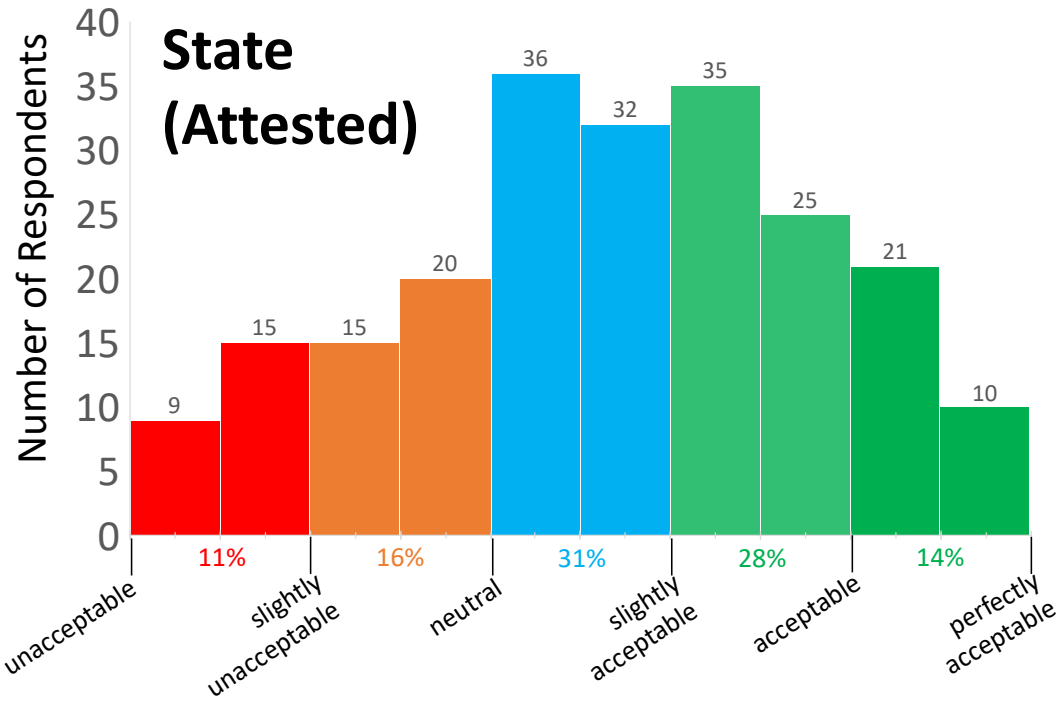

Figure 15. Detailed histogram for state predicates (attested).

For unattested state predicates, 7% of respondents rated the item on average between acceptable (6) and perfectly acceptable (7). Furthermore, 34% of respondents rated the predicate between slightly acceptable (5) and acceptable (6). Additionally, 40% of respondents rated these predicates between neutral (4) and slightly acceptable (5). Furthermore, 16% of respondents rated these predicates between unacceptable (3) and

neutral (4). Finally, 3% of respondents rated them between totally unacceptable (1) and unacceptable (3). See Figure 16.

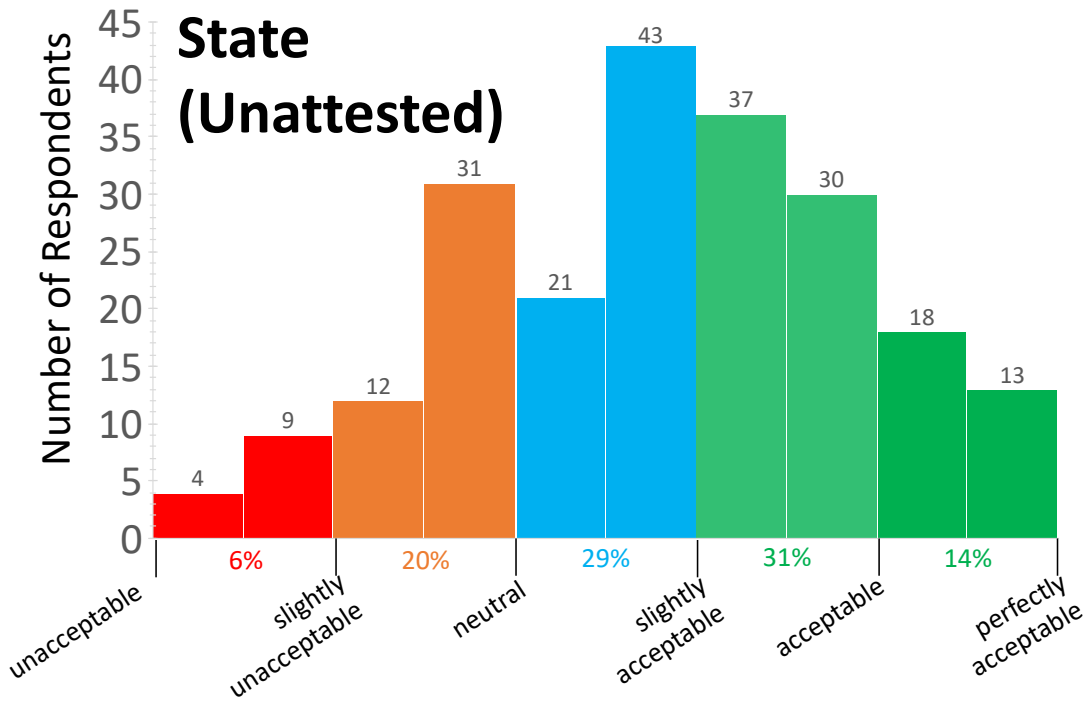

Figure 16. Detailed histogram for state predicates (unattested).

4.3.3 Comparing Activity, Accomplishment, and Achievement Predicates with State Predicates

It was predicted that activity, accomplishment, and achievement predicates would all be rated as more acceptable than state predicates (either attested or unattested). Post-hoc tests were performed to discover the differences among these predicate types. Consistent with this prediction, results confirmed that activity, accomplishment, and

achievement predicates were all rated as significantly more acceptable than any state predicates. Activity predicates were rated significantly higher in acceptability ($M = 5.62$, $SE = 0.07$) compared to both attested state predicates ($M = 4.74$, $SE = 0.07$), $t\,(864) = 16.6$, $p < 0.001$, and unattested state predicates ($M = 4.77$, $SE = 0.07$), $t\,(864) = 15.49$, $p < 0.001$. Likewise, accomplishment predicates were rated significantly higher in acceptability ($M = 5.69$, $SE = 0.07$) compared to both attested state predicates ($M = 4.74$, $SE = 0.07$), $t\,(864) = 17.31$, $p < 0.001$, and unattested state predicates ($M = 4.77$, $SE = 0.07$), $t\,(864) = 16.74$, $p < 0.001$. Finally, achievement predicates were rated significantly more acceptable ($M = 5.13$, $SE = 0.07$) compared to both attested state predicates ($M = 4.74$, $SE = 0.07$), $t(864) = 7.20$, $p < 0.001$, and unattested state predicates ($M = 4.77$, $SE = 0.07$), $t(864) = 6.63$, $p < 0.001$ (see Figure 17).

As shown in Figure 17, six post-hoc comparisons were made to indicate that achievement, activity, and accomplishment predicates (striped bars) were significantly more acceptable than both attested and unattested state predicates (black bars). Note that the y-axis begins at 4 and ends at 6 to better highlight the differences among the predicates.

