

Grammar is modularized, evidenced in the fact that distinct types of grammatical processes impose their effects autonomously, unaware of the contributions of other types of processes. Generalizations of the form ‘subjects precede verbs’ have no counterparts of the form ‘terms containing the phoneme /p/ precede verbs’. Nor do generalizations such as ‘stops become voiced intervocalically’ have counterparts of the form ‘stops become voiced in subjects’. This division of labor is nonetheless the apportionment of a common goal, the production of a linguistic expression in which the work of the modules is brought together. In points of intersection, processes are at work that belong neither entirely to one module nor the other, but lie in the interface, the space between modules where their autonomy melts away. The discussion below examines salient interface phenomena in Arabic in the phonetics-phonology interface, the phonology-morphology interface, the morphology-syntax-semantics interface, and the syntax-semantics interface.

The phonetics-phonology interface

Much recent work in phonology revolves around the issue of to what extent phonological processes are guided by articulatory and perceptual (i.e. phonetic) considerations (Ohala 1974, Ohala 1983, Archangeli and Langendoen 1994, Steriade 1995, Jun 1995, Kaun 1995, Flemming 1995, Silverman 1995, Kirchner 1998, Hayes 1999). Phonological processes that appear to be motivated by phonetic considerations are said to be ‘grounded’. Grounded phonological processes lie at the interface between

phonetics and phonology. Davis (1995) characterizes the opacity of certain segments to emphasis spread in Arabic as a grounded phenomenon. In a dialect of Palestinian, the phonemes [i], [j], [ʃ] and [dʒ] block the rightward spread of retraction of the tongue root (the feature RTR), hence, e.g., [ʔa**ʔ**fāl] (*children*) and [ʃ**a**bā**h**] (*morning*) (where the bold characters are those pharyngealized by emphasis spread—RTR assimilation—including the trigger), but [f**i**nak] (*your mud*) and [ʃa**j**jād] (*hunter*). The class of opaque phonemes share a high tongue body position which is antagonistic with the low tongue position associated with RTR (Archangeli and Langendoen 1994). The blocking effect is a physiological antagonism. It is not a categorical impossibility, since it constrains only progressive spreading. Regressive spreading is unconstrained, hence [χa**j**jā**t**] (*tailor*) and [n**a**fā**t**] (*energy*) (where the bold characters are those pharyngealized by leftward spreading, including the trigger, which is the last segment in these words). Hence, regressive and progressive emphasis spreading are distinct processes, one grounded and the other not, meaning emphasis spreading is a true interface phenomenon, neither purely phonological nor physiologically epiphenomenal.

McCarthy (1994) proposes that physiological considerations define the class of gutturals ([ʔ], [h], [ħ], [ʕ], [χ], and [ʁ]). The gutturals do not appear to share an articulator or a place of articulation, the first pair being articulated in the larynx by the vocal chords, the second in the pharynx by the tongue root and epiglottis, the third at the uvulum by the tongue dorsum, but they nonetheless behave as a phonological class. McCarthy proposes, following Perkell (1980), that distinctive features correspond to patterns of orosensory feedback. The lack of phonological distinctiveness among the gutturals is directly due to poor neural innervation of the posterior region of the vocal

tract, which obscures definition in the feedback from that area. The orosensory feedback from the posterior region consists of proprioceptive input from an undifferentiated posterior region and auditory input from the high F₁ formant typical of the gutturals (Klatt and Stevens 1969, Al-Ani 1970 and others). The proprioceptive indistinguishability of the gutturals, an epiphenomenon of the neural structure of the vocal tract, defines the gutturals as a phonological class, which McCarthy terms ‘pharyngeal’.

The phonology-morphology interface

Phonological processes are commonly sensitive to the morphological context in which they apply. Level ordering of phonological rules is a paradigm case. Arabic displays level ordering effects in stress placement and elipsis as described in Brame (1971). In his review of Abdo (1969), Brame points out that the elision of unstressed high front vowels in Palestinian Arabic (cf. (1b,c)) is blocked when a word is lengthened by clitic affixation, but not agreement affixation, a phonological distinction related to the morphological structure of the word.

