Modal qad in Standard Arabic: A Case for Context-Independent Modality

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Modal qad in Standard Arabic (SA) represents a special case of modal expressions that departs from other cross-linguistic cases of modality in its total independency from context. Unlike English-like modality systems in which the modal base varies across a range of interpretations that are assigned relative to a contextual parameter (Kratzer, 1991), modal qad incorporates an invariable modal base with a fixed epistemic modality meaning as exemplified in (1):

(1) qad qaamt sˁsˁaalt-u
qad held.3sg.M the prayer-Nom
"It must be the case that the prayer will hold very shortly"
(Sibawayh, 8th century)

In contrast to St'a´t'imcets-like languages which have their quantificational force interpreted relative to context (e.g., relative to a choice function variable which selects a subset of the set of possible worlds that are accessible from the actual world (Rullmann et al. 2008: 319)), modal qad has a lexically-encoded quantificational force whose strength is constrained by the aspectual/ temporal properties of qad's prejacent (i.e., qad's sentential complement) with no interpretive role given for context. As shown in (2), the force of modal qad does not depend on the context in a way or another. Alternatively, the modal force of qad is inherently specified as universal or existential depending on the temporal realization of the prejacent.**.** Regardless of the context of utterance, the speaker assigns necessity force of expectation for the relevant eventuality when the prejacent is in the past or perfect tense as in (2.i) and possibility force of expectation for the eventuality in the present-future tense as in (2.ii) (I will speak more about tense in SA to assist in understanding the phenomenon. Please that aspect along with tense plays a crucial role in constraining the strength of qad (to be discussed).

(2) i. qad dʒaaʔ l-muʕlim-u ii qad yaʔti l-muʕlim-u
qad came.PAST/PERFECT the teacher qad come. PRESENT/FUTURE the teacher
"It must be the case that the teacher came" "it may be the case that the teacher came"
(=universal reading) (= existential reading) (Ibn Hisham, 1997: 143)

