THE LEXICAL SEMANTICS of the ARABIC VERB
The Lexical Semantics of the Arabic Verb
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PETER JOHN GLANVILLE
For Chelsea
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Acknowledgments

This book is the result of my curiosity about and love for the Arabic language, and this is something that has been encouraged in one way or another by a large number of people. My students and colleagues at Sultan Qaboos University in Oman were fantastic teachers who made me want to learn more, and after leaving I was lucky to continue my education with some of the best teachers working in the field of Arabic language pedagogy. Like thousands of learners of Arabic, I owe special thanks to Mahmoud Al-Batal, who has worked tirelessly and with great dedication to transform the way that Arabic as a second language is taught, producing materials, training teachers, working on assessment, and convincing decision-makers that Arabic must be taught for communication. I would also like to thank Mohammad Mohammad for his constant encouragement and support, usually provided under his favorite shade tree at the University of Texas at Austin, all of my teachers in Damascus, especially Manal Yosef and Ghada Housen, the Shadeed family of Damascus, and my friend Osama Shamieh. At the University of Maryland I am grateful to Dina Hefnawy, Lutf Alkebsi, Zein Elamine, Heba Salem, and Ahmad Hanafy for being happy to answer my random questions about roots and patterns at the drop of a hat.

Many people have also supported the research and writing process. At the institutional level the University of Maryland Graduate School funded my research with a Research and Scholarship Award (RASA) in 2014, and the School of Languages, Literatures and Cultures provided a semester of leave. I am thankful to my colleagues in the School for providing valuable advice, most notably Michele Mason, Alene Moyer, Steve Ross, and Ryan Long. My colleague in Arabic, Valerie Anishchenkova, has been a good friend and source of moral support, and our coordinator, Lianne Berne, has been fantastic in every way. Outside of Maryland, I am grateful to Vicki Sunter at Oxford University Press for being positive, efficient, and professional throughout the whole submission and review process, to Karin Ryding for insightful comments on the draft book proposal, Angela Harmon for reading early draft chapters, and a number of anonymous reviewers who have encouraged me to be bolder in places, and less outrageous in others. The research I have undertaken for this work would not have been possible without the excellent Arabic corpus developed and maintained by Dilworth Parkinson at Brigham Young University, and like many other researchers I am indebted to him for this.

I first encountered the name Kristen Brustad when I bought an Arabic language textbook in Morocco. Many years later when I was a graduate student at UT she turned up and changed my life. I could never have written this book without the...
linguistic training she provided, or without the confidence that she instilled in me to do what I think should be done. This is to say nothing of her considerable input into this book at all stages.

Finally, I would like to thank my family: my parents, for keeping me on the straight and narrow and for eventually refraining from asking how much longer all this is going to take; my dogs, past and present, for our walks; my son, for making me laugh every day; and my wife Chelsea, who I love with all my heart.
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## List of abbreviations and symbols

(a) Transcription

In transliterating data from Modern Standard Arabic I use the following symbols:

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<th>Transliteration Symbol</th>
<th>Articulatory Features</th>
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<tbody>
<tr>
<td>ﺀ</td>
<td>ء</td>
<td>Glottal stop</td>
</tr>
<tr>
<td>ﻃ</td>
<td>ا</td>
<td>Long open front vowel</td>
</tr>
<tr>
<td>ﺕ</td>
<td>ﺕ</td>
<td>Voiced labial stop</td>
</tr>
<tr>
<td>ﺙ</td>
<td>ت</td>
<td>Voiceless dental stop</td>
</tr>
<tr>
<td>ﺟ</td>
<td>ﺟ</td>
<td>Voiceless interdental fricative</td>
</tr>
<tr>
<td>ﺛ</td>
<td>ﺛ</td>
<td>Voiced alveolar fricative</td>
</tr>
<tr>
<td>ﺖ</td>
<td>ﺖ</td>
<td>Voiceless pharyngeal fricative</td>
</tr>
<tr>
<td>ﺪ</td>
<td>ﺪ</td>
<td>Voiceless velar fricative</td>
</tr>
<tr>
<td>ﺓ</td>
<td>ﺓ</td>
<td>Alveolar liquid</td>
</tr>
<tr>
<td>ﻁ</td>
<td>ﻁ</td>
<td>Voiced dental fricative</td>
</tr>
<tr>
<td>ﺖ</td>
<td>ﺖ</td>
<td>Voiceless dental fricative</td>
</tr>
<tr>
<td>ﻆ</td>
<td>ﻆ</td>
<td>Voiceless pharyngeal fricative</td>
</tr>
<tr>
<td>ﻆ</td>
<td>ﻆ</td>
<td>Voiceless labial fricative</td>
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<tr>
<td>ﻆ</td>
<td>ﻆ</td>
<td>Voiced velar fricative</td>
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<tr>
<td>ﻆ</td>
<td>ﻆ</td>
<td>Voiceless labiodental fricative</td>
</tr>
<tr>
<td>ﻈ</td>
<td>ﻈ</td>
<td>Voiceless uvular stop</td>
</tr>
<tr>
<td>ﻋ</td>
<td>ﻋ</td>
<td>Voiceless velar stop</td>
</tr>
<tr>
<td>ﺓ</td>
<td>ﺓ</td>
<td>Dental liquid</td>
</tr>
<tr>
<td>ﺓ</td>
<td>ﺓ</td>
<td>Labial nasal</td>
</tr>
<tr>
<td>ﻉ</td>
<td>ﻉ</td>
<td>Alveolar nasal</td>
</tr>
<tr>
<td>ﻉ</td>
<td>ﻉ</td>
<td>Voiceless glottal fricative</td>
</tr>
<tr>
<td>ﺩ</td>
<td>ﻰ</td>
<td>Voiced labial fricative, long close back vowel</td>
</tr>
<tr>
<td>ﻋ</td>
<td>ﻋ</td>
<td>Voiced palatal fricative, long close front vowel</td>
</tr>
<tr>
<td>ﻋ</td>
<td>ﻋ</td>
<td>Open front vowel</td>
</tr>
<tr>
<td>ﻋ</td>
<td>ﻋ</td>
<td>Close back vowel</td>
</tr>
<tr>
<td>ﺖ</td>
<td>ﻖ</td>
<td>Close front vowel</td>
</tr>
</tbody>
</table>

The Arabic character ء appears on the end of feminine nouns and is transcribed as /a/ unless the noun is a non-final noun in a possessive construction, when it is transcribed as /at/. 
In giving the citation form of verbs, in naming verb patterns, and in transcribing examples, I do not transcribe hamzat al-wasl, the glottal stop that is added at the beginning of a word to avoid having a vowel as an onset.

(b) Glossing and translation

Following established convention, the citation form of a verb is the third masculine singular perfective. In word lists this is translated using an English infinitive. For example: dahika ‘to laugh’.

Grammatical labels in word lists indicate whether or not the verb takes an object. They are abbreviated as shown:

trns  Transitive. The verb takes a direct object. For example: kasara ‘to break’
int  Intransitive. The verb does not take an object. For example: rakada ‘to run’
obl  Oblique. The verb is followed by a preposition, then an object. For example: i‘tamada ‘to depend’
ditrns  Ditransitive. The verb takes two direct objects. For example: ʔa‘ttaa ‘to give’

In the interests of space, word lists are only provided in transcription and translation. Contextualized data appear in Arabic text with a transcription, a gloss, and a translation. The abbreviations used are as follows:

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
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</thead>
<tbody>
<tr>
<td>1</td>
<td>first person</td>
</tr>
<tr>
<td>2</td>
<td>second person</td>
</tr>
<tr>
<td>3</td>
<td>third person</td>
</tr>
<tr>
<td>ACC</td>
<td>accusative</td>
</tr>
<tr>
<td>COLL</td>
<td>collective</td>
</tr>
<tr>
<td>DEF</td>
<td>definite</td>
</tr>
<tr>
<td>DUAL</td>
<td>dual</td>
</tr>
<tr>
<td>F</td>
<td>feminine</td>
</tr>
<tr>
<td>GEN</td>
<td>genitive</td>
</tr>
<tr>
<td>IND</td>
<td>indicative mood</td>
</tr>
<tr>
<td>M</td>
<td>masculine</td>
</tr>
<tr>
<td>NEG</td>
<td>negative</td>
</tr>
<tr>
<td>NOM</td>
<td>nominative</td>
</tr>
<tr>
<td>PL</td>
<td>plural</td>
</tr>
<tr>
<td>SG</td>
<td>singular</td>
</tr>
<tr>
<td>SUB</td>
<td>subjunctive mood</td>
</tr>
</tbody>
</table>
(c) Highlighting

Arabic words are in italics; translations are in single quotes. For example: *kabiiir* 'big'.

The vowels, affixes, or consonants of an Arabic word may be highlighted in bold depending on the point being made. The text will state what is highlighted in a given example.

Semantic notions are in small capitals. For example: the action **HIT**; the notion of **HEIGHT**.
**A note on primary sources**

Unless otherwise stated, data in word lists are found in Hans Wehr’s *Dictionary of Modern Written Arabic*, edited by J. M. Cowan, 4th edition (Weisbaden: Harrassowitz, 1994), or Lane’s *Arabic–English Lexicon*, originally published in 1863 (Beirut: Librairie du Liban). Contextualized examples of modern usage are drawn from the Brigham Young University Online Arabic Corpus. This is a 30-million-word corpus consisting of texts from newspapers published in Egypt, Syria, Morocco, Kuwait, Jordan, and the United Kingdom, novels by writers from Egypt, Algeria, Palestine, Saudi Arabia, Sudan, Syria, and Lebanon, and non-fiction works found on the Internet or in print, some of which consist of religious or political commentary. The corpus also contains premodern works, including the Quran, and some Egyptian colloquial texts. When I use data from this corpus, the footnote identifies it as coming from Brigham Young University (BYU), and includes a reference used in the corpus to identify the specific text. For example, BYU: SPO1997:27940. Other contemporary data are taken from the novel *mudun al-milh* ‘Cities of Salt’ by Abdul Rahman Munif (10th edition, 2003). These data are identified in footnotes using the author’s last name and the page number. Contextualized examples of older usage are from Ibn Manzuur’s *Lisaan Al-Arab* (Cairo: Dar El-Hadith, 2003). This comprehensive documentation of Arabic usage draws from a number of older sources, and is dated around the year 1300.
Introduction

1.

Introduction and overview

1.1 Introduction

This book is about the mental construction and linguistic construal of meaning. My primary focus is the verb patterns of Arabic: recurring phonological material interlaced with what is traditionally referred to as a consonantal root. While there is a great deal of scholarship problematizing the status of roots, the verb patterns in which they are arranged have received markedly less attention. Standard grammars of Arabic label patterns as ‘intensive’, ‘causative’, ‘middle’, ‘reflexive’, ‘reciprocal’, and so on, with little further explanation of these terms. In many cases a given pattern is assigned several semantic functions in order to account for a variety of seemingly unrelated verb types that nevertheless all receive the same linguistic marking. Hence taḥaadaba ‘to converse’ and taḫaakasa ‘to quarrel’ are held to have the same phonological shape because they are both reciprocal, but in order to explain tamaarada ‘to feign sickness’, a different function must be attributed to this ‘reciprocal’ verb pattern. Similarly, ḥanzala ‘to lower’ and ḥadxala ‘to insert’, from nazala ‘to descend’ and daxala ‘to enter’ respectively, are supposedly formed in a causative verb pattern, and non-causative verbs like ḥabharra ‘to go to sea’ or ḥṭaasā ‘to obey’ are either overlooked or treated separately. Reflexive verbs like intransitive ḥṭasala ‘to wash’, from ḥasala ‘to wash (something)’, are explained as ‘middle’, but reflexive marking on a verb like ihtṭaadā ‘to need’, which does not alternate with a transitive base, is not addressed.

The analysis presented in the coming chapters examines what is shared by all verbs bearing the same marking, arriving at a single semantic typology for each verb pattern. My working hypothesis is that each pattern began, most likely in some ancestor of Arabic, as a collection of independent words, and that over time these became phonetically reduced and merged in a process of grammaticalization. An important consequence of this process is that a pattern becomes an independent lexical unit that marks a certain semantic feature, and is no longer exactly equivalent to the meaning of the once-independent words that comprise it. As such, the verb patterns of Arabic now represent a set of semantic structures, and are iconic (Haiman 1983, 1985), bearing a direct relation to the types of participant involved in a situation and their relationships to each other.
This argument rests on a word-to-word account of derivation in which the Semitic root functions as a proxy for a base word and is never itself a semantic base. The fact that multiple verbs sharing the same root offer different presentations of a shared meaning has led to the frequent claim that roots and patterns are discontinuous morphemes, one encoding lexical meaning, the other grammatical. While verb patterns have certainly become morphemic however, the idea that a root contributes an abstract meaning to a derived word is problematic, since it cannot account for relationships between words. If all words are derived semantically from a root, they should all present variations of a single abstraction, and it should not be the case that there are layers of derivation in which some words clearly incorporate the meaning of others. In illustrating numerous word-to-word relationships, a secondary aim of the book is to establish the root as a consonantal string that may be extracted from more than one source word, and which may therefore have multiple meanings.

1.2 Overview

The book is organized as follows. Chapter 2 establishes a distinction between core meaning on the one hand, and the way in which it is viewed or framed on the other. It illustrates that a meaning component recurs in a given set of words, and that each word presents this component slightly differently. It also situates the current work within the debate over the status of the consonantal root in derivational processes. Chapter 3 begins the analysis of the verb patterns, focusing on three ground form variants distinguished only by a single vowel. I propose a prototypical ordering of participant roles in an event or situation, and argue that a ground form verb represents the structuring of semantic content in a way that either matches this order or that deviates from it. Deviations from the prototype are semantically marked, and the Arabic verbs that construe them are therefore marked morphologically. Chapter 4 turns to reflexive marking. I argue that the affixation of reflexive morphemes to base verbs has created a grammaticalized structure: a morpheme paired with a certain semantic feature. I show that this morpheme now appears on verbs whose action terminates at the subject, and is no longer dependent on a non-reflexive base verb to modify. In Chapter 5 I argue that two verb patterns characterized by a long vowel denote a symmetric semantic structure in which two participant roles are oriented relative to each other. Recognizing the function of these patterns allows for a single treatment of a great range of verbs that bear the same linguistic marking but which otherwise appear to have nothing in common. I illustrate that symmetry is a conceptual category that incorporates but is much larger than reciprocity, discernable in a variety of events and situations, and show that it is marked on verbs crosslinguistically. Chapter 6 examines verbs that causativize simple spontaneous actions, and those that turn static concepts into activities. Two verb patterns and their reflexive counterparts are addressed, each denoting the presence of an agent
that is typically not found in the base concept. Chapter 7 treats two verb patterns that signal repetitive action with repetition of linguistic form, either through reduplication of the second consonant, or of the first syllable. The chapter investigates the types of repeated action construed by verbs formed in each pattern, distinguishing between derived verbs that double up the action of the base verb, and non-derived verbs that encode a sound or rhythm noticed in the environment. In the concluding chapter I consider how the derivational system of Arabic may have come into existence, presenting evidence from studies of grammaticalization and analogy in other languages to strengthen my claim that Arabic verb patterns are the result of these same processes.
2

Words, roots, and patterns

2.1 Introduction

The focus of this chapter is the semantic make-up of word meaning in general. My aim is to establish that all word meaning is comprised of two elements: a semantic structure and conceptual content that fleshes out that structure with specific detail (Langacker 1987, 1990, 1999; Rappaport Hovav and Levin 1998; Levin 2009). Every word frames conceptual content, and the derivation of one word from another produces a set of words in which this content is framed slightly differently.

Section 2.2 familiarizes the reader with the idea of roots and patterns, illustrating that Arabic words form families either because they share a consonantal string or because their overall shape is the same. Section 2.3 provides an overview of the current debate regarding the status of roots and patterns as lexical units, and situates the current work within this debate, outlining my approach to word-to-word derivation and the role of roots and patterns within it. The analysis of word meaning begins in Section 2.4, where I illustrate the distinction between conceptual content and semantic structure with a variety of Arabic data. The following two sections establish a direction of derivation. Section 2.5 treats words derived from verbs, and Section 2.6 illustrates that verbs may be derived from a variety of nouns, adjectives, and other verbs. I summarize the main points of the chapter in Section 2.7 and conclude by considering the implications of the analysis so far for the treatment of the verb patterns in the coming chapters, and for the development of a coherent theory of the Arabic verb.

2.2 Roots, patterns, and word families

Standard analyses of Arabic morphology typically state that, with the exception of a closed class of grammatical function words, every Arabic word consists of two components: a consonantal root and some type of pattern with which it combines (see for example Fischer 2002; Watson 2002; Holes 2004a; Ryding 2005, 2014). A root most commonly consists of three ordered consonants, although roots with two and four consonants are also attested. Following a convention developed by
Pesetsky (1995), I will preface a root with the symbol √. As an example, the words in (1) form a word family whose members all contain the triconsonantal root √hādār, highlighted in bold.

(1) hadara ‘to attend, be present’
hadāara ‘sedentariness; civilization’
hādar ‘a civilized region’
hadara ‘to lecture’
ḥadra ‘presence’
istahadara ‘to summon’

The verb hadara, glossed in (1) as ‘to attend’, literally means ‘he attended’, but the third masculine singular perfective of a given verb is traditionally also its citation form, and is used in grammars in the way that the infinitive is used in English. I maintain this convention throughout this book.

As you looked over the words in (1), you probably searched for a semantic connection between them. This suggests that when the same three-letter string is repeated we recognize it as a discrete extractable element, and a number of studies by Boudelaa and Marslen-Wilson (2004a, 2004b, 2005, 2011) have shown that native speakers of Arabic recognize roots in this way too (although see Bohas 2002). Consonantal strings are also maintained when foreign words are imported into Arabic, where they come to represent the meaning of the source word. The examples in (2) are from Ryding (2014: 86).

(2) talfana ‘to telephone’
talfaza ‘to televize’
balṣafa ‘to Bolshevize’
taʔamraka ‘to become Americanized’

Zeroing in on a root involves backgrounding the remainder of the word, and what is left over is a linguistic pattern that recurs to produce a different type of word family. These word patterns consist of vowels, non-root consonants (sometimes), and slots for the root consonants to fill. They occur with different roots resulting in sets of words that share the same shape. For example, the word hadāara ‘civilization’ exhibits a common pattern characteristic of nouns describing abstract entities or states. This pattern, not the root, is highlighted in (3).

(3) hadāara ‘sedentariness; civilization’
hadāra ‘modernity’
θaqaafa ‘culture’
kaduafa ‘density’
baraʔa ‘innocence’
badaana ‘obesity’
Many property state adjectives are formed in another frequently recurring pattern, highlighted in bold in (4).

(4) kabir ‘big’
    sağiir ‘small’
    tawiil ‘tall’
    haidiiθ ‘modern’
    badiin ‘fat’
    bariiʕ ‘innocent’

For verbs there are theoretically fifteen different patterns. Several of these are extremely rare however, and in this book I focus on the nine most common patterns. In western grammars of Arabic the verb patterns are numbered, while the early grammarians of the language referred to patterns using the root √фll as an exemplar, spelling out the form of the pattern itself (see Owens 1988 and Suleiman 1999). In (5) the root √qtʕ appears in nine different patterns. The pattern number is given in the western tradition, and the pattern name is also provided. I will use names and numbers of patterns interchangeably from this point forward.

(5) Pattern | Name | Example
--- | --- | ---
I | faʕala | qa.taʕa ‘to sever, to cut through’
II | faʕala | qa.taʕa ‘to chop up’
III | faʕala | qa.taʕa ‘to interrupt; to boycott’
IV | faʕala | qa.taʕa ‘to give land’
V | faʕala | taqa.taʕa ‘to break up; cut in and out’
VI | faʕala | taqa.taʕa ‘to intersect’
VII | faʕala | taqa.taʕa ‘to terminate, cut out’
VIII | faʕala | taqa.taʕa ‘to cut for oneself; to glean’
X | faʕala | taqa.taʕa ‘to deduct’

Ryding (2005: 434) asserts that word patterns present a ‘semantic slant’ on a consistent lexical core that is manifested differently depending on the pattern. Determining the nature of both the core and its ‘slant’ or view is a central aim of this book.