- (1) a. [v sími^c-Ø]
hear-3SG/SUB
‘He heard’
- b. [v smí^c-t]

hear-1SG/SUB

‘I heard’

c. [VP [V simi^c-Ø]-kum]

hear-3SG/SUB-2PL/OBJ

‘he heard you (plural)’

Affixation of *-kum* seen in (1c) shifts stress to the right after initial stress is established in the base, the constituent Brame labels *V*, seen in (1a). The prior placement of stress on the initial syllable manifests itself at the VP level as a secondary stress on that syllable, which in turn blocks the vowel deletion seen at work in (1b). A categorial morphological distinction (agreement inflection vs. clitic pronoun) affects the morphological constituency of the word, and in turn phonological processes sensitive to that constituency such as stress, a morphology-phonology interaction.

Phonological processes in Arabic appear to also be sensitive to lexical semantic classes. Regular rules of glide deletion are suspended in the class of verbs of color or defect, e.g. *sawida* (*become black*) and ^c*awira* (*become one-eyed*). These forms evade rules that normally delete glides in the phonological contexts presented there. The same roots are subject to glide deletion when another interpretation is available for them. For example, the root *s-w-d* surfaces as *sāda* when construed to mean *reign* (underlyingly */sawada/*), and a morphological augmentation of ^c*awira*, ^ʔ*a^cāra*, underlyingly */^ʔa^cwara/*, means *loan* (Brame 1970). These facts demonstrate a phonological process that is sensitive to the meaning of the term it applies to, not merely its phonological and

morphological form, information outside the domain of the phonology module proper. Brame notices that a metathesis rule is subject to the same exception. Verbs constructed from roots with identical final consonants require them to be adjacent in certain phonological contexts, hence underlying /*madada*/ (*spread*) surfaces as *madda*. Verbs of defect evade metathesis, e.g. *ṣakika* (*be knock-kneel*), *ʔalila* (*smell badly*). Brame concludes that glide deletion involves metathesis. At the relevant level they are one and the same rule.

A great deal of Arabic morphology is templatic, a quasi-productive derivational morphology in which conditions on phonological and phonotactic well-formedness play a substantial role in the morphological expression of syntactic and semantic features, a paradigmatic case of a phonology-morphology interaction. Because of the derivational significance of templatic morphology, it is discussed below in the context of the morphology-syntax-semantics interface.

The morphology-syntax-semantics interface

The morphology-syntax-semantics interface deals with the manner in which a word's morphophonological characteristics influence its syntactic distribution and/or semantic interpretation (the term is not meant to subsume the syntax-semantics interface, discussed below). As mentioned above, phonology and morphology are unusually intimately intertwined in Arabic. Such an interaction is exemplified by the Arabic verb forms. Verbs are constructed from a three- (but sometimes two- or four-) consonant root

filling consonantal positions in a prosodic template. The templates differ from one another in their phonological structure and the manner in which root consonants associate with prosodic positions. The templates are not productive, and not all templates are attested for all roots. But when a root is extant in more than one template, the meanings of the words so formed and the syntactic frames in which they occur differ in systematic ways. That is, alternations in the phonological and prosodic structure of verbs correlate with units of meaning and associated syntactic properties.

For example, doubling of the middle consonant of the root yields either a causative form (compare *fariḥa* (*be happy*) with *farraḥa* (*make happy*)) or an intensive or repetitive form (compare *ḍaraba* (*beat*) with *ḍarraba* (*beat violently/repeatedly*)). Prefixation of ^ʔ*a-* forms a non-coercive causative (compare *ḥalasa* (*sit down*) with ^ʔ*aḥlasa* (*bid one to sit down*) or ^ʕ*alima* (*know*) with ^ʔ*aʕlama* (*inform*)). Causativization is valency increasing, i.e. the derived forms occur in a syntactic frame with one additional argument vis à vis the underived form.

- (2) a. *fariḥa* *samīr-un*
 be:happy Samir-NOM
 ‘Samir was happy.’
- b. *farraḥa* ^ʔ*aḥmad-un* *samīr-an*
 make:happy Ahmad-NOM Samir-ACC
 ‘Ahmad made Samir happy.’

- (3) a. ʿalima samīr-un al-ḥukm-a
 know Samir-NOM the-judgment-ACC
 ‘Samir knew (or learned about) about the judgment.’
- b. ʾaʿlama al-muḥāmī samīr-an al-ḥukm-a
 inform the-attorney Samir-ACC the-judgment-ACC
 ‘The attorney informed Samir of the judgment.’