The fact that modal qad lexicalizes both its modal base and quantificational force calls for a language-specific descriptive analysis that accounts for the context-independency behavior of modal qad. In this paper, I will offer a compositional, descriptive analysis that addresses this issue as recruiting the following working assumptions: (a) The reference time (i.e., past or utterance time) is interpreted pronominally as a contextually-determined free variable, ranging over the past and utterance times (Partee, 1973) (more explanation is in order)**. (** b) We can take time points as equivalence classes of possible worlds (Iatridou, 2000) by assuming that the time points are captured by world-time point indices i of type <s>. (c) The temporal domain along which these indices are ordered is dense (Fox & Hackl, 2007) with three historically-defined aspect-based intervals: the past tense, perfective interval that is closed by the upper bound of past-time index, a perfect-tense, perfective interval that is bounded by the utterance time index and an open-ended present-future, imperfective interval. (d) I identify two levels for quality in cooperative conversation: In non-evidentiality expressions, the speaker utters what she believes to be justifiably true in compliance with quality (Grice, 1975). In reliability-promoting utterance (e.g., qad-modality), the speaker commits herself to raising the reliability of the truth of her claim in view of legitimate evidence or inductive reasoning (i.e., non-epistemic or justified beliefs) (Comesaña, 2010). That is, reliability involves an evidential requirement as a quality-promoting condition (ibid, p 583). (e) Speech-act propositional contents are completed propositions such that they are no longer sensitive to context (Elugardo, 2007). It follows indirectly from this assumption that a modal that behaves as an illocutionary object is necessarily context-insensitive, and hence qad's prejacent, as completed speech-act content, is not contextually-determined Proposal: I will analyze $[[\text{qad}]]^{i,c}$ as an evidential illocutionary object that integrates an epistemic modality meaning at the speech-act level of interpretation, rather than at the propositional, semantic-content level (= I will present evidence that points to the illocutionary nature of *qad* and speaks against the semantic recursiveness and truth conditionality of modal qad including lack of scope interaction between qad and other scope-bearing operators and its indifference to the modal subordination condition). I motivate and advance a hybrid Lewisian-Kratzerian weak version of the claim that evidentiality is a sub-type of epistemic modality. Following a non-standard practice (Szabolcsi, 1982), I analyze $[[\text{qad}]]^{i,c}$ as an evidential, speech-act operator that displaces the index (i^0) in which the claim has not been turned into a speech-act object yet (i.e., not performing a communicative action) into a new state (i^1) in which the speaker has committed herself to raising the reliability of her utterance in view of available evidence or inductive reasoning. Under this analysis, $[[\text{qad}]]^{i,c}$ is a two place-operator that applies to its prejacent of type <st> and produces an object of type <ss> that does not participate in semantic recursion at the propositional level with the actional meaning of raising the reliability of the speaker's claim towards the addressee (e.g., $[[\text{qad }]]^{i,c}$ (p) =: $\lambda p \lambda i^0.\ \iota i^1.\ R(i)\ [\ c_{t\,=}\ i^0\ \&\ i^0 <_{discrete} i^1\ [\ Rel_p\ (i^1)\ (p)(i)\ (c_s)\ (c_a)])$. To formalize this idea, I will assume that for any $i \in D_{<i>}$, any $p \in D_{<i,t>}$ and any contextually-supplied $c \in D_{<e>}$, $[[\text{qad }]]^{i,c}(p)$ is defined only if: (a) an assignment function c provides values to an individual speaker c_s and an individual addressee $c_{a.}$ and (b) a lexically-encoded similarity modal function **R(i)** is defined with <u>a historically modal base function **f**</u> (i.e., $\cap f\ (i) =: \{i \in D_i : \forall p \in f(i)\ [i \in p]\}$) applied to a similarity function $\mathbf{g_w}$ (i.e., $\lambda p_{<st>.}\ \lambda i'.\ p(i') \wedge \neg \exists i''[\ p(i'')=1 \wedge\ i'' <_{expectation}\ i']$, resulting in the set of the closest possible indices to the speaker's expectation with the same evidential history up to i (i,e., $g_w(\cap f\ (i)) =: \lambda i'.\ \cap f\ (i') \wedge \neg \exists i''[\cap f\ (i'')=1 \wedge\ i'' <_{expectation}\ i']$). R(i) enters the composition with two presuppositions: (a) Observing the evidential requirement of reliability, modal qad has a default universal reading by quantifying over the maximal sum of evidential history. This only works if $[[\text{qad }]]^{i,c}$ quantifies over closed domains such as the past and perfect intervals (c.f. Fox &Hackl, 2007). Therefore, the past and perfect qad expressions are assigned necessity force of expectation by default ((i.e., $[[\text{qad }]]^{i,c}$ ($p^{past\text{-}perfect}$) =: $\lambda p \lambda i^0.\ \iota i^1.\ Max^{sum}\ ({}^{*}g_w(\cap f\ (i))).\ [\ c_{t\,=}\ i^0\ \&\ i^0 <_{discrete} i^1\ [\ Rel_p\ (i^1)\ (p)(i)\ (c_s)\ (c_a)])$. Since maximization never applies to open intervals, satisfying the evidential requirement involves existential quantification over possible indices of the evidential history with the effect of having a lexical mechanism of weakening that targets $[[\text{qad}]]^{i.c}$ as applying to open domains such as the present-future intervals. As a result, the present-perfect qad-expressions are interpreted with a default possibility force (i.e., $[[\text{ qad }]]^{i,c}$ ($p^{present\text{-}future}$) =: $\lambda p \lambda i^0.\ \iota i^1.\ \exists i \in ({}^{*}g_w(\cap f\ (i))).\ [\ c_{t\,=}\ i^0\ \&\ i^0 <_{discrete} i^1\ [Rel_p\ (i^1)\ (p)(i)\ (c_s)\ (c_a)])$.