From a morphological perspective therefore, Arabic words can be grouped in one of two ways: words that share a common pattern, and words that share the same root. Words that share a pattern will be distinguished from each other by their different roots, as in (3) and (4) above. Words that share a root will be distinguished from each other because that root will be organized in different patterns, as in (5).

A root-and-pattern combination is not always a free-standing word. Verbs are built around a verb stem consisting of root and pattern, but this must be inflected in order to be articulated. For example, the root √ḥdr arranged in pattern X results in the stem -stahdir ‘summon’. This stem never appears alone, but combines with inflectional affixes to produce a fully inflected verb, as in (6).
These different affixes contribute the agreement features of the verb, but they do not alter the meaning attributed to the stem. The dividing line between derivational and inflectional morphology is not always clear in a given language (see Haspelmath and Sims 2010), but a useful distinction can be made for Arabic between derivation—the creation of one word from another with an accompanying change in meaning—and inflection—the attaching of affixes to a word or stem without affecting the meaning attributed to it (Shimron 2003).

### 2.3 Roots, patterns, and derivation

A commonly held view of Semitic morphology, as summarized by Shimron (2003: 7), is that roots and patterns are discontinuous morphemes that are merged to form words. This view is associated with Cantineau (1950a, 1950b), who asserts that virtually all words are derived by crossing a root with a pattern. In modern western accounts of Arabic morphology a conception of the root as some kind of morphological base is found in Fleisch (1956), Goldenberg (1994), McCarthy (1979, 1981), Ryding (2005, 2014), Versteegh (1997), and Yip (1988). In particular, McCarthy’s (1979, 1981) influential work on prosodic morphology asserts that words are composed of three discontinuous morphemes arranged on three morphemic tiers: the pattern or CV skeleton, consisting of slots for root consonants (C) and slots for vowels (V), the consonantal root tier, and the vowel melody tier comprised of the vowels that fill the vowel slots in the pattern, marking active or passive voice. Thus the passive verb kuttib ‘to be made to write’, for example, is an amalgamation of these three morphemes, as illustrated in (7).

(7) Vowel Melody \[ \text{u_i} \] perfective passive  
| | |  
CV Skeleton CVCCVC causative (Form 2)  
| | \  
Root k t b ‘write’  

(McCarthy and Prince 1990a: 5)

This root-and-pattern approach to morphology represents a break with traditional Arab thought. In a review of linguistic treatises on Arabic written between 898 and 1367, Owens (1988: 89–124) remarks that several writers assumed a basic meaning for the root, notably Ibn Jinnii and Ibn Faaris (tenth century), but they did not view it as playing a role in derivation. A sometimes vague distinction was made between the tasriif ‘circulation’ of a root, which according to Ibn ́usfuur (thirteenth century) refers to all permutations of a root in various word patterns, and iftiqaq ‘derivation’ of a word
from its *ʔasl* ‘origin’, which may be a simple noun, or a gerund/infinitive referred to as a *masdar* ‘source’. There was a distinction here, therefore, between basic un-derived words and those that are derived from them, and the idea of roots and patterns as discontinuous morphemes was lacking. Ibn Ya‘ṣīf (twelfth–thirteenth century) and Astaraabaadī (thirteenth) use the term *kalima* to refer to both ‘word’ and ‘morpheme’, but the notion of a morpheme is restricted to inflectional affixes. There is no suggestion that a verb itself, without an inflectional affix, consists of two morphemes.

There are several problems with the idea that every word is a combination of a root and a pattern. Heath (2003: 115) points out that the separation of consonants from vowels in nouns like *xubz* ‘bread’, *ḏahab* ‘gold’, *kabf* ‘ram’, and *hīfz* ‘preservation’ leaves vowels that have no consistent function, and so cannot be considered morphemic. There is no reason, he argues, to assert that *kalb* ‘dog’ is decomposed in the mental lexicon into a root √*klb* and a pattern containing a single meaningless vowel. Likewise, he notes that the vowel in imperfective verbs such as *ya-kṭub* ‘he writes’, *ya-ḍriḥ* ‘he hits’, and *ya-bḥ̲θ* ‘he researches’ is either unpredictable or determined by an adjacent consonant, and does not function as a meaning-bearing element. Heath’s conclusion is that Arabic has a core of underived stems, and that these function as bases for derivation, being modified by vowel changes, affixation, or both. A similar argument is made by Bat El (1994, 2003) and Ussishkin (1999, 2003, 2005) for Hebrew.

Logically, it cannot be the case that all words are derived from a root, since the only way that multiple words containing the same root could come about without one being a base for another is if there was prior agreement on what that root means. Such a situation, whereby early speakers of Arabic agreed on the meaning of a root prior to its appearance in a word, is clearly absurd. Some word must be the first to contain a given root, and that root then recurs when another word is coined that shares some aspect of its meaning with the first. Semantically, this is word-to-word derivation. Importantly, it need not be the case that only a single word in a word family is the base for all the others. For example, Larcher (1995, 2006) points out that the noun of place *maktab* ‘office, desk’ appears to be derived from the verb *kataba* ‘to write’, since the noun describes a place where writing is carried out. However, Larcher notes that a second noun, *maktaba* ‘library, book shop’, is linked to *kitaab* ‘book’, since it describes a place where books are found. If both *maktab* and *maktaba* are root-derived, it is not possible to explain why one frames the notion *writing*, while the other builds on the meaning *book*. This can easily be explained with word-based derivation, where both *maktab* ‘office’ and *kitaab* ‘book’ are derived from the verb *kataba* ‘to write’, with *kitaab* then serving as a base for *maktaba* ‘library’.

The fact that the root must ultimately come from a word does not automatically exclude it entirely from derivational processes however (cf. Watson 2006). Larcher (2006) makes an extremely useful distinction between derivation on the semantic level, where there is always a source word, and derivation as a morphological operation. While there is always a base word in any derivation, there are two
possibilities at the morphological level. One is that the derived word results from a change made to the base, and the other is that the root consonants of the base are extracted and arranged in a new pattern. A semantic base is always a word or uninflected stem while a morphological base could theoretically be either a word or an extracted root. An important question facing phonologists and morphologists therefore is whether derivational operations access a consonantal root, or simply a word or stem.

There is a great deal of evidence that derivation does not access a consonantal root. Ratcliffe (1997) shows that the Arabic ‘broken plural’ is not associated with a fixed word pattern, but rather that plurals are marked by the long vowel /aa/ in the second syllable.

(8) Singular       Plural
    kalb           kilaab       ‘dog’
    dafaar         dafaatir      ‘notebook’
    xaatim         xawaatim      ‘seal’
    daamir         damaaʔir       ‘pronoun’
    sulṭaan        salaṭiiin      ‘sultan’

(Ratcliffe 1997: 148)

Because the plural nouns in (8) do not have a consistent shape, a root-and-pattern analysis can only account for them by proposing several different broken plural patterns to which roots are assigned apparently at random. In contrast, infixation of a long vowel to the singular noun, together with accompanying vowel changes, is a consistent rule. In addition, as Davis (2016) illustrates, the broken plural preserves non-root phonological material from the singular noun base. The affixal consonants of a singular noun transfer to the plural, which is unexpected if the plural is formed by extracting only the root from the singular. Root consonants are highlighted in bold in (9).

(9) Singular       Plural
    maktab         makaatib      ‘office’
    mfītaaḥ         mfāatiiḥ      ‘key’
    taqdiir        taqaadiir     ‘evaluation’

The conclusion is that broken plurals are not formed by combining an extracted root with a plural noun pattern, but through an operation that modifies the single base noun. Similarly, Benmamoun (1999: 191) illustrates that active participles and some nouns of place maintain the same vocalic melody as the corresponding imperfective verb, suggesting that they are formed by modifying the imperfective verb stem rather than by plugging a root into a pattern.

(10) yu-ʕallim    ‘he teaches’    mu-ʕallim    ‘teacher’
     yu-ʕaʔid      ‘he assists’    mu-ʕaʔid     ‘assistant’
     ya-ʔuṣlis     ‘he sits’       ma-ʔuṣlis    ‘conference room, council meeting’
     ya-ʔuṣbah     ‘he swims’      ma-ʔuṣbah    ‘swimming pool’
Further evidence for derivational operations on words rather than roots in Arabic comes from the fact that certain denominal verbs preserve the /m/ prefix of the base noun rather than simply extracting the triconsonantal root.

(11) mihwar  ‘pivot, core, axis’  tamahwara  ‘to pivot on, revolve around’ obl
markaz  ‘center’  tamarkaza  ‘to center on’ obl
masxara  ‘object of ridicule’  tamasxara  ‘to take as an object of ridicule’ obl

Based on observations like these that present a real challenge to the assertion that roots and patterns are the basic building blocks of all words, a source word or stem is acknowledged as a morphological base by Benmamoun (1999), Gafos (2003, 2009), Heath (1987, 2003), Larcher (1995, 2006, 2012), McCarthy and Prince (1990a, 1990b), Olmo Lete (2008), Ratcliffe (1997, 1998, 2013), and Watson (2006), and for Hebrew by Arad (2003, 2005), Aronoff (2007), Bat-El (1994, 2003), and Ussishkin (1999, 2003, 2005). Some researchers also allow for the possibility of root-extraction on the morphological level, most notably Benmamoun (1999, 2003a) and Idrissi et al. (2008). Arad (2003, 2005) suggests that some Hebrew words are root-derived, seemingly without an identifiable source word, but she does not discuss how such an independent root morpheme could have come about.

Since semantically there is always a source word for any derivation, it is tempting to dismiss the notion of a consonantal root altogether. The idea that a root is extracted from the source word and combined with a new pattern seems to add an unnecessary level of complication to the mechanics of how new words are formed. However, numerous psychological studies suggest that native speakers of Arabic recognize roots and patterns as discrete components of words, and if this is the case then dismissing the consonantal root is not so easy. Prunet (2006) gives an overview of evidence from psycholinguistic priming studies, neurolinguistic studies on specific brain area activity, and lexical studies focusing on slips of the tongue and other types of error, the overwhelming majority of which support the conclusion that the consonantal root is a morphological unit. This in turn is sometimes taken as evidence that the mental lexicon is organized around roots, rather than fully formed words. Root priming experiments conducted by Boudelaa and Marslen-Wilson (2004a, 2004b, 2005) present participants with a priming word, followed by a target word, and require them to make a decision on whether the target is a word that exists in the language. The time taken to reach that decision is typically shorter when the target and the prime share a root. The conclusion is that exposure to the prime causes participants to access the root in the lexicon, and since it is already active, identification of the target word is quicker.

Prunet et al. (2000) offer an in-depth study of the metathesis errors of an Arabic/French bilingual aphasic whose Arabic errors involve the transposition of root consonants but not affixes and vowels. Examples are given in (12), where I have highlighted the root in bold.
The same speaker’s errors in French do not appear to single out certain consonants over others, and the authors’ conclusion is that while the French errors operate on words as a whole, the domain of the Arabic errors is the root, which must therefore have an autonomous morphological status.

Further support for the existence of the root as a morphological component of a word comes from Davis and Zawaydeh (2001), whose study of hypocoristic or nickname formation in Jordanian Arabic shows that a root is extracted from a full name, whereas affixes and epenthetic consonants are not.

<table>
<thead>
<tr>
<th>(12)</th>
<th>Target</th>
<th>Output</th>
<th>Target gloss</th>
</tr>
</thead>
<tbody>
<tr>
<td>ʕufb</td>
<td>ʕufb</td>
<td>‘grass’</td>
<td></td>
</tr>
<tr>
<td>madʒhuud</td>
<td>madʒduuh</td>
<td>‘effort’</td>
<td></td>
</tr>
<tr>
<td>muxridz</td>
<td>muxḏir</td>
<td>‘producer’</td>
<td></td>
</tr>
<tr>
<td>ʔihtimaal</td>
<td>ʔihtilaam</td>
<td>‘possibility’</td>
<td></td>
</tr>
<tr>
<td>ʔistiʔnaaf</td>
<td>ʔistifnaaʔ</td>
<td>‘appeal’</td>
<td></td>
</tr>
</tbody>
</table>

(Prunet et al. 2000: 613–14)

The derivational process that forms these hypocoristics is different from broken plural formation and the derivation of active participles discussed by Benmamoun (1999) because only the root of the source word appears in the derived form. The /m/ and /ʔ/ prefix of the names muhammed and ʔamḏad do not make it into the nicknames hammuud and madḏuud, and likewise the /t/ infix of ʔibtisaam is lacking in bassuum. The argument that the roots of the full names are extracted and plugged into the hypocoristic pattern therefore seems to be sound.

These facts appear to present a contradiction. On the one hand, some words, such as broken plurals, are clearly derived through a morphological change to a source word, whereas other derived words retain only the root consonants of their base, suggesting that derivation employs root extraction. An approach to word formation in Arabic must therefore acknowledge the existence of word-to-word relationships, while at the same time accounting for the fact that roots and patterns appear to be discrete morphological objects that have some special status in the minds of native speakers as separate components of words.

These two competing strategies of word formation are reconciled by Ratcliffe (1992, 1998, 1999, 2006), who observes that Arabic employs both rule-based and shape-invariant or templatic morphology. Rule-based morphology involves a
consistent change to a base, and may result in various output forms. After McCarthy and Prince (1986/1996, 1990b), derivational rules conform to prosodic constraints that govern the size and phonological shape of a word or stem. The broken plurals in (8), for example, are all formed by infixation of the long vowel /aa/ to the singular noun in such a way that the first syllable of the derived plural is light, while the second is heavy (McCarthy 2006). Variation in the form of the singular noun means that application of this consistent rule produces plurals that are not a uniform shape either. In contrast, shape-invariant morphology results in one standard output form even when the shape of the base word differs. An example is the elative (comparative/superlative) adjective form, which has a consistent form irrespective of the shape or vowelling of the base.

(14) sahl ʔashal ‘easy’
kabiir ʔakbar ‘big’
ṣabur ʔasbar ‘patient’
dʒaahl ʔadʒhal ‘ignorant’ (Ratcliffe 2006: 76)

Ratcliffe (2006: 76–7) points out that the shape of the derived elative form is semantically iconic, representing the meaning ‘more/most’, and asserts that such standard forms arise when speakers prioritize a need to maintain consistency of output over the need to apply a consistent rule. This emphasis on consistency of output results in the existence of a pattern or template that comes to have an independent status as a morphological object paired with a given meaning.

Booij (2010) makes a related point, arguing for a construction morphology in which meaning is assigned to morphological patterns. An example is the Verb+er construction in English, which is instantiated by individual deverbal nouns like walker or swimmer. Booij points out that the meaning ‘one who Verbs’ which is characteristic of these nouns is not a property of the affix -er on its own, since it also appears in comparative adjectives like bigger and smaller without such a meaning. Instead, he asserts that this meaning is paired with the Verb+er construction itself, which is ultimately a schematic generalization about the form and meaning of deverbal nouns. Knowing this pairing of form and meaning allows speakers of English to coin new deverbal nouns without reference to specific existing ones, relying instead on the schematic construction and simply plugging in the desired verb. In other words, speakers learn that Verb+er exists based on individual instantiations of the linguistic pattern, but can then use it without thinking back to these examples. While this Verb+er construction is originally created by affixation and spread by analogy, therefore, it begins to carry a specific meaning independently of any given deverbal noun. Booij notes that this process is regularly observed in language acquisition, where learners begin by storing concrete instances of language use, and then make abstractions across sets of constructs, acquiring the system that underlies them (Tomasello 2003: 238).
Word patterns of Arabic, I suggest, operate in the same way. For example, a noun of place is derived from the imperfective verb stem through affixation and ablaut as shown in (15).

(15)  
\[
\begin{align*}
  ya-ktub & \quad \text{'he writes'} & maktab & \quad \text{‘office, desk’} \\
  ya-tbx & \quad \text{'he cooks'} & matbx & \quad \text{‘kitchen’} \\
  ya-t\j & \quad \text{'he eats'} & mat\j & \quad \text{‘restaurant’}
\end{align*}
\]

These changes then form a pattern paired with the meaning ‘place of X’. Speakers of Arabic learn this pattern, and are able to use it to form other nouns of place without recourse to existing examples. The pattern acquires its own meaning, and in the process becomes a morpheme, stored in the lexicon as a linguistic resource. The same analysis applies to the verb patterns that are the focus of this book. My thesis is that they are initially created when an affix attaches to a base verb (cf. McCarthy 1993), or through reduplication of phonological material in the base, but once created they exist as morphemes to which a variety of other words can be mapped. As an example, the verb iqتtā ‘to cut for oneself’ is derived by infixation of reflexive /t/ to the base verb qa’tā ‘to sever, cut’. A number of other verbs are derived in the same way, and this leads to recognition of a verb pattern, iftā. Once this pattern is recognized as a resource that is available to coin new words, it can be used to derive denominal verbs too, like iτtanaqa ‘to embrace’, from the noun iτunuq ‘neck’, or iτtaada ‘to become accustomed’ from iτada ‘custom’. An analysis in which affixation creates these denominal verbs falls down, since it cannot explain why the output forms are uniform. Under the approach I take here, the pattern is created when a pattern I base verb is modified, yielding a uniform output from a relatively uniform input. Other words with various forms are then also mapped to the pattern, and the uniform output is maintained.

A consequence of carrying out derivational operations on base words is that the consonantal strings of the base remain. Consonantal roots are therefore created by word-to-word derivation, being what Gafos (2009: 338) refers to as ‘a by-product or an emergent property of the organizational principles in the linguistic grammar’. Ratcliffe (2006: 80) makes a similar point, noting that because shape-invariant morphology works by imposing a pattern on a base, ‘it also incidentally imposes the requirement that those words have at least three consonants. The famous triconsonantalism of Arabic thus follows from the nature of the morphological processes in the language.’ If native speakers of Arabic recognize a root as a discrete isolatable component of a given word, therefore, it is because word-to-word derivation creates a recurring element typically consisting of three consonants, allowing them to build up a mental representation of the root as a morphological object. Because this happens over and over in the language, it is possible not only to identify the consonants of a base word that recur in the derived word, but also the consonants of a word that would potentially recur if that word should be fed into a
derivation. Hence, there is a sense in which kalb ‘dog’, xubz ‘bread’, and dahlab ‘gold’ do break down into roots and patterns, not because these two elements are necessarily merged to form them, but rather because the root can be picked out as the element that would remain if the word should be mapped to a new pattern. Almost all words therefore contain a potential root morpheme, which is recognized as separate from the vowels and affixal consonants of the word, and which would potentially become a proxy for the base word, carrying its meaning in a derivation (cf. Arad 2003, 2005).

This is what happens in Davis and Zawaydeh’s (2001) data. The affixal consonants /m/, /ʔ/, and /t/ in the names muhammad, ḥamīd, and ḥibtisaam do not make it into the nicknames ḥammīd, ṭadīj, and ḥtisīm because speakers zoom in on the consonants of the base that they recognize as an existing or potential root. The authors are careful to point out that the three consonants that are preserved in the hypocoristic are exactly as they appear in the full name, not in the supposed underlying root. For example, the name ḥayda is an active participle from the verb ḥaada ‘to return’ (imperfective ya-ḥiud), whose underlying root is ᴿd. The mental representation of this root is presumably built up as speakers are exposed to various word forms containing it, but the hypocoristic ḥayyuud maintains the /y/ of the full name, and does not revert to an underlying /w/. In this instance, speakers do not appear to make the association between the name ḥayda and the root ᴿd that they have encountered in other words. Instead, they identify three non-affixal consonants in the base and plug them in to the new pattern, in effect creating a new root morpheme to represent the base word. This strongly suggests that, on the morphological level, a root is simply the non-affixal consonants of the base word that either are, or could potentially be, extracted and plugged into a new pattern during derivation.