Other templates preserve the argument structure of the base but effect its temporal/aspectual character. Doubling of the final consonant invariably forms a verb from an adjective (i.e., a finite form from a non-finite form) (compare ʾaḥmar (*red*) with ʾiḥmarra (*become red*) or ʾaʿwaḥ (*curved*) with ʾiʿwaḥḥa (*be curved*)). Lengthening of the first vowel derives an activity from an accomplishment (compare qaṭala (*kill*) with qāṭala (*fight with*) or sabaqa (*outrun*) with sābaqa (*run a race with*)).

Morphologically unaugmented verbs vary in the ‘stem vowel’, the second vowel of the stem, which may be *i*, *a* or *u*. The stem vowel *u* systematically occurs in verbs that describe permanent states (Wright 1981, part 2, sec. 38), e.g. ḥasuna (*be beautiful*), taqula (*be heavy*), and kabura (*be big*).

There is no universal generalization about the meanings of verbs with stem vowel *i* or *a*, but the following implicational generalization is systematic. Whenever the same root occurs with both *i* and *a*, the *i*-form is unaccusative and the *a*-form is its causative (Fassi Fehri 1987).

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|-----|----|--------|-----------------------|--------|------------------------|
| (4) | a. | ḥazina | <i>be sad</i> | ḥazana | <i>cause to be sad</i> |
| | b. | hadima | <i>fall apart</i> | hadama | <i>demolish</i> |
| | c. | wajira | <i>be frightened</i> | wajara | <i>frighten</i> |
| | d. | xariba | <i>go to ruin</i> | xaraba | <i>destroy</i> |
| | e. | najiza | <i>be implemented</i> | najaza | <i>implement</i> |

See Doron (2003) for a detailed semantic analysis of the form-meaning correspondences in Semitic template systems, and McCarthy and Prince (1990a), McCarthy and Prince (1990b), Ussishkin (1999), Ussishkin (2001), Idrissi (1997), and Ratcliffe (1998) for discussions of templatic morphophonology in Semitic.

Morphosyntactic regularities are found in templates other than the verbal templates. In some varieties of Arabic, agentivity and eventiveness are morphologically marked in passive participles. In Lebanese Arabic, passive participles of basic (morphologically unaugmented) verbs may be formed on either the template *minfa^cel* or *maf^cūl*, the latter more productively than the former (where *f*, ^c and *l* stand for the first, second and third consonants of a tri-consonantal root). Examples (5) and (6) below demonstrate that the *maf^cūl* participles license agent oriented adverbs like *bi-di^{ʔʔ}e* (*carefully*), a diagnostic of agentivity (Manzini 1983), and are grammatical in the progressive, a diagnostic of eventiveness (Vendler 1957). The *minfa^cel* participles fail these diagnostics ((7)-(8)).

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|-----|----|----------|-----|---------------------------------|-----------------------|
| (5) | a. | š-šrīt | kēn | ma ^ʔ tū ^c | bi-di ^{ʔʔ} e |
| | | the-wire | was | cut | carefully |

‘The wire was cut carefully.’

- b. š-šrīt °am byikun ma³tū°
the-wire PROG is cut
‘The wire is being cut.’
- (6) a. l-bēb kēn ma³fūl bi-di³°e
the-door was opened carefully
‘The door was opened carefully.’
- b. l-bēb °am byikun ma³fūl
the-book PROG is opened
‘The door is being opened.’
- (7) a. *š-šrīt kēn min³eti°c bi-di³°e
the-wire was cut carefully
- b. *š-šrīt °am byikun min³eti°c
the-wire PROG is cut
- (8) a. *l-bēb kēn min³efil bi-di°c°e
the-door was opened carefully

- b. *l-bēb °am byikun min°efil
the-wire PROG is cut

The syntax-semantics interface

Gottlob Frege's 'Principle of Compositionality' (Frege 1892) states that, in languages that obey the principle (clear cases being manufactured logical languages), the meaning of an expression is a function of the meaning of its parts. Natural languages appear to obey this principle to a great extent, though it is unclear whether they can be described as fully compositional (Higginbotham 1986). In a fully compositional language, the only kinds of ambiguity that are expected to arise are lexical ambiguities, e.g. the different meanings of *bank* in English (riverbank vs. financial institution). The meaning of a sentence is otherwise 'pinned down' by its structure. But there are many cases in natural language in which the interpretation of an expression appears to diverge from its structure, and therefore from a one-to-one relationship between structure and meaning. These divergences occur at the interface between syntax and semantics, and constitute the focus of linguistic inquiry on the relationship between structure and meaning.