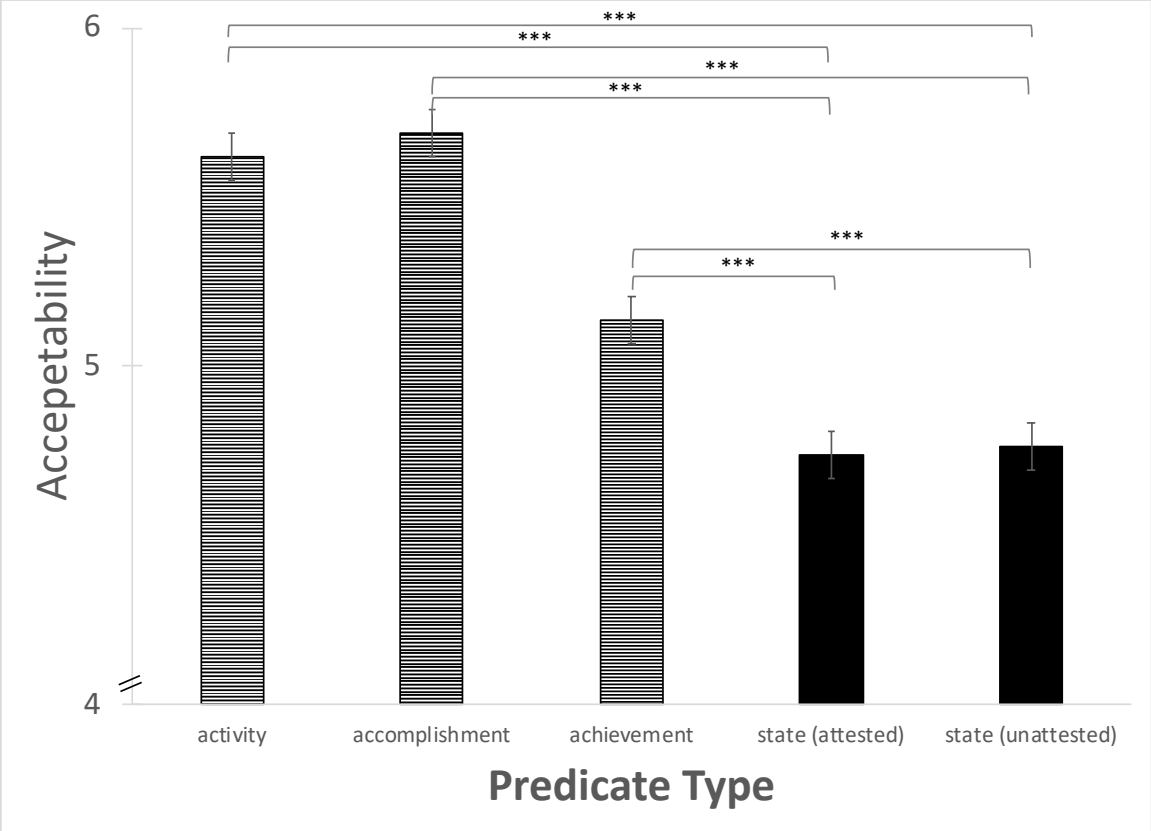

Figure 17. Acceptability rate by predicate type.

4.3.4 The Hypothesis That Activity Predicates Would Be the Most Acceptable

Activity predicates are said to occur more frequently in a progressive construction than any other predicate (Bybee, Pagliuca, et al., 1994; Heine & Kuteva, 2002). Thus, it was predicted that activity predicates would be rated as more acceptable than accomplishment and achievement predicates. This hypothesis was partially supported. Consistent with this prediction, activity predicates (M = 5.62, SE = 0.07) were rated as more acceptable compared to achievement predicates (M = 5.13, SE = 0.07), t (864) = 8.86, $p < 0.001$.

However, inconsistent with this hypothesis, activity predicates (M = 5.62, SE = 0.07) were not rated as more acceptable than accomplishments (M = 5.69, SE = 0.07), t (864) = -1.25, p = 0.72. Instead, the acceptability of activities and accomplishments were quite close to each other. Finally, accomplishments (M = 5.69, SE = 0.07) were rated as more acceptable compared to achievements (M = 5.13, SE = 0.07), t (864) = 10.11, p < 0.001. Achievements were thus rated lower in acceptability compared to both activity and accomplishment predicates (see Figure 18).

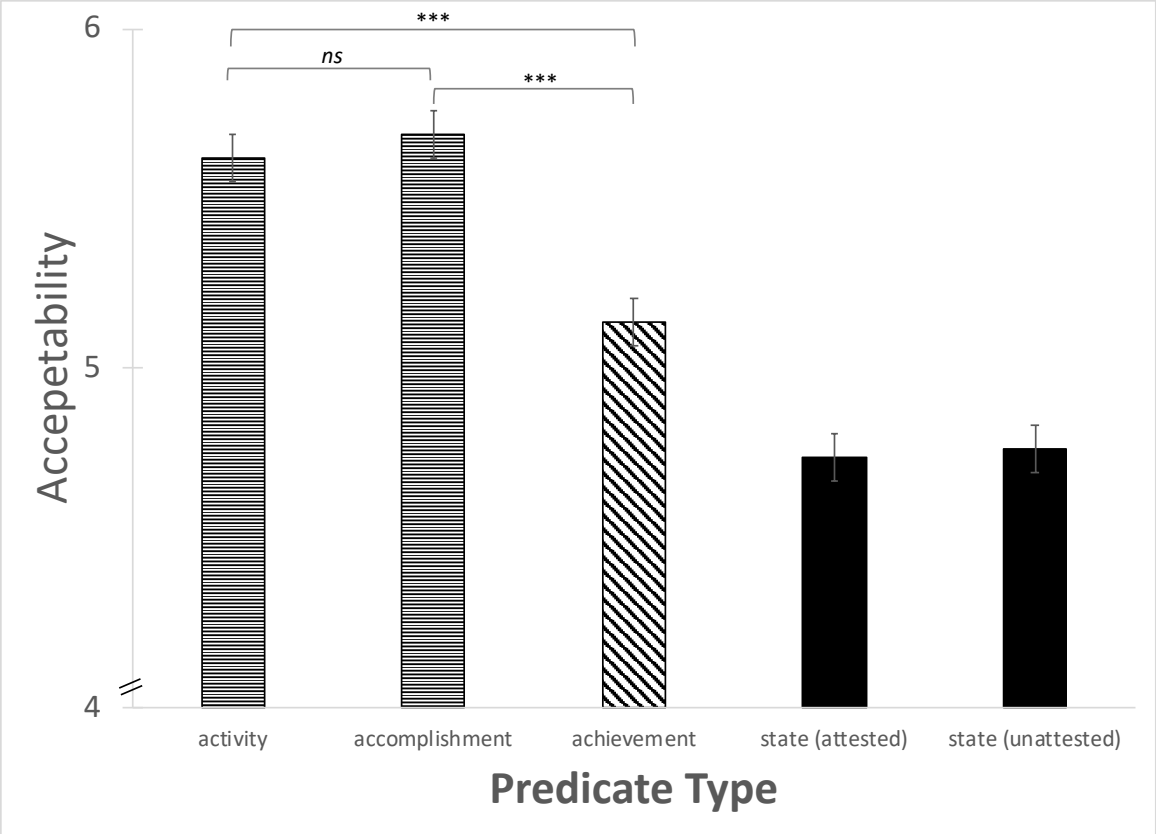

Figure 18. Acceptability rate by predicate type.

However, it should be noted that an accomplishment predicate (e.g. *walk to the park*) may arguably be analyzed simply as an activity predicate (i.e., *walk*) plus a stated culmination point (i.e., *to the park*). Given this understanding, it would not be unexpected for activities and accomplishments to have essentially equivalent acceptability.

4.3.5 The Hypothesis That Attested State Predicates Would Be Rated as More Acceptable than Unattested State Predicates

It was predicted that attested state predicates would be rated as more acceptable compared to unattested state predicates. Inconsistent with this prediction, post-hoc analyses indicated that attested state predicates ($M = 4.74$, $SE = 0.07$) were not rated as significantly more acceptable than unattested state predicates ($M = 4.77$, $SE = 0.07$), $t\ (864) = -0.56$, $p = 0.98$ (see Figure 19). Instead, unattested state predicates were actually rated slightly higher than attested state predicates.