Recognizing a root on the morphological level says nothing about the meaning assigned to that root, however. The medieval grammarian Ibn Jinnii asserts that a ‘supra’ meaning can be attained by comparing all words containing the same root to arrive at a semantic abstraction that is common to all of them (Owens 1988: 108). This ‘supra’ meaning is what I will continue to refer to as the core meaning, or the meaning component, shared by a set of words. It is important to note, however, that while this core meaning can be abstracted from a set of words, it is not necessarily the case that native speakers of Arabic make a sound–meaning pairing between a given core meaning and a consonantal root. Idrissi et al. (2008) appear to believe that an extracted root becomes meaning-bearing, but do not explore further the nature of the meaning that a root might carry. Olmo Lete (2008: 13–14) argues for two ‘levels of application’ for a root: a synchronic level where a root is an abstract morpheme, and a diachronic or generative level, where a root represents the meaning of a base word or stem involved in a derivational process. Since the
same consonantal string can be extracted from more than one source word, it can be assigned multiple meanings, serving as a proxy for one or more bases. It is possible to assign a meaning to a root by abstracting away from all the words in which it appears, but the possibility that native speakers pair the root with this abstraction rather than with a specific word meaning is one that can only be investigated with future empirical research.

Based on the preceding discussion, the approach to derivation that I assume in this book is as follows. Word patterns are created when a morphological operation is carried out on a base word with some regularity. In line with McCarthy and Prince (1986/1996, 1990b) the shape of the resulting pattern is conditioned by prosodic factors. Once the pattern exists, a variety of base words can be mapped to it. Their consonantal roots are extracted and plugged in to the new pattern, creating a uniform output regardless of the shape of the source word.

2.4 Words, structure, and content

The concept that a word denotes is a combination of a semantic structure and conceptual content (Langacker 1987, 1990, 1999; Rappaport Hovav and Levin 1998; Levin 2009). A central tenet of Langacker’s cognitive grammar (1987, 1990, 1999) is that different linguistic expressions construe the same conceptual content in alternate ways. Word classes present, or ‘profile’, different semantic categories: nouns present ‘things’, while prepositions, verbs, and adjectives profile relations. Adjectives present relations between things and states, while prepositions and verbs denote relations between things. They differ in that prepositions present static relations, as in John is in the house, while verbs present relations that are mentally scanned in sequenced phases, typically resulting in a change over time, as in John enters the house. In these two English examples, the same semantic content is construed: a relation between two entities, where one is inside the other. The difference lies in how this relation is viewed. The preposition in presents it as static, while the verb enter presents it as a process.

In an analysis of the discontinuous morphology of Modern Aramaic, Rubba (1993) shows that word patterns are associated with different profiles or presentations of consistent conceptual content. In the same way, Arabic words that share consonants as a result of derivation present the same abstract notion, framed differently in each case. In the examples in (16), two or more words are similar in meaning. The diagrams to the right of the words are my approximations of what is shared, and the label in small capitals is a paraphrase. While these words are in a derivational relationship, my aim at this point is simply to show that derivation results in a reframing of the same meaning component, rather than to establish which word is a base and which is derived from it.
The verbs *waḍaša* 'to put down', *rafaša* 'to raise', and *ḏamaša* 'to gather' all describe two-participant events where an agent acts on a patient, which becomes lower than it was, higher than it was, or which enters a state of collectivity. In the diagrams representing **lowness** and **height**, the horizontal line is a middle point between a lower and a higher zone. The arrows indicate which zone, the lower or the higher, is relevant. The diagram approximating **collectivity** shows several entities grouped together. These three concepts are all presented as caused result states by the respective verbs, whereas the words *waḍiš* 'lowly', *rafiš* 'high class', and *ḏamiš* 'all, entire' present states that are not brought about by an agent. The same content is therefore construed one way by the verb, and another way by the adjective. The diagram in (16d) shows two triangles touching, with each mutually 'at' the other. The word *wašiš* 'inseparable friend' describes an entity in this state of mutual 'atness', being connected to some other implicit party. The verb *wašala* 'to connect (something)' frames this same abstract concept, applying it to the object, which enters a state of connection, or mutual 'atness'. The verb may also be used to mean 'arrive', however, where the 'atness' is no longer construed as mutual. The subject is 'at' the object, but not vice versa. This difference in meaning is explained further in Chapter 3.

The words in (16e) all frame the notion of **precedence**. In the diagram, the arrow represents time or space. The circle represents an entity, while the square is a location that serves as a reference point by which the location of the entity is determined.
The semantic role of the circle is assigned to the subject of the archaic verb *qadama* ‘to precede, be in front of’, which is located in time or space relative to the object. While the verb profiles a relation between things, the noun *qadam* ‘foot’ presents a thing itself. The notion of *precedence* remains implicit here however, since a foot is the part of the body that precedes or leads the rest. The same core meaning is also implicit in the adjective *qadiim* ‘ancient’, which profiles an entity in a state. Like the subject of *qadama* ‘to precede’, the attributant of *qadiim* ‘ancient’ is located prior to a reference point, in this case current time.

The diagram in (16f) is an approximation of quantification. The multiple circles denote some plural quantity, and the dotted line represents an attempt to define or measure it. The verb *ʕadda* describes this action itself, while *ʕadiid* ‘numerous’ construes an entity in a state of plurality. The noun *ʕadad* ‘number’ presents a thing, a unit used in determining quantity.

While shared consonants indicate shared semantic content, the pattern of an Arabic word is an indication of how its semantic content is structured. The structures required to account for the words above are represented schematically in (17). Diagrams are loosely based on Langacker (1990, 1999).

![Diagram](image)

A thing, or an entity, is represented as a simple circle in (17), while a square denotes a state. The arrow in the third diagram denotes a relation between two parties. The words from (16) are regrouped in (18) according to their semantic structure. The pattern of each word is highlighted in bold.

(18) a. *wadaʕa* ‘to place, put down’  
    *rafaʕa* ‘to raise’  
    *ʤamaʕa* ‘to collect, gather’  
    *wasala* ‘to arrive’; ‘to connect’  
    *qadama* ‘to precede, be in front of’ (archaic)  
    *ʕadda* ‘to count’

b. *wadiiʕ* ‘lowly, humble, modest’  
    *rafiʕiʕ* ‘high class, refined’  
    *ʤamiʕiʕ* ‘all, entire’  
    *wasiiʕ* ‘inseparable friend’  
    *qadiim* ‘ancient’  
    *ʕadiid* ‘numerous’

c. *qadam* ‘foot’  
    *ʕadad* ‘number’
The words in (18a) all denote two-participant relations, and are distinguished within this category only by their conceptual content. The verb pattern faLisa is paired with this semantic structure, although the pattern is modified in the verb Sadda ‘to count’, as with all verbs whose final two consonants are identical. The words in (18b) all share the pattern faSiil, and they all present an entity in a state. In (18c) the words present things, and their pattern, faSiil, is one of several in Arabic associated with this function. Figure 2.1 illustrates how the words Sadda ‘to count’, Sadiid ‘numerous’, and Sadad ‘number’ may be broken down into a meaning component and a semantic structure.

This section has established that word meaning consists of two components, but it has not addressed how word families that share conceptual content come about. Sections 2.5 and 2.6 treat this issue in detail.
2.5 Words from verbs

Holes (2004a: 145–62) lists a variety of derived nouns, and many of these maintain but reframe the relation expressed by the base verb. The most obvious example is the Arabic *masdar* ‘source’, which functions as both an infinitive and a gerund. There are several *masdar* patterns. Some are unpredictable, but many are associated with different types of verb meaning. The examples in (19) are not intended to be exhaustive.

(19) 

<table>
<thead>
<tr>
<th>Arabic</th>
<th>English</th>
</tr>
</thead>
<tbody>
<tr>
<td><em>wašala</em></td>
<td>‘to arrive’</td>
</tr>
<tr>
<td><em>nazala</em></td>
<td>‘to descend’</td>
</tr>
<tr>
<td><em>darasa</em></td>
<td>‘to study’</td>
</tr>
<tr>
<td><em>qara?a</em></td>
<td>‘to read’</td>
</tr>
<tr>
<td><em>qatafa</em></td>
<td>‘to sever’</td>
</tr>
<tr>
<td><em>daraba</em></td>
<td>‘to hit’</td>
</tr>
<tr>
<td><em>wušuul</em></td>
<td>‘arriving’</td>
</tr>
<tr>
<td><em>nuzuul</em></td>
<td>‘descending’</td>
</tr>
<tr>
<td><em>diraasa</em></td>
<td>‘studying’</td>
</tr>
<tr>
<td><em>qiraa?a</em></td>
<td>‘reading’</td>
</tr>
<tr>
<td><em>qaṭfi</em></td>
<td>‘severing’</td>
</tr>
<tr>
<td><em>darb</em></td>
<td>‘hitting’</td>
</tr>
</tbody>
</table>

After Fassi Fehri (2005: 9), the *masdar* names an event in general, a kind, without presenting it as ongoing or habitual. This is true as well of the active and passive participles, but these also focus a certain participant, leaving the other implicit. Participle patterns are highlighted in (20).

(20) 

<table>
<thead>
<tr>
<th>Arabic</th>
<th>English</th>
</tr>
</thead>
<tbody>
<tr>
<td><em>kataba</em></td>
<td>‘to write’</td>
</tr>
<tr>
<td><em>tahana</em></td>
<td>‘to grind’</td>
</tr>
<tr>
<td><em>talaba</em></td>
<td>‘to seek’</td>
</tr>
<tr>
<td><em>kaatib</em></td>
<td>‘writer’</td>
</tr>
<tr>
<td><em>taahin</em></td>
<td>‘grinder, grinding’</td>
</tr>
<tr>
<td><em>taalib</em></td>
<td>‘student, seeker’</td>
</tr>
<tr>
<td><em>maktuub</em></td>
<td>‘written’</td>
</tr>
<tr>
<td><em>mathuun</em></td>
<td>‘ground’</td>
</tr>
<tr>
<td><em>matluub</em></td>
<td>‘sought, asked for’</td>
</tr>
</tbody>
</table>

Langacker (1999: 8) observes that relations typically have a focused participant, a primary figure which is singled out and foregrounded against the background of any others. Participles differ in their choice of focused element, which is represented as a dark circle in (21).

(21) 

<table>
<thead>
<tr>
<th>Arabic</th>
<th>English</th>
</tr>
</thead>
<tbody>
<tr>
<td><em>kaatib</em></td>
<td>‘writer’</td>
</tr>
<tr>
<td><em>taahin</em></td>
<td>‘grinder’</td>
</tr>
<tr>
<td><em>taalib</em></td>
<td>‘seeker’</td>
</tr>
<tr>
<td><em>maktuub</em></td>
<td>‘written’</td>
</tr>
<tr>
<td><em>mathuun</em></td>
<td>‘ground’</td>
</tr>
<tr>
<td><em>matluub</em></td>
<td>‘sought’</td>
</tr>
</tbody>
</table>

The active participle foregrounds the subject of the verb from which it is derived, leaving the object implicit, while the passive participle does the exact opposite, focusing the object. The relation of the verb may also be incorporated into nouns of place, nouns of instrument, and nouns of profession, all exemplified in (22).
In each case in (22) the relation of the verb is maintained and augmented. Nouns of place name sites where the action of the verb is carried out, nouns of instrument name things that do the action, and nouns of profession name things that do the action on a repetitive basis. The repetition is mirrored linguistically here by reduplication of the second consonant in the noun.

A different type of deverbal noun denotes entities that share an element of meaning with the action of the base verb.

The verbs daxala ‘to enter’ and xaradja ‘to exit’ describe actions where one party moves relative to another. The semantic content of each verb is a locative relation that can be paraphrased as IN or OUT respectively, and the only difference between the verb and this core meaning is that the verb presents the core meaning as dynamic. The nouns derived from these verbs present things that are either IN or OUT relative to an implicit party, although each noun of course has further idiosyncratic meaning that elaborates upon the meaning component that is common to all. Idiosyncratic meaning also differentiates the three nouns derived from fašaba ‘to gather; to disperse’, whose core meaning is diagrammed in (24).

The approximation in (24) represents a collection of pathways emanating from a central point, and this is discernable in the meanings of the transitive verb fašaba ‘to disperse; to gather’, where the subject causes the object to move out along the pathways, or inwards towards the center. The three derived nouns denote things that
move out from a central point: faṣīḥ ‘a people’ refers to a group that shares a common ancestor with other groups, with dispersion having created separate peoples over time; fiṣḥ ‘mountain path’ is typically one of many routes from the top to the bottom of the mountain; and fuṣba ‘branch, twig’ is connected to a center point, the trunk, from which other linear elements run. These nouns do not modify the entire relation of the verb here, wherein an agent causes something to move inwards or outwards, but rather they denote things that share only the core meaning diagrammed in (24).

I stated in Section 2.4 that the pattern faṣīḥ presents an entity in a state. A more accurate characterization is now possible, whereby faṣīḥ profiles a non-agentive semantic role present in the base verb that it targets. Words of this pattern are derived from a variety of base verbs (cf. Holes 2004a: 157), with perhaps the most common being adjectives formed from stative verbs.

When indefinite, the faṣīḥ words in (25) have an adjectival quality. They may equally be viewed as nominal, however, since ultimately kabiir means ‘a big thing/one’, şağiir ‘a small thing/one’, and so on. When prefaced with the definite article al-, the nominal character of a faṣīḥ word is clearer: al-kabiir ‘the big one’, al-şağıir ‘the small one’. Whether indefinite or definite, the faṣīḥ words construe a relation between an unspecified entity and a state. This same relation is presented by the verbs in (25), with the difference being that the verb construes it as obtaining or coming to obtain in time.

It is possible that this is the original source of the pattern faṣīḥ. That is, the pattern was created through the modification of stative verbs like those in (25) whose subjects are non-agentive, and then became used to profile non-agentive arguments of other verbs. Some examples are given in (26).

Most of the verbs in (26) describe actions that bring about a change of state in the object, but this state can be conceptualized independently of the action itself
Words with the pattern faʕil derived from this type of verb pick out only this state, minus the agent. For example, the object of qataʕa ‘to sever’ changes state, becoming discontinuous, either with itself, by being cut in two for example, or by being cut off from another entity. DISCONTINUITY is not inherently caused by some external party, and can therefore be conceptualized as obtaining without a causal agent. The passive participle maqtʕuʕ ‘severed, cut off’ focuses the object of the verb, but the entire relation, including the backgrounded agent, is still viewed. In contrast, the faʕil word qaʕisiʕ ‘mob, pack’ describes a group that is separate from and therefore discontinuous with a whole. A pack of wolves, for example, is separate from all wolves. Unlike the passive participle, this word takes only the state that applies to the object of the base word, not the relation of the base in its entirety.

The objects of the base verbs faraqa ‘to separate’, wașala ‘to connect’, dğamaʕa ‘to gather’, xalałta ‘to mix’, and mazadaʕa ‘to blend’ respectively enter states of SEPARATION, CONNECTION, COLLECTIVITY, and MIXTURE that, similar to HIGH and NUMEROUS, are not inherently caused. The faʕil words derived from these verbs are therefore able to reframe the state construed by the verb so that it obtains of a single entity without being brought about. However, in a third set of faʕil words the agent of the base is still conceptually present.

\[(27) \quad \begin{align*}
    qatala & \quad \text{‘to kill’} & \quad qatiil & \quad \text{‘killed’} \\
    dğaraha & \quad \text{‘to injure’} & \quad dğariih & \quad \text{‘injured’} \\
    ġasala & \quad \text{‘to wash’} & \quad ġasiil & \quad \text{‘laundry’} \\
    walada & \quad \text{‘to give birth’} & \quad waliid & \quad \text{‘new born’}
\end{align*}\]

The agent of the base verb remains part of the concept described by each faʕil word in (27), hence qatiil ‘killed’ and dğariih ‘injured’ entail a killer and an injurer respectively. Likewise ġasiil ‘laundry’ is something that undergoes a certain process initiated by an agent, and waliid ‘new born’ cannot be conceptualized without a mother who gives birth. Haspelmath (1993: 93) asserts that some types of meaning component are inherently agent-oriented, and the agent cannot therefore be deleted. The semantic content of an action like wash, for example, involves the application of soap and water, and there must be an agent and some type of surface to which these elements are applied. The latter cannot be separated from the former. The action kill can be anything that results in death, but this is specifically a caused or at least an accidental death that has been brought about. Similarly, the result state of injure cannot be separated conceptually from causation. The core meaning of the verbs in (27) is therefore the same as the meaning of the verbs themselves, and hence an agent is conceptually present in all words derived from them.

To summarize this section, words derived from verbs can be divided into those that profile the entire relation of the verb, retaining all of the participants involved,
and those that profile only certain semantic roles present in the event or situation that a given verb construes. A caused result state in the base verb may therefore surface as a simple state, minus an agent, in a derived noun.

2.6 Verbs from words

Derived words like those discussed in the previous section are available as bases from which further verbs can be built. This results in a situation where derived verbs that share a consonantal root may have widely divergent meanings, since there may be several intervening layers of derivation between a word and the ultimate base. Examples are given in (28).

(28) a.  

\[
\begin{align*}
\text{qataʔa} & \quad \text{‘to sever, terminate’} \\
\text{qut} & \quad \text{‘plot of land’} \\
\text{iŋqaʔa} & \quad \text{‘to stop, terminate’}_\text{int} \\
\text{ʔaqtaʔa} & \quad \text{‘to give land to’}_\text{ditrns}
\end{align*}
\]

b.  

\[
\begin{align*}
\text{ʔaada} & \quad \text{‘to return’}_\text{int/obl} \\
\text{ʔaada} & \quad \text{‘custom’} \\
\text{ʔaʔaada} & \quad \text{‘to return’}_\text{trns} \\
\text{iʔaʔaada} & \quad \text{‘to become accustomed’}_\text{obl}
\end{align*}
\]

c.  

\[
\begin{align*}
\text{ʔadara} & \quad \text{‘to emerge, come out of’}_\text{obl} \\
\text{ʔadr} & \quad \text{‘front part; chest’} \\
\text{ʔaʔadara} & \quad \text{‘to issue’}_\text{trns} \\
\text{ʔaʔadara} & \quad \text{‘to preface’}_\text{trns} (\text{provide with a front part})
\end{align*}
\]

d.  

\[
\begin{align*}
\text{ʔaml} & \quad \text{‘sand’} \\
\text{ʔarmala} & \quad \text{‘to cling to sand (because widowed)’} \\
\text{ʔarmala} & \quad \text{‘widow’} \\
\text{ʔaʔarmala} & \quad \text{‘to become a widow’}
\end{align*}
\]

The base verb qataʔa ‘to sever’ in (28a) describes a caused change of state where one party causes another to be discontinuous. This same state is presented as occurring
spontaneously without a causal agent in intransitive *inqaṭaʕa* ‘to stop, terminate’, which is derived directly from the base. The noun *qutʕa* ‘plot of land’ is also derived from *qataʕa* ‘to sever’ and its referent is discontinuous with, or delineated from, its surroundings. This derived noun is then the base for *ʔaqtʕa* ‘to give land’, which describes an event of transfer where the base noun serves as a theme that is sent to a recipient. In a similar vein, the noun *ʕaada* ‘custom’ in (28b) describes a recurring behavior, and is derived from the base verb *ʕaada* ‘return’. This verb is the base for causative *ʔaʕaada* ‘to return, send back’, while the derived noun is the base for *iʕaada* ‘to become accustomed’. In (28c) the verb *sadara* ‘to emerge, come out of’ is the base for causative *ʔasdara* ‘to issue’, where the subject causes the object to come out, and for the noun *sadr* ‘front part’, which shares some notion of forward orientation with the verb. This noun is then the base for *saddara* ‘to preface’, where it functions as a thing that is produced by the subject. The words ultimately derived from *raml* ‘sand’ in (28d) provide further evidence for the derivation of words from words rather than from some abstract root. The noun is incorporated into the verb *ʔarmala* ‘to cling to sand’, used to describe the state of poverty that once befell a widow. This verb is then the base for a new noun, *ʔarmala* ‘widow’, where the glottal stop affix is fused with the consonants of the original base word. This new noun, with its glottal stop, is then incorporated into the result state verb *taʔarmala* ‘to become a widow’.