There is not uncommonly a divergence, for example, between the apparent hierarchical order of quantifiers in a sentence (based on their linear order) and their relative scope. A quantifier is in the scope of another quantifier if the interpretation of the first is subordinate to the interpretation of the second. In (9a) below, for example, the indefinite *qašīdatan* (*a poem*), which asserts the existence of a poem, is (most saliently)

interpreted subordinate to *kullu šābbin* (*every boy*), so that a potentially different poem is asserted to exist for each boy; the poems vary with the boys. In (9b), on the other hand, *šābbun* (*a boy*) asserts the existence of only one boy; it is not subordinate to any other quantifier.

- (9) a. qara³a kull-u šābb-in qašīdat-an
 recited every-NOM boy-GEN poem-ACC
 ‘Every boy recited a poem.’
- b. qara³a šābb-un kull-a qašīdat-in
 recited boy-NOM every-ACC poem-GEN
 ‘A boy recited every poem.’

But the sentences above are ambiguous. In both cases, the opposite scopal interpretation is available. That is, (9a) may mean *A (particular) poem is such that every boy recited it*, and (9b) may mean *Every poem is such that a (potentially different) boy recited it*. In these interpretations, the scopal order is the inverse of the linear order. The fact that the hierarchical arrangements that instantiate the scope of quantifiers in a sentence may diverge from those hierarchical arrangements that instantiate their linear order suggests that sentences are systematically related to ‘logical forms’, representations that feed the interpretive component of language use but not the articulatory component.

If this is so, the syntax-semantics interface lies in the relationship between surface representations, or ‘phonological forms’, and these compositional semantic

representations, or logical forms. A conventional line of reasoning about this relationship is that it is transformational (May 1985). Logical forms are derived from phonological forms by the same transformations that derive phonological forms from other phonological forms, i.e. syntactic displacement. In (9a,b), the object may (covertly) raise to the sentence-initial position (a transformation known as ‘quantifier raising’), where the subject falls in its scope. This view preserves the Principle of Compositionality by casting the ambiguity in (9a,b) as syntactic, not semantic. Each syntactic structure is associated with one and only one meaning, but a sentence may be associated with more than one structure at the syntax-semantics interface.

Properties of Arabic support this view. The availability of the object wide scope reading of the sentences in (9) is contingent on the position of the subject with respect to the verb. If the subject precedes the verb, the inverse scope reading is unavailable. Note that in Standard Arabic, an indefinite subject must be modified in order to be licit in the preverbal position, another syntax-semantics interaction (Mohammad 1999).

(10) šābb-un ṣaġīr-un qara^a kull-a qaṣīdat-in
 boy-NOM young-NOM recited every-ACC poem-GEN

‘A specific young boy recited every poem.’

Not: ‘For each poem, a potentially different young boy recited it.’

That is, the availability of an inverse scope reading depends on the syntactic form of the sentence, indicating that certain syntactic structures block certain interpretations, which correlates structure and interpretation. It indicates, in particular, that quantifier

raising may raise an object to a position superior to a post-verbal subject, but not a pre-verbal subject, and more generally, that quantifier raising is not unbounded, but targets particular syntactic positions, as in Beghelli and Stowell (1997), Kitahara (1996) and Hornstein (1999).

Quantifier raising lies at the interface of syntax and semantics, as does its inverse, ‘reconstruction’. When a displaced term is interpreted, for the purposes of scope or binding, as if it occurred in its canonical position, it is said to have reconstructed.

Mohammad (1989) reports that a term that binds a pronoun in its clause must either be structurally superior to the pronoun’s canonical position (its position prior to any surface word order changes) or precede it in the surface order (see also Fassi Fehri 1993). Since the canonical order (subject>object) can be reinstated by reconstruction, a subject may bind a pronoun in an object regardless of surface precedence (11a-b), but an object may only bind a pronoun in a subject if the object precedes the subject (12a), not if it follows (12b). The judgments below reflect the reading in which the pronoun is bound by the NP *ʾaḥmad*.

- (11) a. ḍaraba ʾaḥmad-un ṣadīq-a-hu
 hit Ahmed-NOM friend-ACC-his
 ‘Ahmed hit his friend.’
- b. ḍaraba ṣadīq-a-hu ʾaḥmad-un
 hit friend-ACC-his Ahmed-NOM
 ‘Ahmed hit his friend.’