One post-hoc comparison was made (shown in Figure 19) that indicated that attested and unattested state predicates were not rated significantly different from one another. Note that the y-axis begins at 4 and ends at 6 to better highlight the differences between predicates. The abbreviation “ns” refers to not significant.

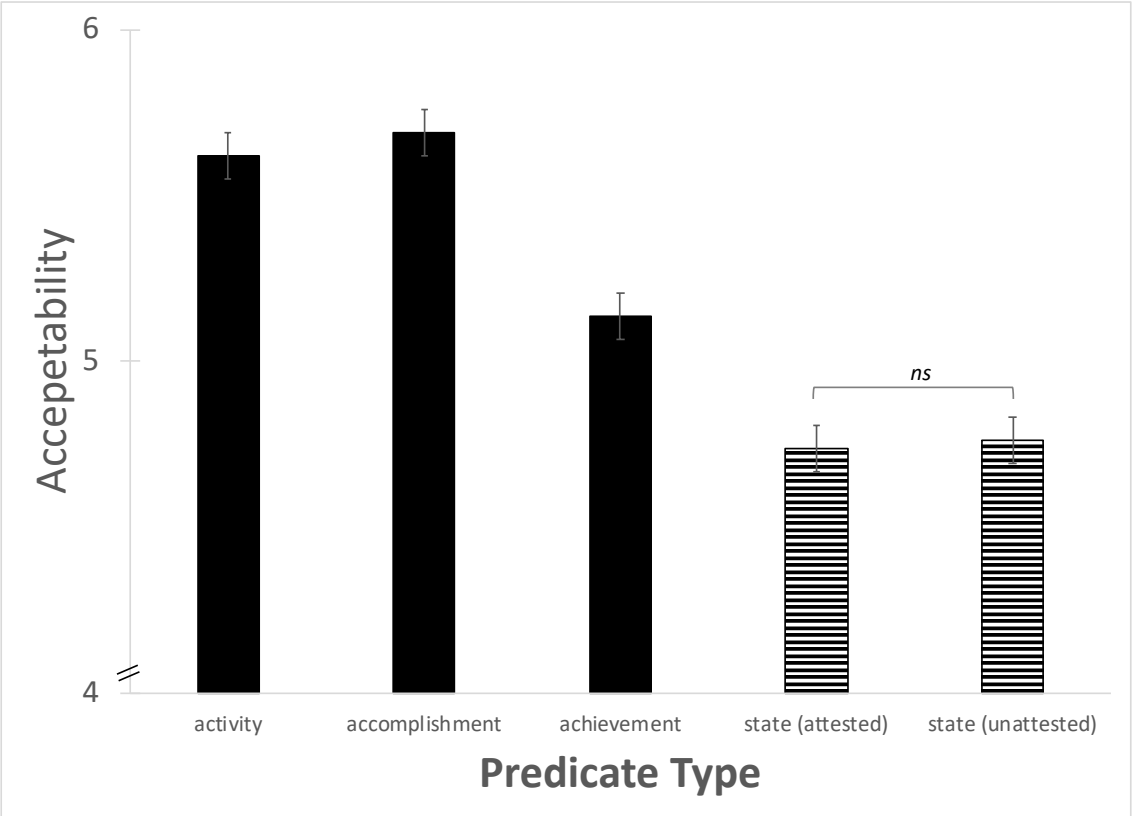

Figure 19. Acceptability rate by predicate type.

4.3.6 The Hypothesis That There Would Be a Negative Relationship Between Age and Acceptability

It was predicted that there would be a negative relationship between age and acceptability. In other words, younger people would be more accepting of [qaʕid] as a progressive marker in general compared to older people. A mixed linear effects analysis revealed that age significantly predicted acceptability ($R^2 = 0.019$) and that this relationship was negative, B = -0.016, $SE = 0.00072$, $t(68.2) = -2.25$, $p < 0.05$ (see Figure 20). For every year increase in age, acceptability decreased by 0.016.

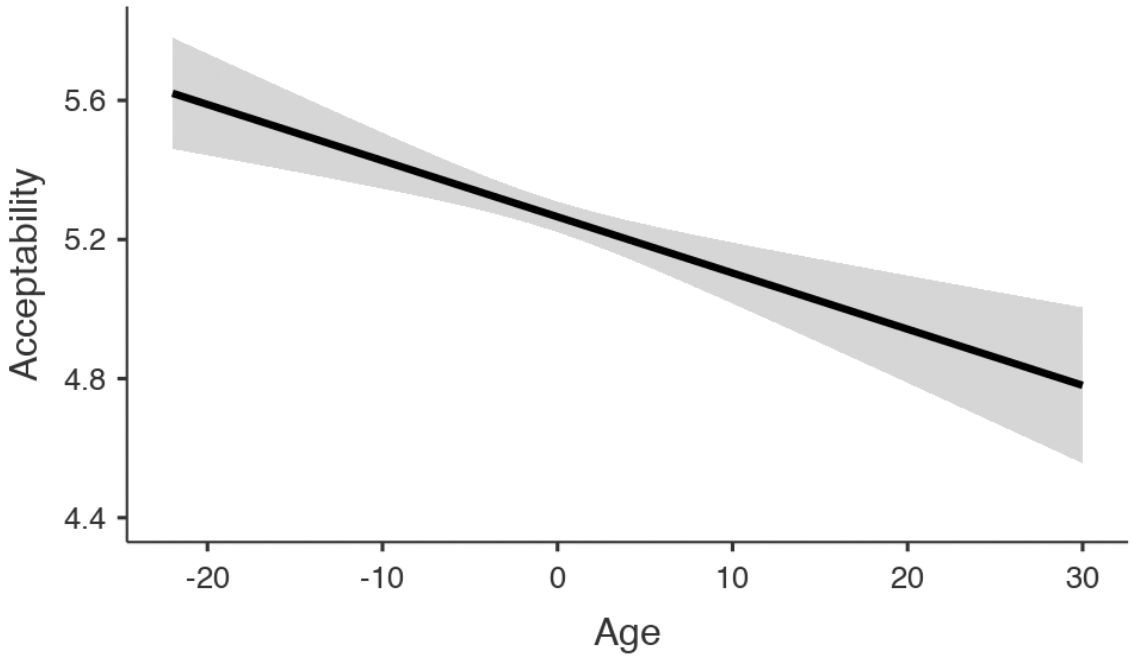

Figure 20. Age by acceptability (M = 35.7).

Figure 20 illustrates the negative relationship between age and acceptability. Note that the y-axis begins at 4.4 and ends at 5.6 to better highlight the differences between predicates. The x-axis is mean-centered which indicates that the axis is centered around the mean (M = 35.7) and indicated by the 0 on the axis. Negative values indicate values below the mean and positive values indicate values above the mean. The grey highlighted area shows the standard error around the estimate.

To further examine age as a possible factor in the proposed grammaticalization process, participants were aggregated into two groups of roughly equal size, with 114 participants in the younger group (18-34 years old) and 104 participants in the older group (35-65 years old). This was motivated by the statistical need of the mixed repeated measures ANOVA and by the general definition of middle age, which is defined as being

between the ages of 40 and 60 (Britannica, 2019). It was reported that when speakers reach middle age, they tend to be less accepting of language change (Holmes, 2013). This motivated the split of the younger and older groups.