This last derivation also illustrates the importance of taking diachronic change into account when discussing synchronic meaning in Arabic. The derivation of *ʔarmala* ‘to cling to sand’ from *raml* ‘sand’ was an instance of linguistic innovation: the creation of a novel word from existing resources. A speaker perceived a particular situation in which sand was a salient element, and created a word to convey that situation to others. The word then becomes used in all instances of widowhood, and its original connection to the notion of sand is lost.

In terms of formal derivation, affixation alone can account for derivation from a base verb (cf. McCarthy 1993). Hence *inqaṭaʕa* is simply *qataʕa* with an additional /n/ morpheme, while affixation of a glottal stop to the bases *ʕaada* and *sadara* results in *ʔaʕaada* and *ʔasdara* respectively. Derivation of nouns from verbs can also be explained without asserting that an underlying root is accessed, since a derivational operation consisting of vowel changes is enough to account for the difference in form. The derivation of *ʔarmala* ‘to cling to sand’ clearly does not involve root extraction, since the glottal stop affix, a non-root consonant, remains. I take *ʔaqtʕa* and *saddara* to be formed by root extraction, because the morphological operation applied to their respective base nouns results in a verb identical in phonological shape to forms derived by affixation to a base verb. This fact suggests that the pattern is created by affixation to a base verb, and then base nouns can be mapped to it, with their root consonants arranged accordingly. This line of thinking is taken up again in Chapter 4.
2.7 Summary and conclusion

My concern in this chapter has been to establish a separation between the meaning of a word and the concept that the word frames. Word meaning breaks down into content and structure, and the same semantic content may be framed in a number of different structures. When the changes made to a base word in the course of derivation are repeated with regularity, a word pattern is created that comes to carry meaning independently of any particular word. Word patterns are therefore stored in the lexicon in addition to words, and an implication of this is that the consonantal strings organized in these patterns are also recognized as morphological objects. Words sharing consonants frame the same conceptual content in different semantic structures, while words sharing patterns denote the same structures, and are distinguished by their individual meaning components. The ultimate conclusion is that word patterns reflect a system of constructions in which conceptual content is framed and reframed. Three of the simplest constructions in this system are associated with variants of the ground form verb, and these are examined in Chapter 3.
3

Ground form verb patterns

3.1 Introduction

The simplest Arabic verb pattern in terms of morphology is pattern I, which consists only of short vowels and consonants, none of which are affixes. Referred to as the ground form in Semitic studies, pattern I consists of three variants, distinguished in the perfective by the quality of the second vowel, which Holes (2004a: 107) terms the theme vowel. My aim in this chapter is to determine what each ground form variant denotes. I argue that one variant is unmarked, and is associated with a semantic structure in which participant roles are organized in a prototypical order. The two remaining types of ground form denote marked semantic structures that deviate from the prototypical ordering of participant roles, and these ground form patterns are therefore marked linguistically.

I begin the chapter by introducing the notion of a prototype in Section 3.2, and outlining its relevance for an analysis of the ground form verb. The following three sections treat each ground form pattern in depth, beginning with the basic pattern faʕala in Section 3.3, where I identify five types of verb that all have subjects construed as initiating an abstract force (cf. Croft 1991). In Section 3.4 I argue that verbs of the pattern faʕila are the exact opposite, having subjects at which a force terminates. It is widely acknowledged that the third ground form pattern, faʕula, construes stative meaning, and this is the subject of Section 3.5. I conclude the chapter in Section 3.6 by demonstrating that certain meaning components may be framed in each of the semantic structures associated with the ground form verb patterns, resulting in sets of related verbs that share consonants. I argue that a system in which verbs are marked relative to an unmarked pattern allows derivation in multiple directions, since any ground form verb can in theory be a base from which another is derived.

3.2 Verb marking and prototype theory

The three ground form verb patterns differ according to whether their theme vowel in the perfective is /a/, /i/, or /u/. The theme vowel in the imperfective is consistent
for two of the patterns, and unpredictable for the other, as shown in (1), where theme vowels are highlighted.

(1) Perfective        Imperfective
    fašala          ya-fišūl; ya-fišak; ya-fišūl
    fašila          ya-fišal
    fašula          ya-fišal

The fact that the imperfective form of fašala is inconsistent suggests that it is a default. By this I mean that it is unmarked linguistically, since its theme vowel does not appear to serve any semantic function. The other variants are marked, even in the imperfective, relative to this neutral form.

An important theoretical preliminary for an account of what these theme vowels represent is the idea of a prototype. In their studies of how humans categorize, Rosch (1978) and Rosch and Mervis (1975) show that some members of a category are considered prototypical, embodying the central characteristics of the category, while other members are marginal. For example, a starling or a sparrow would be a prototypical member of the category comprised of birds, while an ostrich or a penguin, while still falling into that category, is less representative of its class. A body of linguistic work seeks to employ the notion of a prototype in defining semantic transitivity, listing the attributes that are typically present in a transitive event (Lakoff 1977; Hopper and Thompson 1980; Givón 2001; Lazard 2003). Definitions may vary, but there is general agreement that a prototypically transitive event is a punctual bounded action wherein a volitional agent has an effect on a patient (Givón 1984, drawing on Hopper and Thompson 1980). Croft (1991: 173) diagrams prototypical transitivity as consisting of an asymmetric exertion of force by one event participant, an initiator, which is absorbed by a second, an endpoint.

(2) Initiator → Endpoint

The initiator and endpoint roles in (2) are labels for what Kemmer (1993) terms protoroles (cf. Dowty 1987), with an initiator representing any participant conceptualized as beginning an activity, and an endpoint being a role at which an abstract force terminates. A transitive action like hit, for example, involves an agent, the most prototypical initiator, exerting force on a patient.

In what follows I expand the scope of the model in (2) to represent any standard ordering of participant roles. I take the model to represent not an event structure exactly, but rather a canonical ordering of roles that is semantically unmarked because it is manifest in the events and situations that we most frequently discern. Because it is experienced with regularity, this ordering of roles is a type of mental
blueprint for how we typically expect one thing to relate to another. My thesis is that a pattern I verb represents the organization of semantic content in a structure that either matches this prototypical structure or is close enough to be considered a match, or that deviates. Deviations from the prototype are semantically marked, and the Arabic verbs that construe them are therefore marked morphologically.

A structure in which the most prominent participant serves an initiator-type role is in line with the prototype in (2). Pattern I verbs with this type of initiator subject are unmarked in the imperfective, and the /a/ in the perfective simply marks the perfective aspect. Verbs with subjects that serve an endpoint role, most often being affected in some way, represent a marked semantic structure. They are therefore marked linguistically in both the imperfective, with /a/, and the perfective, with /i/.

A third type of structure consists of a single participant in a simple state. This also deviates from the prototypical ordering of participant roles, and verbs that construe it are marked with the middle vowel /u/.

After Croft (1990), some meaning components are inherently oriented towards one of these structures, and this is considered their default view or frame. For example, the concept kill itself consists of an agent and a patient. There is no discrepancy here between the core meaning framed in a transitive structure and the structure itself. Figure 3.1 illustrates how the meaning of the verb qatala ‘to kill’ breaks down into semantic content and structure. The dark circle indicates the semantic role that is assigned to the subject of the verb.

It is important to note that this is not a diagram of a derivation. The point is simply that, even with a basic underived verb like this, a division may be made between content and structure. Verbs that share this structure are distinguished only by their individual meaning components. Hence qatala ‘to kill’ and daraba ‘to hit’ are structurally identical, and what makes them different is their idiosyncratic meaning.

An alternative example of a meaning component that is oriented towards a given structure consists of an auditory stimulus and a recipient. A stimulus is an initiator

![Diagram](image-url)  
**Figure 3.1** Content and structure of qatala ‘to kill’
role that moves to a recipient, an affected endpoint. However, with 
 auditory reception it is this recipient, the hearer, that is the most conceptually prominent. The default view for this meaning is therefore a non-prototypical structure in which an endpoint role is focused as subject. The verb samiʕa ‘to hear’ is marked with /i/ to reflect this deviation from the prototype. The dark circle in Figure 3.2 again indicates the role that is assigned to the subject of the verb.

Prototypically, when one party moves to another it is the moving party, an initiator, that is focused. Here, the initiator-to-endpoint movement still occurs, but it is the receiving party that is most prominent, and which is therefore construed as the subject of the verb.

Not all meaning components are oriented towards an initiator or endpoint. Notions like height or collectivity do not imply an agent, an experiencer, or a recipient. The default view for these neutral concepts is the prototypical structure, and the result is a transitive verb such as rafaʕa ‘to raise’ or damaʕa ‘to collect’ whose subject brings about a change in the object.

In sum, the core meaning of a verb is organized in a semantic structure that either matches the prototypical ordering of participant roles that we most frequently experience, or that deviates from it. Some meaning components are inherently oriented towards an initiator or an endpoint subject, while the semantic content of other verbs is neutral. We now turn to examine pattern I verbs in more detail, beginning with the semantically unmarked case.

### 3.3 Pattern I(a)

Verbs in pattern I faʕala are typically considered agentive or active (Wright 1859; Holes 2004a; Larcher 2012). I make a similar categorization, but in order to account for a greater number of verbs in this pattern I extend the role of the subject of a faʕala verb to the protorole initiator, defined simply as any role that does not absorb a force. All faʕala verbs represent semantic structures where an initiator role is most
prominent, assigned to the subject of the verb. This shared characteristic is diagrammed in (3), where the dark circle represents the role that falls on the subject.

(3) Initiator

Individual fa’ala verbs vary as to whether other semantic roles are also present. While some fa’ala verbs may lack the second affected participant characteristic of semantic transitivity therefore, they do not violate prototypical participant order in which the most prominent participant is an initiator. The following sections examine the types of verb that result from framing meaning in a semantic structure with a prominent initiator role.

3.3.1 Energy transfer

Actions involving the transfer of energy from an initiator to an endpoint can be broken down into two main types: actions involving physical contact, and those resulting in a change of state (Fillmore 1970). Impact verbs are given in (4a), and caused change-of-state verbs are in (4b). The corresponding gerund/infinitive for verbs describing a transfer of energy is consistently formed in the pattern fa’il.

(4) a. ḏaraba ‘to hit’ trns ḏar ḏarb ‘hitting’
    qaraʕa ‘to knock’ trns qarʕ qarf ‘knocking’
    daʕata ‘to press, squeeze’ trns daʕt daʕʕ ‘pressing; pressure’
    naqaʕa ‘to chisel, carve’ trns naqʕ naqʕ ‘chiseling’
    ǧasala ‘to wash’ trns ǧasl ‘washing’

b. ǧaʕatha ‘to injure’ trns ǧarḥ ‘injuring’
    qataʕa ‘to sever’ trns qaʕʕ ‘severing’
    raʕaʕa ‘to raise’ trns raʕʕ ‘raising’
    haraq ‘to burn’ trns harq ‘incineration’
    ċaʕaḥa ‘to slaughter’ trns ḍabʕ ‘slaughter’
    raḥaṭ ‘to tie’ trns rabʕ ‘tying’
    saʕaqa ‘to pulverize’ trns saʕq ‘pulverization’
    kasara ‘to break’ trns kasr ‘breaking’
    qaτala ‘to kill’ trns qaʕl ‘killing’
    faʕaṭa ‘to open’ trns faʕal ‘opening’

The verbs in (4b) involve what Smith (1970) refers to as external control, whereby a change is brought about by a controlling agent, the subject, but it affects a second party, the object. Levin and Rappaport Hovav (1995) build on Smith by proposing two types of result state. Externally caused result states such as break and freeze allow an external controlling agent, as in John broke the window, while internally
caused result states such as decay do not, hence *John decayed the tooth* is unacceptable.

An important point to raise here is that the same content and structure can be discerned in different real-life contexts, and this accounts for multiple uses of a given verb. For example, the verb *qata'a* has slightly different interpretations in the constructed examples in (5).

(5) قطع الفصن

\[ qata'a \quad al-\gu\n\]

severed[3MSG] the-branch-ACC

‘He cut off the branch’

قطع الكهرباء

\[ qata'a \quad al-kahraba\n\]

severed[3MSG] the-electricity-ACC

‘He cut off the electricity’

قطع الشجرة

\[ qata'a \quad af-fadharat-a \]

severed[3MSG] the-tree-ACC

‘He cut down the tree’

قطع البحر

\[ qata'a \quad al-bahr-a \]

severed[3MSG] the-sea-ACC

‘He crossed the sea’

The verb *qata'a* appears in the same syntactic environment in all of the examples in (5), where along with the early Arab grammarians I assume it has an incorporated third masculine singular pronoun for a subject (see also Fassi Fehri 1988), together with a definite noun phrase as an object, yet its meaning differs to varying degrees. This creates the impression that the verb has multiple senses, but in fact it is simply that a two-participant relationship involving discontinuity is salient in multiple contexts.

Fauconnier and Turner (2002: 25–7) illustrate that the English adjective *safe* is assigned different meanings in the context of a child playing with a shovel on a beach.

(6) a. The child is safe.
   b. The beach is safe.
   c. The shovel is safe.

Each of the uses of the adjective *safe* in (6) appears to rest on an abstract meaning characterized by the absence of harm, but this is applied differently in each case. The child is free from harm in (6a), whereas the beach is free from harm to the child in (6b). A similar situation holds in (6c), where the shovel will not cause harm to the child. The meaning assigned to *safe* is constant in an abstract sense therefore, since the absence of harm appears always to be a factor, but the more fine-grained details are
constructed by the language user based on context. The entire linguistic structure in which safe appears therefore conditions the particular meaning that is constructed. Evans et al. (2007: 9) refer to the assignment of meaning to a word in context as a process of ‘meaning construction’. In the case of Arabic *qatā'īya* in (5), the speaker has conceived a relation between two specific participants: a man and a branch; the electricity; a tree; or the sea. In the first three examples this involves a caused change of state. The branch becomes discontinuous with the tree it was attached to, the electricity no longer connects to its destination, and the tree is no longer a contiguous whole. In the fourth example the subject traces a route through the object, making it discontinuous metaphorically (Lakoff and Johnson 1980). These different uses occur not because the verb *qatā'īya* has all these different senses as an inherent property, but rather because multiple situations are perceived in which a two-participant relation involving discontinuity is relevant, and the same verb is therefore used to name it. The specific details of how that relation is to be applied are determined by the hearer, who constructs a plausible scenario based on real-world knowledge.

Three-participant relations involving the transfer of energy extend prototypical transitivity with the addition of a final recipient-like participant.

![Diagram](image)

In the structure in (7) an agent acts on a theme, which moves to a recipient as a result.

The structure is instantiated by the verbs in (8).

<table>
<thead>
<tr>
<th>Verb</th>
<th>Meaning</th>
</tr>
</thead>
<tbody>
<tr>
<td><em>wakala</em></td>
<td>‘to entrust, assign’ trans+obl</td>
</tr>
<tr>
<td><em>ramaa</em></td>
<td>‘to throw’ trans/obl</td>
</tr>
<tr>
<td><em>dafa'īya</em></td>
<td>‘to push; to pay’ trans/obl</td>
</tr>
<tr>
<td><em>ba'āθa</em></td>
<td>‘to emit, to send’ trans/obl</td>
</tr>
</tbody>
</table>

Some of these verbs have more than one interpretation as well, and their meaning is also context-dependent. A prime example is *dafa'īya*, which has the three different meanings illustrated in (9).

(9) a. *kunt āṣūr xō ḫawāḷīlī ki dafa'īya* (1)

<table>
<thead>
<tr>
<th>Verb</th>
<th>Meaning</th>
</tr>
</thead>
<tbody>
<tr>
<td><em>kun-tu</em></td>
<td>1sg-scream-ind</td>
</tr>
<tr>
<td><em>a-ṣru-x-u</em></td>
<td>1sg-try-ind</td>
</tr>
<tr>
<td><em>mash-haawil-u</em></td>
<td>1sg-push-sub</td>
</tr>
<tr>
<td><em>a-dfa'a</em></td>
<td></td>
</tr>
<tr>
<td><em>al-baab-a</em></td>
<td>the-door-acc</td>
</tr>
<tr>
<td><em>l-zuḍqaadji</em></td>
<td>the-glass</td>
</tr>
</tbody>
</table>

‘I was screaming and trying to push (open) the glass door.’

b. قام العاملون... يدفع السيارة المحرقة بأيديهم إلى الشارع.

qaama l-ʕaamiluun bi-daf-ʕaamiluun s-sayyaarat-i
undertook[3m] the-workers with-pushing-gen the-car-gen
l-muhtarriqat-i bi-ʔaydii-him ʔila f-faarif
the-burning-gen with-hands-their to the-street
'The workers began pushing the burning car to the street.'

c. من أعظم ألوان الجهاد... أن تدفع المال للمجاهدين في أفغانستان.

min ʔaYzam-i ʔalwaan-i l-ðidhâaadd...ʔan ta-dfaʕa-a l-maal-a
from greatest-gen kinds-gen the-jihaad...to 2sg-pay-sub the-money-acc
lí-l-muḏaahidiin fíi ʔafaqaanstaan
to-the-fighters in Afghanistan
‘One of the best kinds of jihaad is to pay money to the fighters in Afghanistan.’

As used in (9a) dafaʕa describes an agent exerting a force on a theme argument, the door. In (9b) the subject of the verb is an agent that moves a theme, the car, to a goal, the street, and in (9c), where the verb means ‘pay’, an agent moves a specific theme, money, to a recipient. Rather than somehow containing these two variant meanings of push in addition to the pay meaning, it is again the case that the same semantic feature, in this case some type of caused motion, is perceived in three different situations, and the verb is used to denote it. Conceptualizing push and pay involves the framing of this semantic content in certain types of structure, and the verb itself need only denote part of the structure, specifically that one party causes, or attempts to cause, another to move, with the remaining detail represented at the level of the clause (cf. Goldberg 1992, 1995, 1998).

3.3.2 Symmetrical states

Symmetrical states are states like connection, collectivity, union, and separation that must hold between more than one element: one thing cannot connect, gather, or unite unless it is conceptually divided. These states consist of two semantic roles, which are located ‘at’ each other in the case of connection and unity, and ‘not at’ each other in the case of separation. When this type of meaning is framed in a pattern I verb, the result is almost always a causative verb whose object enters the state due to the action of the subject. As an example, ʤamaʕa can appear in several grammatical constructions, but the symmetrical state of collectivity always applies to the object.

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Ground form verb patterns

Each of the constructed examples in (10) instantiates an initiator–endpoint relation in which the endpoint enters the symmetrical state under the control of the initiator. Further symmetrical state verbs are provided in (11).

(11) xalaṭa ‘to mix’ trns/obl
faṣala ‘to separate’ trns/obl
faraqa ‘to part’ trns/obl
mazadja ‘to blend’ trns/obl
fadala ‘to treat fairly, equally’ trns/obl
wazana ‘to weigh, balance’ trns

There is much more to say about these symmetric meaning components, but my aim here is to point out that they exist, and to illustrate how they are framed in a faṣala verb. I will return to them again in Chapters 4 and 5.

3.3.3 Cognition verbs

A set of cognition verbs is also found in pattern I faṣala. These verbs describe situations that have few of the characteristics of prototypical transitivity, but each involves a subject that is a ‘cognizer’.

(12) nazara ‘to watch, to look at’ trns/obl
raʔaa ‘to see, perceive’ trns
ḥalama ‘to dream’ obl
faṣara ‘to feel’ obl
ʃarafa ‘to know, recognize’ trns

Several of these verbs have subjects that initiate a cognitive process. This is clearest with nazara ‘to look at’: an act of directed perception where the subject focuses on the object, and with ḥalama ‘to dream’: an act of cognitive production. Other verbs have a more experiential quality, but have subjects that are not simply passive receivers of
stimuli. The subject of raʔaa ‘to see’ perceives and identifies the object visually, or forms some kind of mental impression, just as in English the way I see it. Similarly, the subject of faʔara ‘to feel’ is cognizant of whatever is felt. The verb takes an oblique object that names the feeling, as shown in (13).