- (12) a. ḍaraba ʾaḥmad-an ṣadiq-u-hu
 hit Ahmed-ACC friend-NOM-his
 ‘Ahmed’s friend hit him.’
- b. *ḍaraba ṣadiq-u-hu ʾaḥmad-an
 hit friend-NOM-his Ahmed-ACC
 (‘Ahmed’s friend hit him.’)

That reconstruction is impossible in (13), then, from Ouhalla (1994), suggests that recipient>theme is the canonical order for objects.

- (13) *ʾaṭay-tu ṣāhib-a-hu kull-a kitāb-in
 gave-1SG owner-ACC-its every-ACC book-GEN
 ‘I gave its owner every book

Aoun and Benmamoun (1998) and Aoun et al. (2001) point out that in Arabic, reconstruction is more restricted than displacement itself. Aoun and Benmamoun show that in Lebanese Arabic, a displaced term may index a syntactic position across what is normally a syntactic island (a barrier for displacement) if the indexed position is identified by a pronominal clitic (as opposed to a gap). That is, islands do not restrict displacement when the displaced term binds a clitic. However, antecedent-clitic chains only display reconstruction when not separated by an island. Hence, the possessive

pronoun *-un* (*their*) in (14a) may be bound by the quantifier *kell l-m^callmēt* (*the teachers*), but not in (14b). The difference is that the term containing the pronoun *tlēmiz-un z-zġār* (*their young students*) is separated from the clitic pronoun it binds by an island (a relative clause) in (14b) but not (14a).

(14) a. [tlēmiz-un_j z-zġār]_i ʔəl-to [kəll l-m^callmēt]_j bifadḍluw-un_i
 students-their the-young said-2SG all the-teachers prefer-them
 ‘Their young students, you said all the teachers prefer them.’

b. *[tlēmiz-un_j z-zġār]_i ʔəl-to [kəll l-m^callmēt]_j ʔāṣaṣ-o
 students-their the-young said-2SG all the-teachers punished-3PL
 l-wlēd [Island yalli ɖarab-uw-un_i]
 the-children that hit-3PL-them
 ‘Their young students, you said all the teachers punished
 the children that hit them.’

(14b) is grammatical if the pronoun *-un* in *tlēmiz-un z-zġār* is not bound by *kell l-m^callmēt*. That is, displacement itself is not blocked, but reconstruction is. Aoun and Benmamoun claim that since reconstruction is a property of movement chains (Hornstein 1984, Barrs 1986 and Chomsky 1993), the ‘displaced’ term *tlēmiz-un z-zġār* has moved only in (14a), not (14b). In (14b) it is base-generated at the left clause edge, and so does not reconstruct, having not been moved. It is displaced then only in the sense of not occurring in the canonical object position, which is post-verbal.

Aoun, Choueiri and Hornstein show a similar effect for strong (non-clitic) subject pronouns in Lebanese Arabic. But interestingly, a quantifier may bind a strong pronoun *only* when the two are separated by an island (again a relative clause in (15b)).

- (15) a. *kəll muttaha^m-e_i ʕrəf-to ʔanno hiyye_i nḥabas-it
 each suspect-F know-2SG that she imprisoned-3FSG
 ‘Each suspect, you know that she was imprisoned.’
- b. kəll muttaha^m-e_i šəf-to l-muḥāme yalli bya^ʕrif
 each suspect-F saw-2SG the-attorney that know
 ʔanno hiyye_i harab-it
 that she ran:away-3SF
 ‘Each suspect, you saw the attorney that knows that she ran away.’

Again, reconstruction is impossible in the context presented in (15b), demonstrated in (16), suggesting that the relation between the displaced term and the pronoun is not a movement relation when the two are separated by an island, as expected, since islands block movement.

- (16) *[təlmīz-a_i l-kəslēn]_j ma bad-kun txabbr-o wala m^ʕallme_i ʕan l-bənt
 student-her the-bad not want-2PL tell-2PL no teacher about the-girl
 yalli huwwe_j za^ʕbar ma^ʕ-a b-l-faḥṣ
 that he cheated with-her in-the-exam

‘Her bad student, you don’t want to tell any teacher about the girl
with whom he cheated on the exam.’