The data were then submitted to a single factor repeated measures ANOVA with age (younger, older) as the between-subjects factor. There was a significant effect for age such that younger people (M = 5.48, SE = 0.082) were more accepting of the predicates compared to older people (M = 5.23, SE = 0.082), $F(1, 216) = 4.75$, $p < 0.05$, $\eta^2 = .012$ (see Figure 21). In Figure 21, the younger group was significantly more accepting of [qaʕid] overall then the older group. Note that the y-axis begins at 5.1 and ends at 5.6 to better highlight the differences between the age groups.

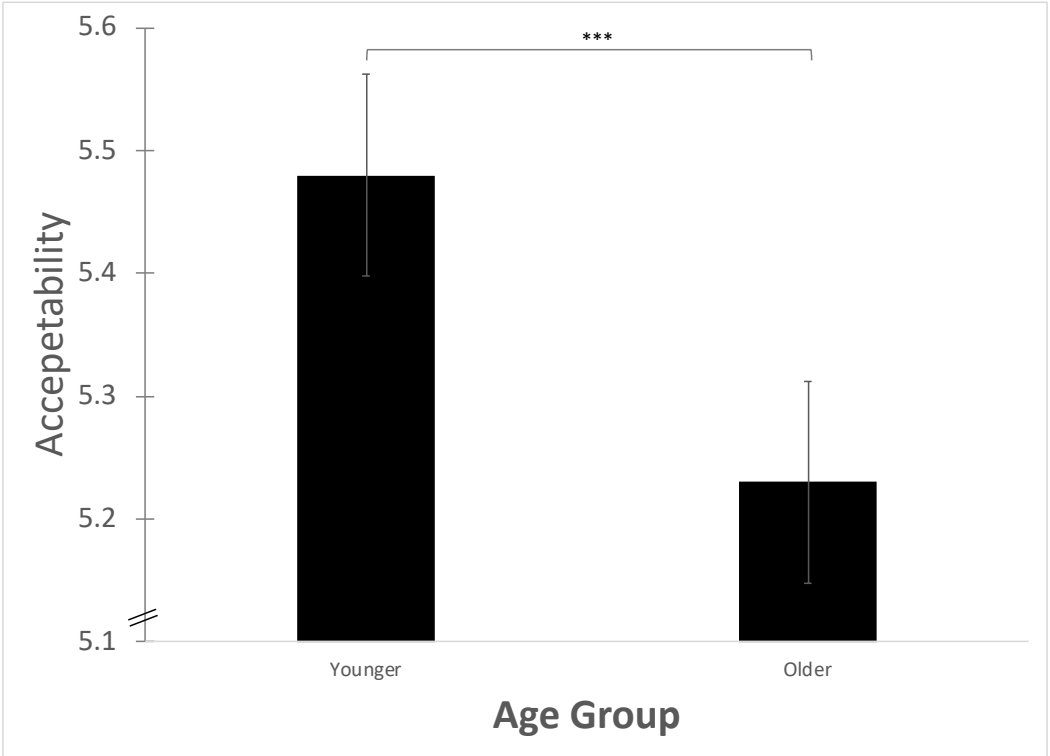

Figure 21. Age group by acceptability.

4.3.7 The Hypothesis That There Would Not Be an Interaction Between Age and Predicate Type

It was predicted that there would not be an interaction between age and predicate type. This prediction was based on the finding in the study in Chapter 2, which did not find an interaction between age and predicate type on acceptability. To investigate this potential interaction, a mixed repeated measures ANOVA was used with predicate type (state (unattested), state (attested), achievements, activities, and accomplishments) as the within subject factor and age (younger, older) as the between-subjects factor. As expected, we did not find an interaction between predicate type and age, F (4, 864) = 1.66, p = 0.16 (see Figure 22). In Figure 22, no significant interaction was found between age group and predicate type. Note that the y-axis begins at 4 and ends at 6 to better highlight the differences between predicate types.

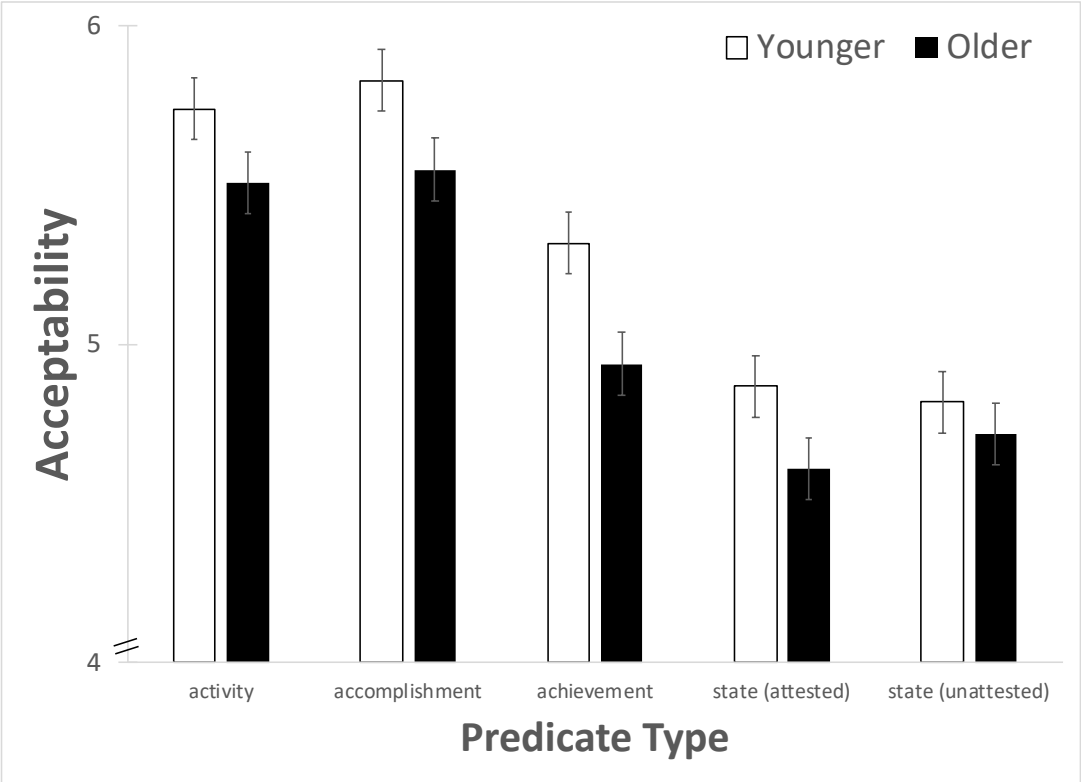

Figure 22. Age group by predicate type on acceptability.

4.3.8 Exploratory Mediation Analysis

An exploratory mediation analysis (EMA) can be used to explore a dataset for potential mediating variables (MacKinnon, 2014). An EMA is used to determine among multiple potential mediators which variable is most relevant (Kesteren, Jan, & Oberski, 2019). In Study 2, an exploratory mediation analysis was conducted between the variables age, acceptability, and self-reported social media use. This analysis was conducted because social media exposure and use could be a potential mediator of the effect between age and acceptability.

Results showed that age significantly and negatively predicted acceptability, B = -.122, SE = 0.059, z = -2.08, $p < 0.05$. Results further showed that age significantly and

negatively predicated social media use, B = -.235, *SE* = 0.80, *z* = -2.95, $p < 0.05$. However, self-reported social media use did not significantly predict acceptability, B = .017, *SE* = 0.049, *z* = .36, $p > 0.05$ (see Figure 23). All three relationships have to be significant in order for social media use to be a mediator between age and acceptability. It therefore can be concluded that the reported social media use does not mediate the relationship between age and acceptability. In Figure 23, self-reported social media use was not a significant mediator between age and acceptability. Stars indicate significant relationships (* = $p <$ 0.05, ** = $p < 0.01$).