(13)  

\[
\text{faʔara} \quad \text{bi-ḥuzn-in} \quad \text{bi-ʔalam-in} \quad \text{bi-anna-hu qad fafila}  
\]

felt[3MSG] of-sadness-GEN / of-pain-GEN / of-that-he had failed[3MSG]  

‘He felt sadness / He felt pain / He felt that he had failed’

The subject of the verb in (13) becomes aware of an emotion, a feeling, or a physical sensation that exists within its own body, but this is not presented as a simple emotional or physical change. Instead, it is construed as a type of activity where the subject discerns the emotion or sensation. A cognitive connection is also described by ʕarafa ‘to know, to recognize’, where a cognizer is in a relation with a ‘cognized’. While none of these verbs involves a prototypical agent, these events of cognition are not brought about by any outside influence, and this allows them to be members of the same category as prototypically transitive events like sever and break. The verbs describing them are therefore found in the same pattern.

3.3.4 Locative configurations

Locative configurations consist of a pairing between an entity that is located: a locatum, after Clark and Clark (1979), and a reference point by which its position is determined: a location. This basic configuration is apparently central to human cognition since without it we would be unable to determine the position of anything we encounter. A locatum is typically the most prominent participant in such a configuration.

(14)  

\[\text{Locatum} \rightarrow \text{Location}\]

Verbs with locatum subjects maintain this prototypical structuring of participant roles. Examples of this type of verb are presented in (15). The gerund/infinitive pattern for such events is consistently faʔuul.

(15)  

\[
\begin{array}{llll}
\text{xaradža} & \text{‘to exit’ obl} & \text{xuruudə} & \text{‘exit’}  \\
\text{daxala} & \text{‘to enter’ trns/obl} & \text{duxuul} & \text{‘entry’}  \\
\text{balaغا} & \text{‘to reach’ trns} & \text{buluğ} & \text{‘reaching’}  \\
\text{baraza} & \text{‘to stand out’ int/obl} & \text{buruucz} & \text{‘prominence’}  \\
\text{sadara} & \text{‘to emerge’ int/obl} & \text{ṣuduuar} & \text{‘emergence’}  \\
\text{laʔaʔa} & \text{‘to resort’ obl} & \text{luṭuus?} & \text{‘resort’}  \\
\text{habata} & \text{‘to descend’ int/obl} & \text{hubuut} & \text{‘descent’}  \\
\text{ʕaradža} & \text{‘to ascend’ int/obl} & \text{ʕuruudə} & \text{‘ascent’}  \\
\end{array}
\]
Very occasionally a symmetric concept may be framed as a locative configuration whereby one party comes to be ‘at’ another. An example is the verb ḫwāṣala, which has the two different meanings given in (16). The infinitive/gerund pattern differs depending on whether or not there is a transfer of energy.

(16) ḫwāṣala ‘to arrive; to connect (something)’ waṣul ‘arrival’ 
    wasl ‘connection’

The core meaning of this verb is a symmetrical state of ‘ATNESS’, an approximation of which is reproduced from Chapter 2 in (17).

(17) 

The triangles in (17) represent two semantic roles, and there are two ways in which this content can be construed. First, each of the triangles may be seen as ‘at’ the other. In this construal neither triangle is focused against the other, and both are equally prominent. This is the situation when ḫwāṣala is used to mean ‘to connect (something)’. Both roles fall on the object of the verb, which enters a state of mutual ‘atness’. Figure 3.3 shows that the core meaning of the verb is applied to the object in this use.

Alternatively, one of the semantic roles inherent in the core meaning of the verb may be construed as ‘at’ the other, without the reverse being true. This occurs when one role is focused against the background of the other, breaking the symmetry. This is the case when ḫwāṣala is used to mean ‘to arrive’. Figure 3.4 illustrates how one role is assigned to the subject of the verb.

Both meanings of the verb ḫwāṣala therefore result from framing the same semantic content in an initiator–endpoint structure. The difference arises due to how that content is distributed within that structure. In one instance its symmetry is maintained, so both roles are mutually ‘at’ each other. In the other instance the symmetry is broken and one semantic role is focused.
One-participant actions differ depending on whether the participant is an agent or a patient. In both cases, the important point is that the action or change is viewed as coming about due to some property of the subject. Certain types of one-participant action or process do not have an endpoint role as part of their inherent content. For example, a number of verbs in this class describe volitional actions where the subject moves in a certain manner.

(18) rakada ‘to run’
    mafa ‘to walk’
    sabaha ‘to swim’
    djaraa ‘to run’

The relevant meaning component here is a specific type of bodily movement that is carried out by an agent, and it may therefore be considered agent-oriented (Haspelmath 1993: 93) in the same way as kill and injure. Other one-participant actions are noticeably less agentive.

(19) saalo ‘to cough’
    saasa ‘to sneeze’
    daba ‘to wilt, to fade’
    namaa ‘to grow’
    fasada ‘to spoil, go bad, become corrupt’

These verbs describe what Smith (1970) terms independent events, where a change or some type of action takes place without the influence of a controlling agent. A verb like namaa ‘to grow’ describes what Levin and Rappaport Hovav (1995) refer to as an internally caused change of state, where an entity changes under its own steam (see also McKoon and Macfarland 2000). Building on Croft (1990), Haspelmath (1993) suggests that certain events are experienced as occurring spontaneously in nature with enough regularity that spontaneity becomes the prototypical instance, while
causation, to the extent that it can be added at all, is the less expected or less common occurrence. This appears to be the case with an event like grow, where it is reasonable to assert that humans encounter themselves, their children, animals, and plants growing with much more frequency than an event in which an external agent causes something to grow. Wechsler (2007) traces the first appearance of English intransitive grow in the Oxford English Dictionary to c.725, noting that the transitive use does not occur until over a thousand years later in 1774. The transitive use is therefore an innovation that builds on the intransitive use. It is understandable that for bodily actions like cough and sneeze spontaneity is a default, and the processes wilt and spoil are likely to be observed occurring spontaneously in nature as well.

I have argued in this section that all faṣala verbs denote situations where the prototypical order of participant roles is maintained, with an initiator being the most prominent. The conceptualization of other events involves framing a meaning component in a structure that deviates from the prototype because the most prominent participant has an endpoint role. This deviation is marked linguistically in Arabic by pattern I faṣila, which is treated in Section 3.4.

3.4 Pattern I(i)

A regular explanation for the marking on a pattern I(i) verb is that its subject is an experiencer, or as Fleisch (1979) puts it, an ‘agent moyen’ that is affected by the action of the verb (cited in Holes 2004a: 101). This is certainly a valid explanation, but there are too many exceptions. For example, it is difficult to explain how or why the subjects of tabiṣa ‘to follow’ or qadima ‘to come, arrive’ are affected participants. Rather than rely exclusively on the notion of an experiencer or ‘agent moyen’ subject therefore, I view pattern I faṣila as representative of a semantic structure that deviates from prototypical transitivity in that the most prominent participant role is an endpoint. Möhlig-Falke (2012) presents a similar analysis of early English impersonal constructions such as me hungered.

All faṣila verbs represent the framing of a meaning component in the structure shown in (20).

(20) Endpoint

Semantic content framed in this structure may be endpoint-oriented itself or it may consist of initiator and endpoint roles whose prominence is reversed only in this particular structure. The presence of a backgrounded initiator role that in some way relates to the subject of a faṣila verb is dependent on individual semantic content.
3.4.1 Experienced states

Emotional and physical states are oriented towards an experiencer, and a non-prototypical semantic structure is therefore their default view. Bossong (1998) discusses a ‘semantic vector’ that is reversed in experience constructions, where the experiencer is the affected endpoint of the process described by the verb. Some verbs, such as English scare, maintain a prototypical order of participant roles where a stimulus causes an emotion in an endpoint, whereas others, like fear, take this affected endpoint as the subject. It is this reversed vector that explains the faʕila verbs in (21).

(21)  
\begin{align*}
\text{hazi}na & \quad \text{‘to become sad’} \\
\text{zaʕila} & \quad \text{‘to get upset’} \\
\text{saʕida} & \quad \text{‘to become happy’} \\
\text{ɡadiba} & \quad \text{‘to get angry’} \\
\text{marida} & \quad \text{‘to get sick’} \\
\text{yaʔi}sa & \quad \text{‘to despair; give up’} \\
\text{habila} & \quad \text{‘to become pregnant’} \\
\text{fari}ha & \quad \text{‘to become joyful’} \\
\text{ʕati}fa & \quad \text{‘to become thirsty’} \\
\text{ʔalima} & \quad \text{‘to feel pain’} \\
\text{kari}ha & \quad \text{‘to hate, feel disgust at’} \\
\text{ra}ɡiba & \quad \text{‘to desire; to loathe’} \\
\text{nadima} & \quad \text{‘to regret’}
\end{align*}

There is not necessarily an overt stimulus with these states. Like the patient-oriented processes WILT and SPOIL, such states are viewed as occurring spontaneously. They differ in that WILT and SPOIL come about due to some property of an initiator, which does what it is typically observed to do in nature, while these states are experienced by a sentient being. These verbs therefore all deviate from prototypical transitivity, in that they describe the absorption of an affect. The default ordering of participant roles does not apply here because either only an endpoint role is present, or, if there is an initiator role, it functions as a type of stimulus that affects the subject. For example, the core meaning of the adjective kariih ‘repulsive’ and the verb kariha ‘to hate’ is an abstract notion of repulsion, which is essentially a relationship between a stimulus and an experiencer that feels some kind of caused negative emotion. In kariih ‘repulsive’, the stimulus, an initiator role, is focused, hence the word describes something that causes a feeling. In the verb kariha ‘feel disgust at, hate’ the experiencer, an endpoint role, is focused. Both words construe the same semantic content, but it is structured differently in each case.

3.4.2 Subject as location

I illustrated in Section 3.3.4 that any locative configuration consists of a located entity, termed a locatum, and a location by which its position is determined. While
the locatum–location order always remains constant in the abstract, the prominence awarded to these roles in a given concept may differ. In events like enter and exit for example, the locatum role is most prominent, being in or out relative to another party. In contrast, in situations like contain and incorporate the most prominent party has a location role, and a locatum is inside it. These latter examples focus the endpoint role of a locative relation, as illustrated in (22).

(22)  
\[
\begin{array}{c}
\text{Locatum} \\
\rightarrow \\
\text{Location}
\end{array}
\]

In the verbs listed in (23), something, typically realized as the object, is located in or on the subject. The verbs share a semantic feature discussed by Masica (1976: 46), where something enters the body or mind.

(23)  
\[
\begin{align*}
\text{hafiza} & \quad \text{‘to memorize; to keep in mind’} \\
\text{fariba} & \quad \text{‘to drink’} \\
\text{tafima} & \quad \text{‘to eat’} \\
\text{familia} & \quad \text{‘to encompass’} \\
\text{labisa} & \quad \text{‘to dress; to wear’}
\end{align*}
\]

It is recognized that eating and drinking are examples of a class of activities that affect the agent who undertakes them (Starosta 1978; Wierzbicka 1982; Haspelmath 1994). Presumably, these events could equally be viewed as actions headed by an agent, but what is coded linguistically here is the fact that the action of the verb terminates at the subject, and it is the subject who is ultimately affected. This is not the case with pattern I(a) ṭakala ‘to eat’, where the initiator is most prominent, and where an effect on the object may be construed. The verb can be used to describe actions of gnawing or eating away at something which is reduced, and hence affected, but not necessarily consumed. A comparison of verbs derived from fariba ‘to drink’ and ṭakala ‘to eat’ suggests that only the former verb is consistently associated with an effect on the consumer. In pattern V taʃarraba ‘to absorb, soak up’, the subject takes in the object, but intransitive taʔakkala ‘to erode’, formed in the same pattern, describes an action where the subject is worn down bit by bit. Thus one verb stresses the internalization of a liquid, while the other stresses the breaking down of an entity. The conclusion is that fariba ‘to drink’ is marked linguistically because its object is located relative to its subject, while the same does not hold of ṭakala ‘to eat’, whose subject affects the object.

My claim here then is that certain verbs construe a locatum–location relation with inverse prominence, and this structure enables us to conceptualize events of internalization such as encompass, memorize, and drink. Further, Lakoff and Johnson (1980) illustrate that metaphor is not limited to flowery or figurative use of language,
but is a central mechanism for understanding new experiences through recourse to
established patterns of understanding. In this way, physical location serves as a
metaphor for more abstract concepts like responsibility and obligation, where it is ON US to act, or ability, where we have it IN US to do something. This enables an
extension of this analysis to a verb like damina ‘to be responsible for’, where the
object rests ON the subject metaphorically. Further examples of pattern I(i) verbs in
which the subject is a metaphorical location are provided in (24).

(24) a. salima ‘to be safe from; faultless’ obl
   bariʔa ‘to be free of, innocent of’ obl
   fariغا ‘to be vacant’ int
   b. samiغا ‘to hear’ trns
   fahiida ‘to witness’ obl/trns
   zalima ‘to learn of’ obl

The subject of the verbs in (24a) is a location at which nothing is located. For salima
‘to be free from’ and bariʔa ‘to be innocent of’ the subject is free of specific negative
elements such as danger, fault, illness, or sin, whereas the subject of fariغا ‘to be
vacant’ is simply free of anything. The subject in each of the situations described by
the verbs in (24b) is a recipient-like location at which something comes to rest. The
subjects of samiغا ‘to hear’ and fahiida ‘to witness’ receive audio and visual stimuli
respectively, and the subject of zalima receives a piece of information.

The semantic content of a small number of faʔila verbs may be framed in both a
prototypical and a non-prototypical structure.

(25) a. damina ‘to be responsible for; to guarantee; to be liable for’ trns
    dimna ‘in, within’
   b. qabila ‘to receive well, be receptive to, to accept’ trns
    qabla ‘before’
   c. qadima ‘to come, arrive at; to be bold, audacious’ int/obl
    qadama ‘to precede’ trns (archaic)
    quddaama ‘in front of’

The prepositions dimna ‘in’, qabla ‘before’, and quddaama ‘in front of’ all relate a
locatum to a location. The subject of the preposition is IN, BEFORE, or IN FRONT relative
to the object. The faʔila verbs reverse this, so that the location role is assigned to the
subject, and the locatum role to the object. As noted above, the subject of damina ‘to be
responsible for’ is responsible or liable for something located metaphorically ON it, and
with qabila ‘to be receptive to’, the object is BEFORE the subject, ready to be accepted.
The conceptual content of the archaic faʔila verb qadama ‘to precede’, the preposition
quddaama ‘in front of’, and the faʔila verb qadima ‘to come, arrive; to be bold, audacious’ is reproduced in (26).
I illustrated in Chapter 2 that this notion of precedence consists of two participant roles organized in time or space, which is represented by the arrow in (26). As time is scanned, the circle is first, and as space is scanned, the circle is in front, relative to the square. The circle is therefore a locatum, always prior or in front, and the square is a location: something is always prior to or in front of it. The verb *qadama* 'to precede' and the preposition *quddaama* 'in front of' present this content with a prototypical ordering. The circle role is assigned to the subject, which precedes or is in front of the object. The same content is still relevant in *qadima* 'to come', two constructed examples of which are given in (27).

(27) a. قدم رمضان
   *qadima ramaadan*
   came[3MSG] Ramadan
   'Ramadan arrived.'

   b. قدم إلى دبي
   *qadima ila dubai*
   came[3MSG] to Dubai
   'He came to Dubai.'

The role of the square in (26) is assigned to the subject of *qadima*. In (27a) the subject *Ramadan* is in the future before the event occurs, but it moves and ends up 'in the now'. So Ramadan is construed as moving from the future to a point that precedes it in time. Note the contrast: in *qadama* 'to precede', the subject precedes a reference point, while in *qadima* 'to come', a reference point precedes the subject. Similarly, in (27b) Dubai is a destination that the subject moves towards, and is in front of the subject in space. Note the contrast again: the subject of the preposition *quddaama* 'in front of' is in front of something, but the subject of *qadima* 'to come to' has something in front of it. The subject of *qadima* is therefore assigned the location role, an endpoint role, inherent in the core meaning that it frames. This also applies to the archaic use of *qadima* 'to be bold, audacious', where the subject faces some challenge or obstacle which, again, is in front of it. The notion of precedence diagrammed in (26) is therefore a thread of meaning that is salient in the situations described by both verbs and the preposition, but with *qadima* it is structured in a specific configuration that reverses the prominence of the participant roles.

In sum, the subject of the *fašila* verbs discussed here is an endpoint because it is assigned a location role. This does not always mean that it is a location in the event
conceived, but rather that it is a location for the locatum inherent in the core meaning of the verb.

3.4.3 Sequence verbs

The relationship between a locatum and a location represents a natural order, but the prominence of each role may change as different events are conceptualized. A similar natural order applies to what I will call a sequence configuration, where one participant precedes another. Similar to location, while the order of a sequence remains fixed, the second participant may be made more prominent in a given concept, as shown in (28).

(28) □ — □

First Second

Verbs describing events of following focus the second party in a sequence over the first. An example is given in (29), where the words derived from the verb illustrate its association with subordination, sequence, and rank.

(29) tabiṣa ‘to follow, come after; be subordinate to’ trns
    tabiṣ ‘attendant, servant’
    tabaṣṣiya ‘dependency’

The subject of the verb in (29) is preceded or outranked by the object. This ‘outranked’ party takes the second role in a sequence, an endpoint role that is also profiled by the faṣil word tabiṣ ‘attendant’. A further example of a sequence verb where the second party in the sequence is focused as subject is laḥiqa ‘to come after; to catch up with’, an example of which is given in context in (30).

(30) laḥiqa arsnaal bi-l-furuq-i l-mutasaddirat-i
coupt[3MSG] Arsenal with-the-teams-GEN the-leading-GEN
bi-fawzi-hi ʕala sawθamtuun
with-win-its over Southampton
‘Arsenal has caught up with the leading teams with its win over Southampton’

In (30) the object of the verb precedes the subject, and is the first to be in a place, while the subject arrives second. The subject of both these verbs is therefore an endpoint because it is preceded in a sequence. Both location and sequence represent types of natural order which remain fixed, and while in some instances an initiator role is more prominent, in other cases an endpoint role is focused.

3.4.4 Influence

A number of pattern I(i) verbs describe events in which an unspecified force impacts or influences the subject.

(31) 
- *dahika* ‘to laugh’ int/obl
- *fafila* ‘to fail’ int
- *gariqa* ‘to drown; to sink’ int
- *farida* ‘to limp’
- *famila* ‘to work; to do’ int/trns

The action *laugh* is typically induced by a stimulus such as a sight, a joke, a thought, and so on, which causes the laugher to act. The laugher is therefore influenced, and the outburst of energy that he or she emits is the result. In some cases, the influence is a negative force that prevents the subject from doing what might be considered a default or unmarked action. In the case of *fafila* ‘to fail’, the failure is construed as happening to the subject, while no such negative influence is suggested with pattern I(a) *nadaha* ‘to succeed’. Likewise, the subject of *gariqa* ‘to drown, to sink’ becomes immersed in a medium due to forces beyond its control.

It is not immediately obvious how the subject of *famila* ‘to work’ could be viewed as an endpoint, since *work* is a one-participant action similar to *walk* in that it involves the exertion of energy that is not absorbed by any other party. If walking involves an initiator acting, it seems a stretch to claim that working involves an endpoint absorbing force. There is a difference, however, in that the subject of *famila* engages in purpose-driven activity. Conceivably any action can be *work* provided that there is a purpose that informs it, making it *work* rather than just a random act. Earlier uses of the verb cited by the lexicographer Ibn Manzur (c.1300) illustrate that the subject is put to a purpose. All translations of Ibn Manzuur’s data in this book are mine.

(32) 

مل أم النفقة تعمل كما تعمل في مكة

*lam ʔa-ra n-nafaqat-a ta-ʕmal-u ka-maa*

NEG1sg-see the-spending money-ACC 3sg-work-IND like-what

*ta-ʕmal-u fii makka*

3sg-work-IND in Mecca

‘I have not seen the money one expends pass away as it passes away in Mecca.’