Aoun, Choueiri and Hornstein claim that (15a) is ungrammatical for interface reasons as well. In the base structure for the derivation, the pronoun *huwwa* is an appositive modifier of the the quantifier *kəll muttahame* before the quantifier is displaced. Following Emonds (1979), they propose that appositive modifiers are interpreted as separate clauses conjoined with the clause in which they occur in the surface representation, so that binding between the quantifier and the pronoun fails in the logical form, as the pronoun is then not structurally subordinate to the quantifier. In summary, the breakdown in each of the ungrammatical sentences in (12)-(16) arises because the logical forms of these sentences do not instantiate the relevant configurations. These sentences cannot be mapped to logical forms that license the relevant configurations because of constraints on the interface between syntax and semantics, in particular constraints on displacement. These facts lend credence to the hypothesis described above that the constraints on the interface are the same as those that constrain the derivation of surface forms.

Another syntax-semantics interaction typical of Arabic is the manner in which inflectional distinctions in the finite verb reflect the position and/or interpretation of its subject. Again to take Lebanese as an example (see Hoyt (2000) on Palestinian), unaccusative verbs may optionally fail to agree with a post-verbal indefinite subject. However, the presence of agreement correlates with the discourse semantic property of specificity. An NP interpreted specifically must refer back to a previously mentioned discourse referent, while an NP interpreted non-specifically must introduce a new

discourse referent (Enç 1991). The discourse in (17)-(19), in Lebanese Arabic, demonstrates. (17i) and (17ii) are two possible continuations of the sentence in (17).

(17) šōfōr l-baš ʔall-na ʔanno ʕiddet bašēt ʕilʔ-o bi-ʕažʔet sēr.
 driver the-bus told-us that several busses stuck-3PL in jam traffic
 ‘The bus driver told us that several busses were stuck in traffic.’

(i) baʔdēn smiʕ-na ʔanno wəʃil tlēt bašēt mʔaxxarīn
 later heard-1PL that arrived three busses late
 ‘Later we heard that three busses arrived late.’

(ii) baʔdēn smiʕ-na ʔanno wəʃl-o tlēt bašēt mʔaxxarīn
 later heard-1PL that arrived-3PL three busses late
 ‘Later we heard that three busses arrived late.’

(18) ʕrif-t sēʕita ʔinno hūle kēn-o min bayn l-bašēt
 knew-1S then that these were-3PL of among the-busses
 lli ʔall-na ʕan-un š-šōfōr
 that told-us about-them the-driver
 ‘Then I knew those were the busses that the driver was talking about.’

Sentence (17) introduces several busses as discourse referent. In the continuation in (17i), the verb *wəʃil* (*arrived*) does not agree with the indefinite subject *tlēt bašēt*

(*three busses*) (cf. (17ii)), and the indefinite is interpreted as introducing a new discourse referent—three additional busses. In the continuation in (17ii), the verb agrees with the indefinite, and the indefinite is interpreted as referring back to a previously introduced discourse referent, the previously mentioned busses in this case. That is, (17ii) asserts that the busses that arrived late were among the busses the driver said were stuck in traffic, while (17i) does not make this assertion. As a result, the assertion in (18) is infelicitously redundant following continuation (17ii) (it asserts only what (17ii) already asserted) but informative following continuation (17i) (it asserts more than what (17i) asserted). (17i) and (17ii) differ only in the presence of agreement on the verb, meaning this inflectional morphological characteristic has a significant impact on the interpretation of the sentence.

The phenomenon in (17) and (18) illustrates a case in which a particular morpheme, the agreement affix, affects the interpretation of another constituent in the sentence, the subject. The fact that subjecthood is a syntactic notion suggests that the dependency is mediated structurally, and indeed the relationship is impacted by word order. When an indefinite subject precedes the verb, the verb obligatorily agrees (and consequently, as expected, the subject is interpreted specifically).

(19) t̄lēt baṣēt wəṣl-*(o) m^ʔaxxarīn

three busses arrived-*(3PL) late

‘Three busses arrived late.’

Summary

The phenomena discussed above illustrate interactions between phonetics and phonology, phonology and morphology, morphology and syntax and syntax and semantics. These interactions demonstrate limits to modularity and reify the coherence of language. Interface linguistics in Arabic is a rich and varied domain, with unique empirical contributions to make to the theory of language and with substantial complexities yet to be explained.

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