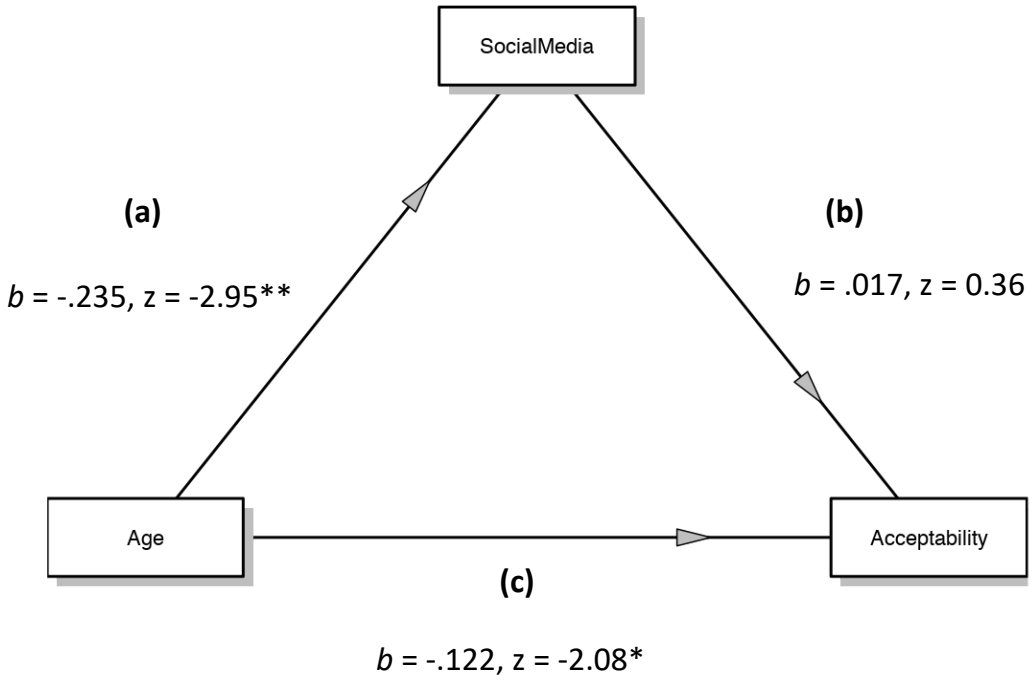

Figure 23. Analysis of self-reported social media use as potential mediator between age and acceptability.
Note. Reported social media use was not a significant mediator between age and acceptability. Stars indicate significant relationships (* = $p < 0.05$, ** = $p < 0.01$).

4.4. Discussion

The purpose of Study 2 was to examine the aspectual use of [qaʕid] as a progressive marker in NA. The detailed grammatical judgment task in this study sheds light on the formation as well as the changes in the usage of [qaʕid] in NA. The study explored whether predicate type affects the acceptability of [qaʕid] and whether age affects the acceptability of predicates with [qaʕid]. Results showed that activity, accomplishment, and achievement predicates incorporating [qaʕid] were generally rated as acceptable in NA. Activity and accomplishment predicates were rated similarly in acceptability, while achievement predicates rated lower in acceptability than both of these. State predicates, both attested and unattested, were rated as neither acceptable nor as unacceptable, but rather as in between these two judgments. State attested and unattested state predicates were also similarly rated. Lastly, age predicted overall acceptability ratings, with older participants rating the progressive marker as less acceptable than younger participants overall for each predicate type. The interaction between age and predicate type acceptability was not significant, indicating that the age effect was stable across all predicate types.

The fact that activity, accomplishment, and achievement predicates were all rated as acceptable is consistent with the hypothesis that [qaʕid] is postulated to be developing and undergoing a process of grammaticalization. It was predicted that activity and accomplishment predicates will receive higher acceptability rates than achievements and states. This prediction was based on the inherent temporal properties of activity and accomplishment predicates that involve processes that consist of successive phases following one another in time, which is compatible with the progressive aspect.

Achievements were also rated as acceptable in Study 2. Vendler had thought that achievements should not be possible in the progressive in English, generally they represent instantaneous events that lack the necessary temporal duration needed for the progressive. However, achievements can routinely be used with the progressive in English (e.g., *He is winning the race*), and the same is demonstrated for this progressive construction in NA.

Unlike activity and accomplishment predicates, states entail no change or inherent endpoint, and this temporal property makes them incompatible with the internal structure of the progressive that consists of successive stages. In Study 2, attested and unattested state predicates were rated as being in between acceptable and unacceptable which provides more support for the grammaticalization theory. The extension of this progressive marker to include state predicates also supports the hypothesized further grammaticalization of [qaʕid] in NA.

According to Heine & Narrog (2010), one of the proposed methods to account for grammaticalization phenomena, i.e. the development from lexical to grammatical functions, is the extension to new contexts and the loss of lexical meaning. This was observed in the extension of [qaʕid] to achievement and possibly also to state (attested and unattested) predicates. This provides further evidence that [qaʕid], as a progressive marker in NA is becoming desemanticized, though the process of grammaticalization is still underway in NA (Asad, 2013; Bybee, Pagliuca, et al., 1994; Heine & Narrog, 2010).

Interestingly, attested state predicates were not differently rated as compared with unattested state predicates. The fact that native speakers of NA are open to allowing the use of [qaʕid] with state predicates (and, thus, with all predicate types) serves as evidence

of continuing language change from lexical to grammatical status. The extension of this progressive marker to include state predicates also supports the hypothesized further grammaticalization of [qaʕid] in NA. According to Heine & Narrog (2010), one of the proposed methods to account for grammaticalization phenomena, i.e. the development from lexical to grammatical functions, is the extension to new contexts and the loss of lexical meaning. This could indicate that this construction in NA could possibly be broadening its distribution to become not just a progressive construction but rather a general imperfective construction.

The study showed that [qaʕid] as a progressive marker is used differently by different generations of native speakers of NA. Notably, age as a factor indeed negatively predicted acceptability ratings. This result shows an interesting development in terms of how [qaʕid] as a lexical item has come to serve a new grammatical function in NA. An effect for age is particularly important because it indicates that the usage distribution of the [qaʕid] construction is narrower for older participants but broader for younger participants. This indicates movement in the grammaticalization process over time in NA.

This is supported by the fact that linguistic change typically is gradual (and may be continuous) in the sense that it is not perpetrated as an instantaneous revolution in the whole speech community, but spreads through it gradually over space and time (Hopper & Traugott, 2003; Lehmann, 2004). This can also help to explain the lack of interaction between age of participants and predicate type in this study. The acceptability of [qaʕid] in this case presents a gradual extension that can be noticed in an age group of the examined population, as opposed to a change to a specific predicate type.

The growing popularity of social media has led to an increase in linguistic change affecting languages at all levels, from spelling all the way up to grammatical structure and semantic meaning across the lexicon (Hamilton, Leskovec, & Jurafsky, 2016; Tagliamonte & Denis, 2008). It is worth noting that the effect of social media use cannot be completely excluded because the data in this study relies on self-reported use of social media. In Study 2, the results did not indicate any significant effect for the self-reported social media use on the acceptability of [qaʕid] as a progressive marker. That said, the results showed that age significantly and negatively predicted social media use. This means younger participants who are more involved in the language used in social media are plausibly more likely to extend [qaʕid] when expressing progressive aspect in NA. This finding could provide more support to the effect of age on the extended use of [qaʕid] in NA grammar.

4.5. Conclusion

Study 2 thoroughly examined the use of [qaʕid] as a progressive marker in NA. Results show that native speakers of NA extend its use with a variety of predicate types, which indicates that [qaʕid] as a progressive marker is becoming semantically bleached, though the process of grammaticalization is still underway. In summary, the results of this study present an important step forward in the study of the progressive marker in NA.