In both uses of the verb in (32) the subject is employed, serving some implicit party: the user of the sword and the spender of the *nafaqa* ‘money that is spent or given away’. It is this notion of service or purpose that distinguishes the action of *work:*
if something works, it acts for a purpose, and if it is not working, it is not doing what it is supposed to do. The theme vowel of the verb ʕamila ‘to work’, at least in these earlier uses, may therefore be explained by the fact that the subject is in the service of some implicit party.

In sum, verbs in pattern I(i) share a common semantic structure in which an endpoint role is the most prominent, and this is a deviation from the prototypical ordering of participant roles most regularly experienced. The final variant of pattern I is marked by /u/ in both the perfective and the imperfective, and this last variant is examined directly.

3.5 Pattern I(u)

Pattern I verbs with /u/ as the theme vowel in both the perfective and imperfective are used to describe an entity in a simple property state like goodness or shortness. As noted in the previous chapter, stative adjectives/nouns are derived from them.

(33) qaṣūra ‘to be short’ int  qaṣīr ‘short’
ṣağūra ‘to be small’ int  šağīr ‘small’
ḥasūna ‘to be good’ int  ḥasān ‘good’
sahl ‘to be easy’ int  sahl ‘easy’
kaḅūra ‘to be big’ int  kaḅīr ‘big’
saṭūba ‘to be difficult’ int  šaṣb ‘difficult’
baṣūda ‘to be far’ obl  baṣṣid ‘far’
qaruba ‘to be near’ obl  qarīb ‘near’

Static situations are not conceptualized with reference to either an initiator or an endpoint. The subject of these verbs is just an entity located in a state, as shown in (34).

(34)

The attribution of a property state using a verb is not unique to Arabic. Dixon (1982) presents a survey of seventeen languages in which what he terms ‘adjectival concepts’ may be expressed by verbs. The use of this type of verb to express a state is limited in modern-day Arabic, but appears to have been more widespread at an earlier point in time. Ibn Manẓūr (c.1300) quotes a hadith from Ibn Masoud in (35), explaining that the speaker’s past woes joined up with his current troubles and left him feeling sad and depressed.
Ground form verb patterns

Axani ina qadam wa haduha
took[3MSG]-me what be old[3MSG] and what be current[3MSG]
‘The old and the new took me.’

The verbs in this example have fallen out of use, but a handful of stative verbs are still current. They are typically more formal than the corresponding derived adjective. In the example in (36) the use of the verb ya-sfiub ‘to be difficult’ is contrasted with the adjective sath ‘difficult’, which appears in a verbless topic-comment sentence.


5 MSG

\[
\text{PROXIMITY}
\]

The noun qurb 'nearness, proximity' construes this concept, referring to the distance between two things. The verb qaruba 'to be near' focuses one participant, placing it in a state of proximity to some other party. A contextualized example is given in (38).
The meaning of this verb results from framing the semantic content proximity in the semantic structure diagrammed in (34). Figure 3.5 breaks the verb down into its content and structure. It shows that the semantic structure of the concept denoted by qaruba consists of an entity in a state. The presence of a second participant role, the thing that the subject of qaruba is near to, is due to the meaning component that is framed in the structure. The same analysis applies to the archaic verb qaduma 'to be ancient', which frames the notion of precedence diagrammed in (26) as a state. The subject of the verb is in a state of precedence, located in time relative to an implicit reference point.

3.6 Summary and conclusion

My argument in this chapter is that the three Arabic verb patterns typically referred to as ‘the ground form’ correspond to three different structures in which conceptual content is viewed. The prototypical structure consists of a natural or canonical ordering of participant roles, and is headed by an initiator that begins an action or heads a static relation. The verb pattern associated with this structure is unmarked in the imperfective, and marked in the perfective only for completed action. In a second semantic structure the most prominent participant is an endpoint that experiences an emotional or physical state, is somehow influenced in an event, or is second in a natural order such as a locative relation or a sequence. This structure deviates from

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the prototype, and is denoted by a marked verb pattern. A third structure simply consists of an entity in a state, and the verb pattern associated with it is also marked. Although a meaning component is typically framed in only one of these structures, there are numerous examples where the same content can flesh out two, or even all three, resulting in two or three related verbs.

(39) a. qadama ‘to precede’ (archaic)
    qadima ‘to come, arrive’
    qaduma ‘to be ancient’ (archaic)

b. ḥadaṭha ‘to happen’
    ḥaduṭha ‘to be modern, current’ (archaic)

c. waḍaṭa ‘to place, put down’
    waḍuṭa ‘to be lowly, humble’ (archaic)

d. kabara ‘to be older than’ (archaic)
    kabira ‘to grow old, big’
    kabura ‘to be or become big’ (archaic)

e. qaṣara ‘to fall short of, not be up to, miss; to confine; to finish’
    qaṣira ‘to duck down due to neck pain’ (?) (archaic)
    qaṣura ‘to be or become short’ (archaic)

The verbs in (39a) have been explained over the course of this chapter, all framing the notion of precedence. In (39b) the shared meaning seems to be a relationship to time, presented as an action in ḥadaṭha ‘to happen’ and a state in ḥaduṭha ‘to be modern’. The idea of lowness is relevant in (39c), resulting from an action in waḍaṭa ‘to put down’ and being a simple state in waḍuṭa ‘to be lowly’. In (39d) stative kabura ‘to be or become big’ presents a simple property state predicated of an entity, while kabira ‘to grow old’ has an animate experiencer subject that undergoes a process. Transitive kabara ‘to be older than’ is a relation between two parties, with the object being a reference point by which the grandness of the subject is defined. Ibn Manzūr (c.1300) provides context for each verb.

(40) كَبَرَ… أي غَطَّىٰ فِيهِ كِبْرٍ
    kabura…. ‘He became big[3SG]… that is became great[3SG], so he big-NOM
    fa-huwwa kabiir-un ‘He became big…that is he became great, so now he is big.’

كَبِيرٌ الرَجُلُ والدِئَبِيّةُ… طَعِنَ فِي السَّن
    kabira r-radgul-u wa d-daaabbat-u…. ‘the-man-NOM and the-beast-NOM…. advanced[3SG] in
    tafāsana fī s-sinn the-age
    ‘Man and beast grew old….: advanced in age.’
A similar phenomenon is found with the verbs in (39e), where an abstract notion of shortness is also framed in three different ways. Contextualized examples in (41) are again from Ibn Manzuur.

\[
\begin{align*}
\text{qasura} & \quad f\text{-fay?-u} \quad xilaaf \quad taala \\
\text{became short} & \quad \text{the-thing-NOM: opposite became long}
\end{align*}
\]

‘The thing became short: opposite of became long.’

\[
\begin{align*}
\text{qasar-tu} & \quad \text{yan af-fay?} \quad \text{Sa\d{d}iz-tu} \quad \text{yan-hu wa lam a-blu\-\text{-hu}} \\
\text{missed-1SG} & \quad \text{from the-thing: was unable-1SG from-it and NEG 1SG-reach-it}
\end{align*}
\]

‘I missed the thing: I fell short of it and did not reach it.’

\[
\begin{align*}
\text{yuqal\-u} & \quad \text{qasira} \quad \text{al-faras-u….} \quad \text{Pi\d{d}a} \quad \text{Paxa\d{a}-hu} \\
\text{be said} & \quad \text{ducked} \quad \text{the-horse-NOM} \quad \text{…if took} \quad \text{it}
\end{align*}
\]

‘It is said “the horse ducked down”…if it gets a pain in its neck.’

A relation between an entity and a state is presented by \textit{qasura} ‘to be or become short’, while \textit{qasara} ‘to fall short of’ is a relation between two parties, the first being short relative to the other. Archaic \textit{qasira}, which I have translated as ‘duck down’, has an affected experiencer subject.

The derivational relationship between related ground form verbs is not always clear. It seems reasonable to argue that \textit{qadama} ‘to precede’ is the base from which \textit{qadima} ‘to come, arrive’ and \textit{qaduma} ‘to be ancient’ are derived, because the former verb profiles a simple relation that is manipulated in the other two. To argue that a \textit{fa\d{a}la} verb is always the base verb, however, would require the assertion that \textit{kabura} ‘to be big’ is derived from \textit{kabara} ‘to be older than’, and that \textit{qasura} ‘to be short’ is derived from \textit{qasara} ‘to fall short of’. This seems instinctively wrong because the stative verbs denote simpler concepts, and the \textit{fa\d{a}la} verbs appear to augment these with the addition of further participant roles. The verb marking discussed in this chapter signals deviation from a prototypical semantic structure, not derivation from a base, however (cf. Croft 1990), and within this system there is no reason...
why derivation, defined as the formation of one word from another, should always follow the same direction. A marked verb can be derived from an unmarked *fašala* verb, but the opposite may also occur, where a *fašala* verb is derived from a *fašula* base. In the first instance, the core meaning of the base becomes reframed in a non-prototypical semantic structure, and in the second case, content that is framed in a marked structure to begin with is reframed in a way that conforms to the prototypical ordering of participant roles. The conclusion is that verbal marking is a signal about how a meaning component is structured, and not necessarily an indication of which verb precedes another diachronically in the development of the language. Chapters 4 and 5 build on this conclusion, illustrating two further deviations from the initiator–endpoint prototype, beginning in Chapter 4 with reflexivity.
4

Reflexive marking

4.1 Introduction

The primary reflexive marker in Arabic is a /t/ affix, which appears in several different verb patterns, while a second reflexive marker, the /n/ affix, is restricted to a certain class of verbs traditionally termed anticausatives. Two reflexive verb patterns, iftaṣala and infaṣala, are the focus of this chapter. My argument is that affixation of reflexive pronouns to faṣala verbs has created these two patterns, and that they have then become paired with reflexive semantic structures. Particularly in the case of iftaṣala, the association of the pattern with a reflexive structure means that it is no longer restricted to producing verbs that alternate with an unmarked base verb. It may take a variety of base words, or it may simply mark a certain semantic feature on a verb that was once unmarked. This latter possibility does not involve derivation at all.

Reflexive marking on a verb serves a different function to reflexivization with a full reflexive pronoun at the level of the clause, and this difference is illustrated in Section 4.2. Having established the function of reflexive marking, I then turn to the types of verb that bear it, beginning in Section 4.3 with verbs that enter into an alternation with an unmarked counterpart. I divide these into verbs where an agent acts and experiences the result of the action, marked with /t/, and verbs where the subject is a patient-like argument that undergoes an event, marked with /n/. In Section 4.4 I address reflexive verbs that cannot reasonably be the result of affixation, but are better accounted for under an analysis where a verb pattern itself denotes a semantic structure. Some of these are derived verbs that reflect the incorporation of a simpler word-level concept into a more complex structure, whereas others are basic underived words that are marked because the concepts they construe deviate from the prototypical ordering of participant roles proposed in Chapter 3. I conclude the chapter in Section 4.5, drawing a parallel between the analysis of the morphological constructions presented here and the account of syntactic patterns in Goldberg’s (1995, 1998) construction grammar. I argue that the same principles are at work, operating at the level of the verb in one case, and at the level of the clause in the other.
4.2 Reflexive marking on the verb

A likely path of development for the /t/ and /n/ affixes is that they were once full reflexive pronouns that appeared in conjunction with unmarked verbs, producing a contrast similar to that found in German, for example.

\[(1)\]  
\[
\begin{align*}
\text{füllen} & \quad \text{‘fill’} \quad \text{trans} \\
\text{sich füllen} & \quad \text{‘fill’} \quad \text{int}
\end{align*}
\]

(Haspelmath 1993: 95)

Haspelmath (1990) outlines a typical path for the grammaticalization of passive marking crosslinguistically, in which reflexive nouns and pronouns become phonetically reduced and attach to verbs. Possible candidates as the source of /t/ and /n/ in Arabic are ḍaat ‘self’ and nafs ‘spirit, self’, or ancestors thereof, although I will not pursue this further here. When reduction and incorporation occurs, the function of a reflexive pronoun is generalized first to marking actions on the self, then to anti-causativity, marking spontaneous changes of state, and finally passivization, where an agent remains present conceptually but is defocused, with a patient realized as the subject of the verb. In Modern Standard Arabic this process has been halted by codification, and reflexive marking does not extend to the passive, which as in Classical Arabic is construed by an internal vowel change. In many modern dialects however, where linguistic change has continued unchecked, the /t/ and /n/ affixes regularly mark passive verbs. Thus ‘to be written’ is expressed as kutiba in Modern Standard, but inkatab in Syrian, and itkatab in Egyptian Arabic.

It is important to note that in terms of verbal semantics the incorporation of a reflexive marker into a verb results in a meaning that differs from that expressed by a verb with a full reflexive pronoun at the level of the clause. This is illustrated in (2).

\[(2)\]  
\[
\begin{align*}
\text{a. \quad كسر أحمد الشباك} \\
\text{kasara} & \quad \text{?ahmad-u} \quad f-fubaak-a \\
\text{broke[3MSG]} & \quad \text{Ahmed-NOM} \quad \text{the-window-ACC} \\
\text{‘Ahmed broke the window.’}
\end{align*}
\]
\[
\begin{align*}
\text{b. \quad كسر الشباك نفسه} \\
\text{kasara} & \quad f-fubaak-u \quad nafs-a-hu \\
\text{broke[3MSG]} & \quad \text{the-window-NOM} \quad \text{self-ACC-its} \\
\text{‘The window broke itself.’}
\end{align*}
\]
\[
\begin{align*}
\text{c. \quad كسر الشباك} \\
kusira & \quad f-fubaak-u \\
\text{was broken[3MSG]} & \quad \text{the-window-NOM} \\
\text{‘The window was broken.’}
\end{align*}
\]
\[
\begin{align*}
\text{d. \quad اكسر الشباك} \\
inkasara & \quad f-fubaak-u \\
\text{broke[3MSG]} & \quad \text{the-window-NOM} \\
\text{‘The window broke.’}
\end{align*}
\]
The *fašala* verb in (2a) and (2b) describes a semantically transitive event involving a transfer of energy. In both cases an initiator role is assigned to the subject, while the object is an endpoint that changes state, becoming broken. In (2b) a full reflexive pronoun is placed in the object slot, and the subject is portrayed as acting on itself. This does not change the semantics of the verb, which still describes an action where the subject serves one role, and the object the other. In (2c), passive *kusira* 'to be broken' maintains this relation, but changes the focused participants, so that the patient is now realized as subject. Only in (2d) is there no distinction between initiator and endpoint, and the subject simply changes state, becoming broken spontaneously (Saad 1982). The incorporation of a reflexive marker into *kasara*, to produce *inkasara* in (2d), therefore reflects a different function to the ‘verb plus full pronoun’ structure: the endpoint role that falls on the full pronoun object in (2b) falls on the subject of reflexive *inkasara* in (2d).

This difference is explained by Haiman’s (1983) assertion that expressions that are closer linguistically, having merged to form a word, reflect a higher degree of conceptual closeness. Part of his argument is that a separate word denotes a separate entity, whereas this is not the case with a bound morpheme. Haiman concludes that sentences containing full reflexive pronouns describe events involving two co-indexed participants, while sentences consisting of a verb that is marked with a reflexive affix describe one-participant events. He gives the example from Russian in (3) to illustrate this point.

(3) a. *On utomil sebja* 
   he exhausted himself 
   (His will drove his body to exhaustion)

b. *On utomil +sja* 
   he exhausted +REFL 
   (He grew weary) 
   (Haiman 1983: 796)

The verb in (3a), Haiman points out, is agentive, and represents both the action of the subject and the effect on the object, which happens to be co-indexed with the subject. In contrast, the verb in (3b) bears a phonetically reduced reflexive marker, and expresses only the effect on the subject, which is the patient of the sentence.

In her seminal study of the middle voice, Kemmer (1993) identifies a category of events in which an agent carries out an action on or through its own body. Examples include washing and grooming actions like brushing or shaving, or changes of body posture such as lying down. She illustrates that verbs describing this type of event are commonly marked with a certain type of affix crosslinguistically, and her conclusion is that marking on such verbs signifies that there is a reduced distinction between the initiator and endpoint of an event. Arabic /n/ and /t/ serve this function, and it is for this reason that use of a reflexive pronoun to paraphrase the meaning of a verb containing /n/ or /t/ is not entirely accurate. To paraphrase *inkasara* as ‘break itself’ or *iltaffa* ‘to turn’ as ‘turn itself’ distinguishes between a subject and an object that
happens to be co-indexed with it, but the verbs themselves do not construe this distinction. A similar point is made by Doron (2003a), who uses linguistic tests based on those of Sells et al. (1987) to illustrate that the reflexive morpheme hit- in Hebrew does not function like an object.

(4) a. dani raxac et ackmo
    Dani washed acc himself

b. dani hitraxec
    Dani washed-MID

(Doron 2003a: 58)

Doron notes that the sentence in (4a) could perhaps be used to describe a situation where Dani washes a statue of himself, but this possibility is totally ruled out for the sentence in (4b). Her conclusion is that the hit- morpheme does not correspond to an argument position, a slot in the syntax for an object. Doron’s data illustrate the distinction between reflexivization at the level of the clause, and reflexivization within the verb. The unmarked verb in (4a) presents a prototypically transitive relation in which an initiator is more prominent than an endpoint: one role to the subject, one to the object. This is not a reflexive verb, but a reflexive clause. The verb in (4b) is marked to indicate that the initiator is not more prominent than the endpoint, and both roles inherent in the action wash therefore fall on the subject.

The incorporation of a phonetically reduced reflexive pronoun into specific Arabic verbs has, I will argue here, created a linguistic pattern that is now paired with a reflexive semantic structure, and which is recognized as such independently of any given verb. Assuming that reflexive marking in Arabic began as reflexive pronoun incorporation, its function has extended from modifying a specific set of verbs to marking a certain semantic feature of an event. Once reflexive marking becomes an independent verb pattern rather than the simple modification of a base, it is no longer limited to verbs that alternate with an unmarked counterpart. Instead, it is used to mark a reflexive semantic structure consistently, and it may appear on both derived and underived verbs that construe such a structure. The next section presents reflexive verbs that conform to an analysis in which a reduced reflexive pronoun attaches to a base verb, while Section 4.4 illustrates that such an analysis cannot be applied consistently, suggesting that at some point a verb pattern has come into existence as a meaning-bearing lexical unit.

4.3 Alternations

Chapter 3 established a prototypical semantic structure associated with the verb pattern fašala. The most prominent semantic role in that structure is an initiator, which is realized as the subject of a fašala verb. When a reflexive marker attaches to a
fašala verb, it takes an endpoint role, assigning this role also to the verb’s subject. In many cases, this results in an alternation between an unmarked and a marked verb. Alternations of this type can be accounted for by affixation. The unmarked verb construes an action that terminates at a participant other than the subject, and the affixed verb construes the same action which now terminates at the subject itself. There are essentially two types of alternation, one in which the reflexive marker denotes an additional beneficiary, recipient, or goal-like argument, and one in which the role it takes is that of the object of the unmarked verb. Each type is treated in turn.

4.3.1 Subject as beneficiary
An event of transfer involves three participant roles. For example, one use of the pattern I verb dafaša 'to pay' involves an agent acting on a theme, money, that moves to a recipient. In (5), the terms initiator and endpoint are more general cover terms for the specific roles found in individual events of transfer.

![Diagram](5)

Initiator Theme Endpoint

The endpoint role in an event of transfer may be a recipient, a goal, or a beneficiary, depending on the unique semantic content of the event itself. The structure in (5) is prototypical because the semantic role that acts is more prominent than the semantic role that benefits from the action. One party acts, and that action flows outwards, terminating elsewhere. A reflexivized structure deviates from this prototype because the party that instigates an action is also the party that is affected by it. The diagram in (6) is adapted from Kemmer (1993: 77).