Chapter 5. Discussion

5.1. Study Goal and Summary of Major Results

The aim of this dissertation was to provide insight into how the active participle [qaʕid] is used to express the progressive aspect in NA with different predicates (states, activities, accomplishments, and achievements). This goal was achieved by empirically examining native speakers' acceptability of different instances of the progressive with [qaʕid] in NA. Specifically of interest was whether and how the predicate type (states, accomplishments, and achievements) affected the acceptably of the active participle [qaʕid] as a progressive marker in NA. Additionally, the dissertation explored whether and how the age of informants affected the acceptability of the active participle [qaʕid] with various predicate types.

To answer these questions, 2,004 native speakers of NA were surveyed across two studies. Study 1 (*n*=1786) provided initial evidence that non-state predicates with [qaʕid] are more acceptable in NA than state predicates. In addition, Study 1 indicated that younger participants rated [qaʕid] as more acceptable than older participants for both non-state and state predicates.

Study 2 (*n*=218) confirmed and extended the results of Study 1. Consistent with Study 1, Study 2 showed that activity, accomplishment, and achievement predicates incorporating [qaʕid] were generally rated as acceptable in NA. State predicates, both

attested and unattested, were not rated as acceptable for NA speakers, but notably were also not rated as unacceptable. That is, they were essentially judged to fall into a region in between. Lastly, and further confirming the results of Study 1, Study 2 showed that age predicted overall acceptability ratings with younger participants rating the progressive marker as more acceptable than older participants across all predicate types.

The primary contributions of this dissertation are three-fold. First, this dissertation is the first to empirically examine grammatical judgments of the participle [qaʕid] in NA with native speakers. Second, the data indicate that [qaʕid] is at the desemanticization stage of grammaticalization, whereby the lexical meaning of *sit* is changing to communicate a more grammatical meaning that expresses the progressive aspect in NA. Third, both studies showed a negative relationship between age and acceptability. In NA, [qaʕid] as a progressive marker is more strongly grammaticalized for younger native speakers compared to older native speakers, providing further support for the gradual process of grammaticalization across generations of native speakers (Tagliamonte & D'Arcy, 2007). In the next sections, more context and discussion to elaborate on these primary contributions is provided.

5.2. First Time Empirical Validation of Grammaticality Judgments of NA Participle with Native Speaker Sample

The first unique contribution of this dissertation is that these studies are the first to empirically examine grammaticality judgments of the participle [qaʕid] in NA with native speakers. The use of [qaʕid] as a progressive marker is prevalent in the language of NA speakers. However, no empirical study had yet examined this construction closely in NA.

The grammaticality judgment tasks used here depended on acceptability judgments from native speakers of NA. To the best of my knowledge, no other study has incorporated native speakers' acceptability judgments in assessing the grammaticality of [qaʔid] as a progressive marker in NA. Some linguists argue that grammaticality judgments made by native speakers are more informative than elicitation methods for the purposes of investigating the grammatical system of the target language. Grammaticality judgment tasks provide important information that is not readily available about what is possible or impossible in a grammar (C. Schütze et al., 2014). In addition, grammaticality judgment tasks can avoid biased views by linguists about a linguistic phenomenon in a language by providing the input of native speakers (Scallan, 2012; C. T. Schütze, 1996, 2005).

The test items used in this dissertation mainly consisted of attested examples of NA. This is important because naturally occurring data allows the analysis of attested language that occurred in an authentic linguistic context. Thus, the grammaticality judgment is more valuable because it is considering a natural example generated by a native speaker, rather than a judgment of a constructed example (Resnik, Elkiss, Lau, & Taylor, 2014).

5.3. The Desemanticization of [qaʔid] in NA

The second contribution of this dissertation is the data from the studies. The results clearly indicate that [qaʔid] is undergoing the first stages of grammaticalization in NA. The original positional function of [qaʔid] has lost its original lexical meaning and has been reanalyzed as a grammatical marker of the progressive aspect in NA. The data revealed that [qaʔid] is at the semantic bleaching stage of grammaticalization, and this provides

strong support for desemanticization. Grammaticalization is in fact made up of several different mechanisms, and desemanticization is considered one of the main mechanisms that characterize it (Bybee, Pagliuca, et al., 1994; Heine, 2003). As Heine (2003, p. 579) indicates, grammaticalization is viewed as a semantic process that involves four interrelated mechanisms: "i desemanticization (or "bleaching," semantic reduction): loss in meaning content, ii extension (or context generalization): use in new contexts; iii decategorialization: loss in morphosyntactic properties characteristic of the source forms, including the loss of independent word status (cliticization, affixation); iv erosion (or "phonetic reduction"), that is, loss in phonetic substance."

The fact that activity, achievement, and accomplishment predicates were all rated as acceptable is consistent with established theory in which [qaʕid] is postulated to be developing and undergoing a process of grammaticalization. Furthermore, both attested and unattested state predicates were rated as in between acceptable and unacceptable, which again supports the grammaticalization theory: The extension of [qaʕid] as a progressive marker in different contexts would be one mechanism of grammaticalization that is preceded by desemanticization and is immediately responsible for decategorialization and erosion (Heine & Kuteva, 2007).

Even though the active participle [qaʕid] retains its full phonetic content in NA in the expression of the progressive form, the process of grammaticalization cannot be doubted. According to Heine & Kuteva (2007), "phonological erosion is usually the last to apply in grammaticalization processes, and it is not a requirement for grammaticalization to happen" (p. 42). The process of grammaticalization is still underway in NA grammar.

5.4. [qaʕid]'s Semantic Bleaching Is Stronger in Younger Participants

This dissertation showed that [qaʕid] as a progressive marker is used differently by different generations of native speakers of NA. One of the important findings was related to the effect of age on the acceptability of [qaʕid] as a progressive marker with different types of predicates. Age as a factor indeed negatively predicted acceptability ratings. An effect for age is particularly important because it indicates that the usage distribution of [qaʕid] is narrower for older participants but broader for younger participants. This indicates movement in the grammaticalization process over time in NA.

Age plays a significant role in the speaker's participation in ongoing linguistic change (Heine & Narrog, 2010). According to the literature, there might be two age-related effects that could explain the important role of age in the studies. The first is called age-grading. An age-graded effect might occur when a linguistic phenomenon appears in one age group, often associated with adolescents, but disappears in another (Labov, 1994; Wagner, 2012). In age-graded change, the observed linguistic phenomenon is expected to recede as speakers age and change with a relatively brief period of time (Tagliamonte & D'Arcy, 2007). An example of age-grading is the use of a particular discourse features such as the intensifier *pure* in the speech of adolescents in Glasgow, Scotland (Macaulay, 2006). The use of expletive *like* in Canadian English by teenagers is another example of age-graded change (Tagliamonte & D'Arcy, 2004).

In contrast, a generational change is an effect that is established or introduced in one age group and then adopted by another age-group to a higher or lesser degree (Milroy & Gordon, 2003). In this case, the linguistic change is traced in generational terms, and the

younger age groups are typically shown to be more advanced than the older (Nevalainen, Raumolin-Brunberg, & Mannila, 2011). Once a generational change takes place in a linguistic community it does not disappear. An example of this type of effect is the rising rates of markers of agreement found in Brazilian Portuguese (Naro & Scherre, 2000).

The differing rates of acceptability between younger and older native speakers observed in the dissertation is most consistent with a generational effect. There are several reasons to support this kind of age effect. First, while there was a significant effect of age, this effect was not very large. A small age effect is more consistent with an age-generational effect where the linguistic phenomena appears but to a lesser degree with older speakers compared with younger speakers (Tagliamonte & D'Arcy, 2007). If the grammaticalization had been an age-graded effect, we might have observed large differences between younger and older participants because for age-graded effects linguistic phenomena might appear in one age and disappear in another (Wagner, 2012). We did not observe such larger differences.

Second, the analysis only revealed a main effect for age and not an interaction between predicate type and age. This result again is more consistent with a generational change where the grammaticalization process works essentially the same across predicate types, just to a lesser degree with older speakers when compared with younger speakers. If it had been an age-graded change, we likely would have observed an interaction between predicate type and age that would indicate a very different process happening in the different age groups. However, we did not find such an interaction. Lastly, the analysis indicated a significant linear negative relationship between acceptability and age. This

further suggests that the relationship is gradual and changes as native speakers get older. However, we must be cautious not to over-interpret this result. While we have some initial evidence for a gradual effect across age, a larger sample and more equal representation of each group would be needed to draw firmer conclusions about this interpretation.

This result shows an interesting development in terms of how [qaʕid] as a lexical item has come to serve a new grammatical function in NA. The acceptability of the construction indicates that an ongoing generational change and that the grammaticalization of [qaʕid] has already taken place. This is supported by the fact that linguistic change typically is gradual (and may be continuous) in the sense that it is not perpetrated as an instantaneous revolution in the whole speech community, but spreads through it gradually over space and time (Hopper & Traugott, 2003; Lehmann, 2004).

5.5. [qaʕid] and State Predicates

Both the preliminary and primary study found openness to the acceptability of [qaʕid] as a progressive/imperfective marker with state predicates in NA. The importance of such a finding in NA is that [qaʕid] potentially allows or may eventually allow progressive constructions to be used with states, which is contrary to what is found in the literature about statives in the progressive generally. In a good number of languages, including some Arabic dialects, the progressive does not combine with states. According to Vendler (1967), stative predicates in English are not compatible with the progressive because they do not involve change. To illustrate, predicates such as *know* and *own* with the progressive are problematic in English, as shown in (39) and (40):

(39) *Sara is knowing the way

(40) *John is owning his house

Both (39) and (40), when used with [qaʕid], were not absolutely rejected by native speakers of NA in the studies undertaken here. Thus, one can argue that [qaʕid] in NA more easily allows what would typically be a state predicate to be interpreted as an activity predicate than does the *-ing* construction in English. Recall there was no difference in the acceptability rates of states that are attested and states that are unattested. That is, the majority of respondents rated the item as below acceptable (rating = 5) but above unacceptable (rating = 3).

5.6. The Localist Theory and the Progressive

Recall that the active participle [qaʕid] is a posture verb. The larger implication of this work is that the evolution and use of the imperfective/progressive aspect in NA is representative and consistent with how the progressive aspect is used in many other languages. Evidence for this conclusion is provided by an extensive body of literature that describes that the imperfective/progressive aspect in many languages has evolved progressive constructions from locative sources (Bertinetto et al., 2000; Bybee, Pagliuca, et al., 1994; Comrie, 1976).

The literature provides ample evidence from different language families for a relationship between expressions involving locative elements (including posture verbs) and the progressive aspect (Bybee, Perkins, & Pagliuca, 1994; Comrie, 1975, 1976; Heine et al., 1991; Heine & Kuteva, 2002). According to Ard (1979), there is a relationship between locative constructions and the progressive aspect that is observed cross-linguistically. He

employs Anderson's localist theory of aspect in his discussion of the progressive aspect across different languages. The localist theory proposes that "the underlying representation of the progressive aspect should include a locative expression" (Comrie, 1975, p. 90). Ard (1979) explains that this is a cross-linguistically common phenomenon:

> The fact that this similarity is found in languages unrelated to each other in either the genetic or areal sense and with a wide variety of different surface manifestations of locative constructions would seem to imply that there is some natural semantic relationship between locative constructions and these verbal expressions. (p. 122)

The general finding in the literature indicates that the most common source of progressive forms found cross-linguistically is locative expressions and posture verbs. This common finding across languages is in line with the findings of the studies in this work, in which such a linguistic phenomenon is also observed in NA with the shift from the original bodily posture meaning to the progressive aspect. The results indicated that in NA the posture active participle [qaʕid] 'sitting', when incorporated with activity, accomplishment, and achievement predicates, is generally rated as acceptable by native speakers of NA.

Chapter 6. Conclusion

Although a significant amount of research on Arabic and specifically NA still remains to be completed, this dissertation has presented original research on the expression of the progressive with the use of the active participle [qaʕid] in NA. The results obtained from Study 1 and Study 2 clearly indicate that [qaʕid] is undergoing the first stages of grammaticalization in NA. [qaʕid] in NA is changing from the lexical meaning of 'sitting' into an aspectual marker of progressivity. This final chapter presents implications of this work, future avenues of research, and the conclusion.

6.1. Future Avenues of Research

A number of different avenues might be pursued by linguists who wish to expand research on this topic.

A first avenue could be to re-examine and confirm the findings of this dissertation with a corpus. Most linguistic research on Arabic, and especially Arabic dialects, is not based on corpora due to the lack of dialectal Arabic corpora (Mansour, 2013). This is caused by the fact that most research on Arabic dialects focuses on phonetic variation based on audio recordings of dialect speakers. This focus has caused a lack of linguistic studies of Arabic dialects that are based on actual text or corpora (Alorifi, 2008; Biadsy, Hirschberg, & Habash, 2009; Horesh & Cotter, 2016). Unfortunately, this applies to NA

as well. If a comprehensive NA corpus becomes available, the application of corpus-linguistic methods in future research would be beneficial.

Specifically, the proposed grammaticalization in this study could profit from the application of corpus linguistics methods in the future because corpus linguistics could potentially shed more light on important factors in grammaticalization that are difficult to examine with survey-based methods. Such factors include context extension, frequency of use, the exact interaction between frequency of use, and functional change (Heine & Kuteva, 2005). According to Mair (2011), this could allow the accumulation and statistical analysis of a larger number of linguistic data in shorter periods of time. Thus, a detailed NA corpus could provide an excellent opportunity to test the development of [qaʕid] as a progressive marker in NA.

A second avenue of research on the progressive with [qaʕid] could aim to confirm if other dialects in the region (such as: Omani, Kuwaiti, Emirate Bahraini, and Iraqi) treat [qaʕid] as a progressive marker as NA does. The results in this study have shown that [qaʕid] as a progressive marker is accepted even with state predicates (attested and unattested). Given the fairly high acceptability rate of the progressive marker in NA across predicates, it is therefore possible that the progressive marker in other Arabic dialects is also acceptable and in a similar stage of grammaticalization. This kind of research is motivated by the possible influence of contact between languages and dialects on grammaticalization (Heine et al., 1991). Therefore, examining similar dialects will provide needed information that might bring more insight into the research of the progressive in Arabic dialects and NA.

Research could be extended to consider semelfactives, which are instantaneous events that consists of a single stage. For example, *knock* and *blink* describe punctual events that take no more than a moment in time (Engelberg, 1999). Future research could choose to examine the use semelfactives with the active participle [qaʕid] and the imperfective in NA, which was not considered in the present study.

Finally, another interesting direction for future research could be to re-examine the grammaticalization of [qaʕid] as a progressive marker in NA after at least a generation has passed. The diachronic pathway of grammaticalization from lexical to grammatical function takes place over an extended period of time (Hopper & Traugott, 2003). In Studies 1 and 2, [qaʕid] as a progressive marker was shown to be more strongly grammaticalized for younger native speakers compared to older native speakers of NA. This finding provides initial support for the gradual process of grammaticalization across generations of native speakers (Tagliamonte & D'Arcy, 2007). However, while these studies found a reliable difference between younger and older native speakers, future research should examine if grammaticalization of [qaʕid] as a progressive marker continues into later stages. If grammaticalization of [qaʕid] continues, it is expected that native speakers of NA would become even more accepting of [qaʕid] as a progressive marker and that this effect would be stronger in younger compared to older native speakers of NA. Furthermore, it is possible that future studies can expand the research on the progressive to document other gradual changes in the grammaticalization of [qaʕid] in NA that was reported in other languages, such as phonetic reduction.