![Diagram](6)

Initiator Theme Endpoint

In this structure the initiator and the endpoint roles are equally prominent, falling on the same party, which both acts and receives. It is not difficult to see that the reflexive verbs marked with /t/ in (7) are formed when a reflexive marker attaches to the unmarked verb. The result is that the object role of the unmarked verb is no longer the final affected endpoint. A beneficiary of some kind is added, and this role is assigned to the subject. The marked verbs in (7) all instantiate the semantic structure diagrammed in (6).
A state of division falls on the object of both the unmarked and the reflexive verbs in (7), with the difference being that only the unmarked verbs describe a final effect on the object. In the reflexive verbs, whatever is divided or broken off also moves to ‘be at’ the subject, and so the action finally terminates there. The subject of iqtaṭ’aʕa ‘to cut for oneself; to glean’ extracts the object from a whole. The morphology of the creation verbs iftiqqa ‘to derive’ and ıxtaraʕa ‘to devise’ suggests that these actions were once also conceptualized as forming or fashioning something by breaking it off from the whole and molding it into something new, while the object of iqtasama ‘to divide up, share’ is divided amongst a typically plural subject, elements of which each receive a part or portion of whatever is divided. Similarly, ıxtazala ‘to abbreviate, reduce to’ is to take away only one part of the object, which goes to the subject while the remainder is discarded or ignored. Ibn Manzuur (c.1300) gives an earlier use of this verb in context.

(8) آرادوا أن يخترلوه دونا أي يتحرروا به
\(\text{\textbarraad-uu} \quad \text{\textbaran \textbar ya\textbar xtazil\textbar uu\textbar hu} \quad \text{\textbar duuna \textbar na ay} \quad \text{\textbar ya\textbar nfarid\textbar uu} \quad \text{\textbar bi\textbar h}\)
\[\text{\textbar wanted\textbar 3\textbar MPL} \quad \text{\textbar to 3\textbar M\textbar take away\textbar PL\textbar him} \quad \text{\textbar without\textbar us that is 3\textbar M\textbar be alone\textbar PL\textbar with\textbar him}\]

‘They wanted to take him away from us, that is, to be alone with him.’

The point is that these instances of division all involve the subject coming to possess something that was once part of a larger entity. The addition of a reflexive affix to the unmarked verb mirrors the addition of a beneficiary role that is assigned to the subject. With other reflexive verbs the incorporated reflexive pronoun simply takes the endpoint role that is assigned to the object of the unmarked verb, with the result that the subject both acts and undergoes the action. Such actions on the self are discussed in Section 4.3.2.

4.3.2 Actions on the self

Actions on the self deviate from the prototypical ordering of participant roles because an initiator and endpoint are equally prominent, with both roles therefore falling on the same entity. A reflexive initiator–endpoint structure is diagrammed in (9), adapted from Kemmer (1993: 71).
The unmarked verbs in (10) denote a prototypical structure in which only an initiator role is focused, while the verbs bearing reflexive /t/ construe the structure in (9), in which both roles are equal in terms of prominence.

<table>
<thead>
<tr>
<th>Verb</th>
<th>Meaning</th>
<th>Role</th>
<th>Role</th>
</tr>
</thead>
<tbody>
<tr>
<td>gasala</td>
<td>‘to wash’</td>
<td>trns</td>
<td>i gtasala</td>
</tr>
<tr>
<td>nahara</td>
<td>‘to slaughter’</td>
<td>trns</td>
<td>int nahara</td>
</tr>
<tr>
<td>ramaa</td>
<td>‘to throw’</td>
<td>trns</td>
<td>i rtamaa</td>
</tr>
<tr>
<td>manaifa</td>
<td>‘to prevent’</td>
<td>trns</td>
<td>int manaifa</td>
</tr>
<tr>
<td>rasama</td>
<td>‘to draw’</td>
<td>trns</td>
<td>i rtasama</td>
</tr>
</tbody>
</table>

As noted in Chapter 3, Smith (1970) identifies a class of English verbs where the action or change of state described can occur with or without an agent exercising what she terms external control. The relevant change can be independent of an agent, as in the door opened, or an agent may control it, as in Tim opened the door. She notes that for another class of verbs external control is obligatory: build, cut, slice, and draw cannot be used to describe events that are not brought about by an agent, whereas open can (see also Levin and Rappaport Hovav 1995). Actions like wash, slaughter, and throw have both an initiating agent and an endpoint that is affected as part of their unique semantic content, and they cannot be perceived as events in which the agent role is no longer present. The reflexive verbs in (10) retain the agent role that is inherent in the meaning of the unmarked verb, while the endpoint role is also assigned to the subject: the washer is also the washed, the killer is also the killed, and so on. Talmy (2000) notes that the subject of English refrain is a ‘divided self’ that must overcome its own impulse to act, and this is captured nicely in the contrast between Arabic mana‘a ‘to prevent’ where the subject just prevents, and imtana‘a ‘to refrain’, where the subject both prevents and is prevented. The verb irtasama ‘to appear’ is typically said of a smile or perhaps lines on a face. An example is given in context in (11).

It is worth restating here that these reflexive verbs cannot be accurately paraphrased using a full reflexive pronoun. The verb irtasama does not mean ‘draw itself’, and hence it cannot be used to describe a situation where an agent takes up paper and pen to draw his or her own image. Rather, the semantic content of unmarked rasama ‘to draw’ involves a line or imprint appearing on a surface under the control of an agent, and in a very restricted set of contexts the distinction between the agent and the line can be eliminated, so that the line appears under its own steam. A similar situation occurs with English build, which is almost always transitive except in recent usage

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where tension is said to build, or the heat of spicy food to build on the tongue. Again here, an inherently agentive concept is viewed as a one-participant event where an agent-like subject changes under its own control.

4.3.3 Symmetry

Several symmetric meaning components are construed as result states in *iftaSala* verbs. Many of these verbs alternate with an unmarked transitive pattern I causative.

(12) *ẓamaša* ‘to gather, combine’ _trns_  *idżamaša* ‘to meet, get together’ _int_
*خلاَثا* ‘to mix, blend’ _trns_  *ixtalātha* ‘to mix’ _int/obl_
*rabaša* ‘to tie, connect’ _trns_  *irtabasha* ‘to connect’ _int/obl_
*mazaḍaša* ‘to blend’ _trns_  *imtazaḍaša* ‘to blend’ _int/obl_
*wasaša* ‘to connect’ _trns_  *itaśaša* ‘to connect, call’ _obl_
*qaraša* ‘to combine’ _trns_  *iqṭarasha* ‘to combine’ _int/obl_

A state of COLLECTIVITY, MIXTURE, CONNECTION, and so on falls on the endpoint of the relation construed by the unmarked verb, being brought about by a distinct initiator. The reflexive verb assigns both these roles to the subject, which both initiates the event and enters the symmetrical state. When this type of verb is intransitive, the subject must be an entity that can be divided conceptually into elements that are capable of somehow coming together. If the verb has an oblique object, the subject still enters the state, but it is shared with the oblique. The difference is illustrated with the verb *idżamaša* in (13).

(13) a. اجتمعوا
*idżamaša*-uu
‘They got together.’

b. اجتمع مع صديقه
*idżamaša*  *maš* šadiiq-i-h
‘He got together with his friend.’

In both (13a) and (13b) the subject of *idżamaša* enters a state of COLLECTIVITY under its own control. Since this state cannot apply to a single indivisible entity, it is shared between elements of the plural subject in (13a), and between the subject and the oblique object in (13b). Further symmetric *iftaSala* verbs are given in (14).

(14) *wazana* ‘to weigh, balance’ _trns_  *ittazaša* ‘to be well balanced’ _int_
*šadala* ‘to treat equally, justly’ _obl_  *išadala* ‘to be moderate, balanced’ _int_
*laqiya* ‘to meet, find’ _trns_  *iltaqaa* ‘to meet’ _int/obl_
*xalafa* ‘to take the place of’ _trns_  *ixtalafa* ‘to differ’ _int/obl_

A symmetry is discernable in the conceptual content of the unmarked verbs *wazana* ‘to weigh, balance’ and *šadala* ‘to treat equally’, where the subject places the object in some
kind of equilibrium. With the marked verbs ittazana ‘to be well balanced’ and *tadala
‘to be moderate’, this state applies to the subject and there is no distinction between a
party responsible for the occurrence of the equilibrium and the party on whom it falls.

The symmetric content of the *yašala verb laqiya ‘to meet, find’ is obscured by the
way it is construed, but it is very similar to the content of wasala ‘to arrive’. I argued
in Chapter 3 that wasala frames an abstract notion of CONNECTION, and although
there are clearly differences between this concept and the notion of MEETING framed
in laqiya, both concepts consist of two roles that are ‘at’ each other. I will therefore
use the same diagram to represent both concepts.

![Diagram](image)

The two semantic roles in this concept are only mutually ‘at’ each other when they
are equally prominent in a given construal. When only one role is prominent, it is
focused against the other. That is, the focused role is ‘at’ the other, while the reverse
does not apply. When wasala means ‘to connect something’, both roles fall on the
object. They are equal in prominence, and the object enters a state of CONNECTION. In
reflexive ittasala ‘to connect to, call on the telephone’, both roles are still equally
prominent, but it is the subject that enters the state now. When wasala means ‘to
arrive’ however, the ‘atness’ is no longer mutual. The subject is at another party, but
the opposite is not construed. One of the semantic roles represented by the triangles
in (15) is focused, and the other functions as a reference point.

A similar situation applies to laqiya ‘to meet, to find’. The noun liqaaʔ ‘meeting’ does
not focus one semantic role against the other, and so the concept is construed as a
mutual coming together. Like wasala ‘to arrive’, laqiya ‘to meet, find’ focuses only one
role as subject, leaving the other as object, and this breaks the symmetry. In line with the
analysis presented in Chapter 3, the theme vowel /i/ in laqiya denotes a semantic
structure where the most prominent role is an endpoint. Whereas the subject of wasala
‘to arrive’ is an initiator that comes to be ‘at’ something therefore, something comes to
be ‘at’ the endpoint-subject of laqiya ‘to meet, find’. The ‘atness’ is again not mutual, as
illustrated by the contextualized example in (16).

![Contextualized Example](image)

2 BYU: Ghadoi—reference: A\{479611\}S\{ArabsWorld\}D\{6-10-2011\}.

لقوا مصرعهم خلال اشتباكات مع قوات الأمن

laq-uu *masraʔ-a-hum xilaal iftibaakaat maʕ quwwaat ilʔamn
met-3MPL death-ACC-their during clashes with forces the-security

‘They met their deaths during clashes with the security forces.’
In this example death comes to the subject, which is an endpoint with reference to which some other party is located. The underlying symmetrical content of this verb is not construed as symmetric here, but is visible when no distinction is made between one semantic role and another, as with the noun liqaa? ‘meeting’ and the reflexive verb iltaqaa ‘to meet’.

It is the prominence awarded to semantic roles that explains the meanings of xalafa ‘to take the place of’ and ixtalafa ‘to differ’. The shared notion here may be paraphrased as ALTERNATE, an approximation of which is diagrammed in (17).

(17) \( \bigcirc \neq \bigcirc \)

Before it is framed in any semantic structure, the representation in (17) again consists of two semantic roles, each the alternate of the other. Unmarked xalafa ‘to take the place of’ is an asymmetric construal of this concept, whereby the subject succeeds or substitutes for the object, and is therefore its alternate, without the reverse also being construed. One of the semantic roles in (17) is focused against the background of the other here. In reflexive ixtalafa ‘to differ’, both roles are equally prominent, being assigned to the subject. The subject now both is an alternate, and is alternated from, hence, it differs, either within itself or in conjunction with another party.

Symmetric ifta\(\bar{a}\)ala verbs therefore frame inherently symmetric conceptual content in a reflexive semantic structure that presents two semantic roles as equal. If the same content is also framed in a pattern I verb, the symmetry is maintained if both roles fall on the object, but broken if one role is assigned to the subject, since this is now more prominent, while the other is backgrounded.

4.3.4 Subject as patient

While verbs marked with reflexive /t/ describe actions in which an agent benefits or is otherwise affected, verbs marked with /n/ are anticausative, meaning that the agent role of the unmarked verb is lost. The difference is nicely illustrated by the alternation in (18).

(18) fa\(\ddag\)ala ‘to occupy, keep busy’\textsubscript{trans} ifa\(\ddag\)ala ‘to keep busy, work’\textsubscript{int} infa\(\ddag\)ala ‘to become preoccupied’\textsubscript{int}

The core meaning of the verbs in (18) is an abstract notion of OCCUPATION. In transitive pattern I fa\(\ddag\)ala this meaning component is construed as either a caused activity where the object is engaged or busy due to the action of the subject, or a caused mental state where the object is preoccupied. Pattern VIII ifa\(\ddag\)ala may be transitive, meaning ‘to occupy a place’, where the subject is also a beneficiary that takes the object (the place) into its possession. More commonly, the verb is intransitive, meaning ‘to work, keep busy’. In both cases the subject is agentive, and this contrasts with pattern VII infa\(\ddag\)ala, whose subject becomes preoccupied, undergoing a change of state.
Chierchia (2004) and Koontz-Garboden (2007, 2009) argue that anticausative verbs are derived from causatives crosslinguistically through reflexivization, and the Arabic data offered here clearly support this assertion. Verbs whose core meaning is a state of division are reflexivized to produce an anticausative infaṣala verb where the subject undergoes what Hale and Keyser (1987) refer to as a change in material integrity.

(19)  

<table>
<thead>
<tr>
<th>Arabic</th>
<th>English</th>
<th>English</th>
</tr>
</thead>
<tbody>
<tr>
<td>qatafa</td>
<td>‘to sever’</td>
<td>‘to cut out, cease’</td>
</tr>
<tr>
<td>kasara</td>
<td>‘to break’</td>
<td>‘to break’</td>
</tr>
<tr>
<td>faqaqa</td>
<td>‘to split’</td>
<td>‘to split’</td>
</tr>
<tr>
<td>faḍara</td>
<td>‘to split; to cleave’</td>
<td>‘to split; to explode’</td>
</tr>
<tr>
<td>qarada</td>
<td>‘to sever’</td>
<td>‘to become extinct’</td>
</tr>
<tr>
<td>qasama</td>
<td>‘to divide’</td>
<td>‘to divide’</td>
</tr>
<tr>
<td>faṣala</td>
<td>‘to separate’</td>
<td>‘to separate’</td>
</tr>
<tr>
<td>inqatafa</td>
<td>‘to cut out, cease’</td>
<td>‘to cut out, cease’</td>
</tr>
<tr>
<td>inkasara</td>
<td>‘to break’</td>
<td>‘to cut out, cease’</td>
</tr>
<tr>
<td>infaqa</td>
<td>‘to split’</td>
<td>‘to cut out, cease’</td>
</tr>
<tr>
<td>infaḍara</td>
<td>‘to split; to explode’</td>
<td>‘to cut out, cease’</td>
</tr>
<tr>
<td>inqarada</td>
<td>‘to become extinct’</td>
<td>‘to cut out, cease’</td>
</tr>
<tr>
<td>inqasama</td>
<td>‘to divide’</td>
<td>‘to cut out, cease’</td>
</tr>
</tbody>
</table>

The relevant meaning component of the verbs in (19) is a type of separation, and this is viewed as a result state in both the marked and unmarked verb, where one participant experiences a break either in its physical mass or in its continuation through time. This conceptual content is semantically neutral, being neither agent- nor patient-oriented, but it acquires this orientation from the structure in which it is viewed. In the prototypical structure, it becomes a result state that is brought about by an external controller. In the reflexive structure of the derived verb it becomes a spontaneous change of state. The patient-like role of the subject arises due to a combination of a structure that disallows a focused initiator and a backgrounded endpoint, requiring them to be equally prominent, and a meaning component that falls on a patient argument.

4.3.5 An agency continuum

The previous discussion has established a difference between intransitive iftaṣala and infaṣala verbs that relies on the notion of agentive control (cf. Smith 1970). The reflexive affixes /n/ and /t/ take the endpoint role assigned to the object of the unmarked verb, with the effect that this role is now assigned to the subject. The difference is that the action of an iftaṣala verb occurs under the control of the subject, while infaṣala verbs typically describe actions that the subject undergoes. This assertion is based on the contrast between iftaṣala verbs like iḡtasala ‘to wash’, where an agent is clearly present, and infaṣala verbs like inkasara ‘to break’, where no agency is construed. However, a subject’s control, or lack of control, over an action is not always as obvious, and the choice of /t/ or /n/ to form a reflexive verb can at times appear random. The point is illustrated in (20).

(20)  

<table>
<thead>
<tr>
<th>Arabic</th>
<th>English</th>
<th>English</th>
</tr>
</thead>
<tbody>
<tr>
<td>rafaqa</td>
<td>‘to raise, increase’</td>
<td>‘to rise’</td>
</tr>
<tr>
<td>xafada</td>
<td>‘to lower, decrease’</td>
<td>‘to subside, drop’</td>
</tr>
</tbody>
</table>
The actions described by both types of reflexive verb may be viewed as falling on an agency continuum. At one end are actions like wash with an inherent agent, and at the other are spontaneous changes of state like break, where agency is entirely lacking. Between these two poles there is something of a gray area, where an action is not a simple change of state, but neither is it an action performed by an agent upon its own body.

We have already seen that one set of infā'ala verbs construes a loss of material integrity: breaking, splitting, exploding, and so on. Others describe changes where the subject becomes less, declines, or recedes.

All of the actions described by the infā'ala verbs in (21) result in a subject that is either physically lower or less than it was, or which has changed its physical configuration to take up less surface area. Bend and fold, for example, involve the subject contorting back upon itself, while dissolving, declining, and lowering are instances of lessened volume or lessened height, while withdrawal and recession involve backwards motion in which the extension or spread of the subject is reduced. It seems that backwards and downwards are semantically marked directions, and backward-oriented motion is less likely to be conceived of as undertaken willingly by a subject that controls an action. When an infā'ala verb does describe forward motion, it is often not neutral, but specifically unrestrained, as illustrated in (22).

The verb indafā'ā describes impetuous acts of rushing or acting emotionally, while indalāqa ‘to spill’ is an instance of accidental uncontrolled motion. Likewise in-bāthaqa is used to describe unrestrained outbursts, while a typical subject of indalāqa ‘to flare up’ is fire, war, or violence. These actions are all spontaneous, but they involve a certain lack of restraint on the part of the subject, which is almost carried forward rather than moving under its own volition.

With some exceptions like infataha ‘to open’ that seem fairly neutral therefore, pattern VII infā'ala verbs convey loss of material integrity, decline, recession, and a
certain type of uncontrolled motion. In contrast, intransitive iftaʕala verbs describe actions where the subject moves upwards or outwards, expanding rather than retracting.

(23)  
rafaʕa ‘to raise’ₜᵣns  
madda ‘to extend’ₜᵣns  
nafara ‘to spread’ₜᵣns

irtafaʕa ‘to rise’ᵣᵢₜ  
intadda ‘to extend’ᵣᵢₜ  
intafara ‘to spread’ᵣᵢₜ

The subject of the verbs in (23) need not be animate, but it appears that rising and expanding are movements in an unmarked or positive direction, and these actions are viewed as being carried out by the subject, while lowering and receding are actions that are undergone. Other iftaʕala verbs describe changes of orientation or configuration, translocation, and non-translational motion, or motion on the spot.

(24)  
lafata ‘to turn’ₜᵣns  
saffa ‘to put in a line’ₜᵣns  
lawaa ‘to bend, turn’ₜᵣns  
naqala ‘to relocate to’ₜᵣns  
hazza ‘to shake’ₜᵣns  
iltfata ‘to turn’ᵣᵢₜ  
istaffa ‘to form a line’ᵣᵢₜ  
iltawa ‘to turn, twist’ᵣᵢₜ  
intaqala ‘to relocate to’ᵩᵢₜ  
ihzaza ‘to shake’ᵣᵢₜ

Some of the actions described by the iftaʕala verbs in (24) correspond to Kemmer’s (1993) category of motor manipulation of the body, where the subject takes on a new configuration or orientation. In the unmarked verb the relevant configuration or movement is conceptualized in a prototypical initiator–endpoint relation where the party that instigates the change is more prominent than the party to whom the change applies. In the reflexive verb the configuration or motion falls on the party that initiates the action, and hence the prototypical distinction between a prominent initiator and a backgrounded endpoint role is eliminated.