6.2. Conclusion

While the evolution of progressive constructions from locative sources is a universal cross-linguistic phenomenon, this occurrence has never been studied in NA. This dissertation has provided evidence of the grammaticalization of [qaʕid] from a lexical postural/locative function to a grammatical function that expresses the progressive aspect in NA. Native speakers of NA accept the use of [qaʕid] with activity, accomplishment, and achievement predicates to varying degrees and do not completely reject its use with state predicates. The potential acceptability of state predicates (attested and unattested), especially among younger speakers of NA, indicates that the grammaticalization of [qaʕid] is more widespread than acknowledged. In addition, this dissertation incorporated a view of individual native speakers of NA which is claimed to benefit the study of grammaticalization (Petré & Van de Velde, 2018).

Appendix A. Stimuli for Study 1

1. Arabic: قاعدة اتخرج، يلا جهزوا الهدايا/ English: I am sitting graduating, prepare the gifts.
2. Arabic: النصر قاعد/ English: The Naser team is sitting winning the game.
3. Arabic: قاعدة اطفش منه/ English: I am sitting bored of it.
4. Arabic: قاعد يلبس/ English: He is sitting wearing his clothes.
5. Arabic: قاعد أمشي في النادي/ English: He is sitting walking in the gym.
6. Arabic: قاعد العب بلاي ستايشن/ English: I am sitting playing PlayStation.
7. Arabic: قاعد اندم على هذا الاختيار/ English: I am sitting regretting this decision.
8. Arabic: قاعدة مبسوطة، تضحك و ترقص / English: She is sitting happy, laughing and dancing.
9. Arabic: قاعدة استنى يردون علي/ English: I am sitting waiting for their reply.
10. Arabic: قاعدة أفكر بحفلة بكرا/ English: I am sitting thinking of tomorrow's party.
11. Arabic: قاعد زعلان في الغرفة/ English: He is sitting upset in his room.

Appendix B. Stimuli for Study 2

1. Arabic:أنا قاعد أمشي في الحديقة / English: I am sitting walking in the garden.
2. Arabic:.اقعد ارقص طول السهرة / English: I am sitting dancing during the entire party.
3. Arabic: قاعد أدور البيت اللحين / English: I am sitting searching for the house.
4. Arabic: قاعد العب كورة مع الشباب / English: I am sitting playing soccer with the guys.
5. Arabic: قاعد اسبح تعال جرب حمام السباحة / English: I am sitting swimming come try the pool.
6. Arabic: انا قاعد ادف العربية/ English: I am sitting pushing the cart.
7. Arabic: قاعد يلبس بيطلع/ English: He is sitting getting dressed he will go out.
8. Arabic: قاعد يرفس حارس الفريق/ English: He is sitting kicking the goalkeeper.
9. Arabic: قاعدة أحب زميلات الفصل/ English: I am sitting loving my classmates.
10. Arabic: قاعد أرحم نفسي من ضغط الشغل / English: I am sitting feeling sorry for myself.
11. Arabic: قاعد أكره كل شيء بالشغل/ English: I am sitting hating everything about this job.
12. Arabic: قاعد أخاف من اللي راح يصير/ English: I am sitting fearing what will happen.
13. Arabic: قاعد اتخيل إذا صدق رجعت للدوام/ English: I am sitting imagining if I went back to work
14. Arabic: قاعدة طفشانة من ترتيب دولابي/ English: I am sitting bored of organizing my closet.
15. Arabic: قاعد يوحشني شخص / English: I am sitting missing a person.
16. Arabic: قاعد اصدق اخواني/ English: I am sitting trusting my siblings.
17. Arabic: قاعد أعرف طريق مختصر/ English: I am sitting knowing a shortcut
18. Arabic قاعدة أفهم مشكلتك/ English: I am sitting understanding your problem.
19. Arabic: قاعدة أؤمن بهذا المبدأ/ English: I am sitting believing in this principle.
20. Arabic: قاعد أميز هالسيارة/ English: I am sitting noticing this car.
21. Arabic: أنا قاعدة أقدر تعبك/ English: I am sitting valuing your hard work.
22. Arabic: قاعدة اشتهي شنطة شانيل / English: I am sitting desiring a Chanel bag.
23. Arabic: قاعد يملك بيته من سنين /English: He is sitting owning his home.
24. Arabic : قاعد زعلان على هذا الموضوع/ English: I am sitting upset about this issue.
25. Arabic: قاعدين نفوز السباق/ English: We are sitting winning the race.
26. Arabic: قاعد انتبه لصوته/ English: I am sitting noticing his voice.
27. Arabic: قاعد أخسر هالمبارة/ English: I am sitting losing this match.
28. Arabic: قاعد يموت/ English: He is sitting dying.
29. Arabic: قاعدة أتخرج / English: I am sitting graduating.
30. Arabic:قاعد القى مفتاح السيارة / English: I am sitting finding his car keys.
31. Arabic: قاعدة أوصل للحفلة /English: I am sitting arriving at the party.
32. Arabic: قاعد اميز وجهه/ English: I am sitting recognizing his face.
33. Arabic:قاعدة ارسم رسمة / English: I am sitting painting a painting.
34. Arabic: قاعد اكتب مقالة / English: I am sitting writing an article.
35. Arabic:قاعد أتحسن من الحادث / English: I am sitting recovering from the accident.
36. Arabic:قاعد أركض للمحل / English: I am sitting running to the store.
37. Arabic: قاعد امشي للبيت/ English: I am sitting walking to my house.
38. Arabic: قاعدة اركب دولاب الالعاب/ English: I am sitting assembling the toy chest.
39. Arabic: قاعد ابني بيت / English: I am sitting building a house.
40. Arabic: قاعدة اتسلق جبل ايفريست/ English: I am sitting climbing mount Everest.

Appendix C. Arabic Vowels and Consonants

Letter	IPA	Description
ء	ʔ	Glottal stop
ا	eː~æː~ɑː	Long unrounded vowel
ب	b	Voiced bilabial stop
ت	t	Voiceless alveolar stop
ث	Θ	Voiceless dental fricative
ج	ʒ	Voiced palato-alveolar sibilant
ح	ħ	Voiceless pharyngeal fricative
خ	x	Voiceless velar fricative
د	d	Voiced alveolar stop
ذ	ð	Voiced dental fricative
ر	r	Alveolar trill
ز	z	Voiced alveolar sibilant
س	s	Voiceless alveolar sibilant
ش	ʃ	Voiceless palato-alveolar sibilant
ص	sˤ	Pharyngealized voiceless alveolar sibilant
ض	ðˤ	Pharyngealized voiced dental fricative
ط	tˤ	Pharyngealized voiceless alveolar plosive
ظ	ðˤ	Pharyngealized voiced dental fricative

ع	ʕ	Voiced pharyngeal fricative
غ	ɣ	Voiced velar fricative
ف	f	Voiceless labiodental fricative
ق	q	Voiceless uvular stop
ڤ	g	Voiced velar stop
ك	k	Voiceless velar stop
ل	l	Alveolar lateral approximant
م	m	Bilabial nasal
ن	n	Alveolar nasal
ه	h	Voiceless glottal fricative
و	w,	Labio-velar approximant, Long rounded vowel
ي	j, i:	Palatal approximant, Long closed front unrounded vowel
ة	a	Short unrounded vowel (followed by voiceless alveolar stop in genitive construct)
ـُ	u	Short rounded vowel

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Biography

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