The choice of /n/ or /t/ to mark reflexivity therefore depends on the meaning component framed in the verb. Instances of division or dissolution are less likely to be viewed as happening under the control of the subject, and the reflexive verb is marked with /n/*. Actions on the body require an agent, and are marked with /t/*. Between these two extremes on the agency continuum are actions involving certain types of downward motion, decline, and recession, and others involving upward motion, extension, and changes of configuration. Reflexive verbs describing the former actions tend to be marked with /n/*, while those describing the latter are marked with /t/*.

Irrespective of the choice of affix, however, all of the reflexive verbs discussed so far in this chapter can be explained under an analysis in which a reflexive pronoun is reduced and attached to a base verb. When this happens, the reduced pronoun either adds a beneficiary role that is assigned to the subject, or it takes the endpoint role that falls on the object of the unmarked verb, assigning this to the subject instead. Since affixation can explain the existence of these verbs, there is no need to argue for a verb pattern that carries meaning. Affixation alone cannot account for all reflexive verbs, however, and so Section 4.4 presents the case for an independent verb pattern.
4.4 A verb pattern

My contention in this section is that the incorporation of a reduced reflexive pronoun into an unmarked verb results in a verb pattern that becomes associated with a reflexive semantic structure. Bybee (2003: 148) asserts that all grammatical morphemes develop from full words. As an example she traces the development of the English suffix -ly to the Old English noun liç ‘body’. Through repeated appearances in compound nouns like mann-liç ‘having the appearance or body of a man’, two things have happened to this full noun. In terms of form, it has been reduced to the suffix form -ly that we see today in English manly, and in terms of meaning it has lost its original denotation of ‘body’. Its meaning has become generalized, contributing a meaning akin to ‘appearance of x’ or ‘fashion of x’, where x is the meaning of the word to which it attaches. In turn, this generalization enables the affix to attach to a greater range of base words. Hence English quickly or disappointingly clearly cannot be paraphrased as ‘quick body’ or ‘disappointing body’, because the function of the affix has changed as a result of grammaticalization. It is detached from the meaning once assigned to the full-form word, taking on the semantic function that the full word was once used to fill in compound words. My argument is that this same process has resulted in the verb patterns of Arabic. A full reflexive pronoun attached to a number of verbs as an affix, and the resulting shape of those verbs, including the affix, became associated with actions that begin and end with the same event participant (after Kemmer 1993). Due to this association, the pattern is no longer dependent on a transitive base verb. It may take other base words, incorporating and augmenting their meaning, or it may simply mark the reflexive nature of an underived verb, which previously went unmarked. This argument applies primarily to pattern VIII iftaşala, since infaṣala alternates with pattern I faṣala almost exclusively.

4.4.1 Denominals

Denominal iftaşala verbs reflect the incorporation of a ‘thing’ into a more complex semantic structure (cf. Clark and Clark 1979). Examples are given in (25).

(25) ʃunuq ‘neck’  iʃtanaqa ‘to embrace’ trns
lihya ‘beard’  iltahäuser ‘to grow a beard’ int
ridaa? ‘robe, garment’  iɾtadaa ‘to get dressed, wear’ int/ trns
diθaar ‘blanket, cover’  iddaθara ‘to cover up’ int
hiɾfa ‘profession, craft’  ihtarafa ‘to take as a profession’ trns
ʃaada ‘custom, habit, norm’  iʃtaada ‘to get accustomed to’ obl

The subject of the verbs in (25), as a result of its own action, is a recipient of the thing denoted by the base noun. Each respective event has a reflexive structure, since an agent both acts and receives something, but the agent of each verb is clearly not
supplied by the base. It is reasonable to conclude that *iqtatāfa* ‘to cut for oneself’ is created by adding a reduced reflexive pronoun to *qatāfa* ‘to cut’, where the base verb is agentive and the added pronoun supplies a beneficiary role, but the same argument cannot work here. There is no agent in the nominal base, so both the agent and the recipient roles construed by the reflexive verbs in (25) must be associated with the verb pattern *iftašala*. It seems that the shape of verbs like *iqtatāfa* has become associated with the entire semantic structure of the verb, becoming a pattern that can take base nouns as well.

The verb *ištanaqa* ‘to embrace’ is used today for non-reciprocated embraces: of religion, ideas, and so on, but was once used for a situation where the subject literally takes the neck of the object. Ibn Manzūur (*c. 1300*) points out that this taking by the neck may take place *fī i l-harb* ‘in war’ or *fī i l-mawadda* ‘in friendship’. As the verb has been used in new contexts over time its reflexive nature remains, since to embrace something is still to bring it to oneself, while the relevance of the base noun *ʕunuq* ‘neck’ has faded. The semantic structure construed by this verb is the same as that of *iqtatāfa* ‘to cut for oneself’, where the subject acts on a theme, which moves towards it as a result. The difference is that the base is not itself an action, but the theme that is caused to move. This is diagrammed in (26).

![Diagram](image)

In his analysis of English denominals, Jackendoff (1990) discusses ‘incorporated theme’ verbs of transfer, where the name of the item transferred is used to describe the entire relation. An example is English *we buttered the bread*, where a thing, butter, is incorporated into a three-participant relation, serving as the theme that is transferred by the subject to the object. The Arabic verbs in (25) are examples of reflexive incorporated theme verbs. If there is a grammatical object, it shares the theme role with the incorporated noun: the object of *ištanaqa* ‘to embrace’ is taken by the neck, and the object of *irtadaa* ‘to wear’ can be anything on condition that it can conceivably be viewed as a *ridaaʔ* ‘garment’. Similarly, the object of *ihṭarafa* ‘to take as a profession’ could be any type of behavior, but will be understood as a *hirfa* ‘profession’. Jackendoff (1990) refers to this phenomenon as argument fusion, where an incorporated theme and an overt theme appear together, as in *we buttered the bread with creamy unsalted butter*. He proposes that the object of the *with* phrase here, *creamy unsalted butter*, fuses conceptually with the incorporated theme *butter*, and this places restrictions on the overt theme that require it to be a buttery substance. It is for this reason that sentences like *we buttered the bread with jam* are unacceptable. In the same vein, the oblique object of pattern VIII *ištadada* ‘to get
acquainted to’ is understood as any repeated experience since this is what the incorporated theme šaad ‘custom, habit, norm’ denotes.

All of the verbs in (25) therefore construe the semantic structure diagrammed in (26), and what differs is the nature of the incorporated theme. Such verbs cannot come about by the kind of affixation discussed in Section 4.3, since this modifies the semantic structure of the base by adding a beneficiary role that is merged with its agent, or by making the endpoint role of the base as prominent as its initiator role. Rather, the verb pattern itself denotes both the initiator and endpoint roles here, representing a structure that is simply flavored or fleshed out by the incorporated noun.

4.4.2 Result states

The affixation of reflexive /t/ to transitive verbs like raafa ‘to raise’, resulting in irtaafa ‘to rise’, creates a verb pattern associated with what Rappaport Hovav and Levin (1998) term an internally caused result state. This is a state that comes about under the control of the affected party, rather than being caused by the action of a separate agent. In the case of irtaafa, the base verb raafa describes an externally caused result state, and reflexivization results in an alternation. Other iftaala verbs are derived from simple states, however, and not from result state verbs. Examples are given in (27).

<table>
<thead>
<tr>
<th>(27)</th>
<th>kamala</th>
<th>‘to be complete’</th>
<th>kaamil</th>
<th>‘complete’</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>wasufa</td>
<td>‘to be wide’</td>
<td>waasif</td>
<td>‘wide, spacious’</td>
</tr>
<tr>
<td></td>
<td>wadaha</td>
<td>‘to be clear’</td>
<td>waadih</td>
<td>‘clear’</td>
</tr>
<tr>
<td></td>
<td>xafiya</td>
<td>‘to be invisible’</td>
<td>xaﬁi</td>
<td>‘invisible’</td>
</tr>
<tr>
<td></td>
<td>qaruba</td>
<td>‘to be near’</td>
<td>qariib</td>
<td>‘near’</td>
</tr>
<tr>
<td></td>
<td>ba̱uda</td>
<td>‘to be far’</td>
<td>ba̱iid</td>
<td>‘far’</td>
</tr>
</tbody>
</table>

It is not possible to state with any certainty whether the source word for the derived iftaala verbs in (27) is the pattern I verb or the corresponding adjective derived from it, whether formed in the active participle pattern fua’il or in the pattern faa’il. In either case, however, the subject of the iftaala verb enters the state associated with the base. Participles formed from these verbs therefore always describe something that is changing or has changed: muqtarib is something that is approaching or has come near, and muxtaﬁin is something that has vanished. Derivation here
reframes the meaning component of the base in a reflexive initiator–endpoint structure. The initiator brings a change about, and that change falls on the endpoint. Since both roles are equally prominent, the result is a verb whose subject changes under its own steam.

The *iftaʕala* verbs *irtafaʕa* ‘to rise’ and *iqtaraba* ‘to approach’ bear reflexive marking, therefore, because they both denote changes of state in which there is no distinction between the party that brings the change about and the party that enters the state. In the first case, where the base *rafaʕa* ‘to raise’ is a verb that already construes initiator and endpoint roles, a reflexive marker takes the endpoint role of the base and assigns it to the subject. In the second instance, the base *qaruba* ‘to be near’ just construes an entity in a state, and neither the initiator nor the affected endpoint role present in the derived verb are supplied by the base. The conclusion is that verbs like *irtafaʕa* have given rise to the verb pattern *iftaʕala*, which has become associated with an internally caused change of state. The pattern is then able to mark this feature wherever it is found, and does not rely on a base word to provide two distinct semantic roles that it then reflexivizes.

4.4.3 Verb building

Several *iftaʕala* verbs incorporate a simpler verb, yet unlike those in Section 4.3.1 their meaning cannot be explained as the addition of a beneficiary argument to a base. An example is *istamaʕa* ‘to listen to’, which contrasts with *samiʕa* ‘to hear’ in that the subject not only receives an audio stimulus, but is actively engaged, focusing on a sound in addition to receiving it. Pattern I *samiʕa* ‘to hear’ is a relation consisting of an audio stimulus and a recipient, an endpoint role that is realized as subject, as shown in (28).

(28) sound recipient

In *istamaʕa* ‘to listen to’ this structure is incorporated into a reflexive structure where an agent actively takes in the sound, as diagrammed in (29).

(29) agent sound recipient

An account in which a verb pattern marks a semantic structure is able to explain why reflexive marking seems to add a beneficiary or recipient in some cases, an agent in others, and both of these roles in the case of denominal verbs. The pattern is not
really adding anything, but rather it marks a reflexive structure that incorporates the simpler concept denoted by the base.

In many cases the difference between a pattern I verb and an iftaṣala verb derived from it is that the latter denotes possession or ownership. Possession involves a locative element, since the possessed item is located in the domain of the possessor, and its linguistic expression draws on what Herslund and Baron (2001) call basic lexico-grammatical structures. Essentially there are two ways to construe the fact that A is located at B: with a preposition, or with a verb. With a preposition, A is at B, while with a verb the opposite is construed, B has A. For one type of possession Arabic employs the preposition method while English employs a verb, as illustrated in (30).

(30) a. "I have a car."  
   ʿInd-ii sayyaarat-un  
   at-me car-NOM

b. "She has a cold."  
   ʿInda-ha barad-un  
   at-her cold-NOM

The contrast between Arabic and English in (30) illustrates the fact that the exact same locative configuration can be construed as either an A–B or a B–A relation. There is a second stronger type of possession however: ownership, which subsumes the locative configuration expressed in (30). Ownership is what Heine (1997) views as prototypical possession. A locative situation like John has a headache is ultimately a simple association between a thing and a location. Ownership is different because the possessor exercises some kind of control over the possessed. Taylor (1999) elaborates on the nature of this control, viewing the possessor as enjoying a privileged right of access to something. Viewed in this light, ownership consists of a control relation from possessor to possessed, and a locative relation from possessed to possessor.

The reflexive verbs in (32) construe this possessor–possessed relation, which is fleshed out with the semantic content of a less complex verb.

(32)  
   hafiza   ‘to memorize, to protect’ trns  
   ḫalla   ‘to reside in’ trns  
   ḥadara   ‘to come, attend’ trns/obl

   ihtafaṣa   ‘to keep for oneself’ obl  
   ihtalla   ‘to occupy’ trns  
   ihtadara   ‘to overcome’ trns
The subject of pattern I *hafiza* 'to memorize, protect' internalizes the object mentally or metaphorically, having it in its protection, but the subject does not possess the object or exercise a special right of ownership over it like the subject of marked *ihṭafaza* 'to keep for oneself'. The difference between the two verbs is exemplified in (33).

(33) a. حفظ القرآن

*hafiza* al-qur’aan

memorized[3MSG] the-quran

‘He memorized the Quran.’

b. احتفظ بالقرآن

*ihṭafaza* bi-l-qur’aan

kept[3MSG] of-the-quran

‘He kept the Quran with him.’

The verb in (33a) describes an event of internalization, while the reflexive verb in (33b) denotes an action in which an agent exercises control over the object, causing it to remain in his possession.

The pattern VIII verbs *ihṭalla* ‘to occupy’ and *ihṭadara* ‘to overcome’ both incorporate the locative relation described by their unmarked counterparts *halla* ‘to reside in’ and *ḥadara* ‘to attend’ into the larger structure diagrammed in (31). With *halla/ihṭalla* ‘to reside in/occupy’ the subject is located in a place in the first instance, but it possesses that place in the second. The verb *ihṭadara* is rare in the active voice, but the example in (34) illustrates its meaning.

(34) احترضه الهَمُّ وتخاليه الشوق

*iḥṭadara-hu l-hamm-u wa-taxaaladža-hu*

overcame[3MSG]-him the-anxiety-NOM and distracted[3MSG]-him

ْf-*fawq-u*
the-desire-NOM

‘Anxiety overcame him, and desire distracted him.’

Whereas the subject of *ḥadara* ‘to attend’ is simply located at the object, the subject of *iḥṭadara* above, anxiety, takes the object into its control. More commonly, the verb occurs as passive *uḥṭudira* ‘to die’, where the subject is attended and taken by God.

The verbs in this section therefore construe a type of taking, an event of transfer in which the agent and recipient roles are filled by the same entity, and this structure is denoted by the verb pattern. The semantic content of the simpler base verb is reframed in this reflexive structure, gaining an initiating agent in some cases, or a recipient in others. The result is a meaning contrast between the base and the marked verb, but such a difference in meaning is not always found. Section 4.4.4 examines *iḥtaSala* verbs that do not differ in meaning from the unmarked base.

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3 BYU: Zamakhshiri:Section1:BAAB:17:PARA:39:Name:AlxAC.
4.4.4 Consistent marking

Reflexive marking frequently results in a contrast between an unmarked verb that denotes a change occurring under the control of an external agent, and a marked verb where the relevant change occurs spontaneously. One type of meaning component that is framed in these two separate structures is a kind of configuration like *bend* or *curve*. These meaning components are not configurations that can only be inflicted on one party by another, and neither are they configurations that can only occur under the control of the party that experiences the change. They are semantically neutral. As such, they are framed in a prototypical semantic structure denoted by pattern I *faːla*, and in the reflexive structure that is derived from it, denoted by *IFTaːla*. Other meaning components are not semantically neutral. For example, *smile* is a type of facial configuration that occurs under the control of the smiler, who alters his or her own facial muscles. This type of meaning component is not presented with an external causer in pattern I *faːla*. However, in some cases a reflexive verb with the same meaning as the unmarked verb exists. Two examples are shown in (35), where only one translation is given since both verbs share the same meaning.

(35) *basama* *ibtasama* ‘to smile’
    *dadʒaː* *idtadʒaː* ‘to lie down’

*Smile* and *lie down* result in facial or bodily configurations that fall on the party that brings them about and the unmarked verb is therefore intransitive. The addition of /t/ to the unmarked verb is unnecessary here, since it does not mark a change in meaning. Instead, the marking occurs because the pattern has become associated with an internally caused change of configuration, where an agent acts and takes on a new position as a result. Since the pattern is used to denote this semantic structure elsewhere in the language, it is also used with the verbs in (35). It adds nothing, but it ensures that the same types of event are marked consistently. Haiman (1983, 1985) refers to this type of unnecessary linguistic marking as iconic motivation: pressure to code a certain feature consistently throughout a language, which competes with economic motivation: pressure to simplify linguistic structure (see also Kemmer 1993: 48–9).

This type of consistent marking, where an unmarked and a marked verb construe the same meaning, is rare in Arabic when the base verb is intransitive. It is more common, however, with transitive verbs that construe two-participant relations that are inherently reflexive. To illustrate what ‘inherently reflexive’ means, consider the English verbs in (36).

(36) John picked up a rock.
    Steve lawyered up (i.e. got himself a lawyer).
    Mary hijacked a bus.

The verbs in (36) all describe events where one participant brings the second into its possession. Such situations are reflexive, but the verbs are not derived from some
non-reflexive counterpart. A relatively large number of iftaʕala verbs describe similar events. They are not derived from any base, and frequently overlap in meaning with an unmarked verb. They may be explained by the development of a verb pattern, which once created is then used to mark reflexivity wherever it is found. Many inherent reflexives construe events of taking and situations of possession. In (37) there is no difference in meaning between the marked and unmarked verb.

(37) ɡaala ʿiɡtaala ‘to seize, assassinate’  trns
xaṭafa ʾixtaṭafa ‘to seize, hijack, kidnap’  trns
laqata ʿiltaqaṭa ‘to gather, pick up’  trns
ḥadana ʾiḥtaḍana ‘take in one’s arms’  trns
ṣaada ʾiṣṭaada ‘to catch; to hunt’  trns
farasa ʿiftarasa ‘to prey on’  trns
ḥakara ʾiḥtaḍara ‘to monopolize’  trns
ḥaaza ʾiḥtaaza ‘to possess’  trns
malaka ʾimtalaka ‘to own; rule’  trns
qaada ʾiqtaada ‘to drive; to lead’  trns
dḥada ʾidṭhada ‘persecute; enslave’  trns
ɡašaba ʾiɡtasaba ‘to rape; violate’  trns

Many of the unmarked verbs in (37) are no longer used in Modern Standard Arabic, where the iftaʕala variant dominates. Some unmarked forms, such as xaṭafa ‘to seize’ and laqata ‘to pick up’, are more common in spoken dialects, but no generalization can be drawn regarding a general preference for one pattern over the other, since the dialects also employ many marked verbs.

Unmarked ɡaala ‘to seize’ gives rise to the derived noun ɡuul ‘ghoul’, an evil spirit that carries out the reflexive action of robbing graves and snatching bodies. The marking of this verb, resulting in ʾiɡtaala, simply codes the reflexive action that is already construed by the unmarked base. This is not derivation, but rather consistent marking. The pattern adds no semantic roles here, it just spells out what is left implicit by the unmarked variant. The original reflexive nature of ʾiɡtaala is less relevant in modern usage, where the verb typically means ‘assassinate’. It once described the action of lying in wait, grabbing, and killing a victim, as the explanation from Ibn Manzuur (c.1300) in (38) makes clear.

(38) ʿan yu-xdaʔ al-ʔinsaan ḥataa ya-šiir ila makaan
to 3MSG-be tricked the-person so that 3MSG-become to place
qad istaxfaam la-hu fii-hi man ya-qṭul-u-hu
has hid[3MSG] for-him in-it who 3MSG-kill-him
‘For a person to be tricked so that he comes to a place where someone is lying in wait to kill him.’
This action is reflexive because the subject must physically take the object. Today, where acts of assassination no longer require physically overpowering a victim, this earlier ‘take’ flavor is gone. The subject of all the verbs in (37) either takes or attempts to take the object into its possession, enjoys a certain right to it, or actively exercises some type of dominance over it. The verbs instantiate a ‘take’ relation, or a ‘control’ relation in which the subject in some way has the object. Other verbs that have become marked with /t/ describe acts of taking or seeking that need not be physical.

(39) haadha (archaic) ihtaadha ‘to need’ obl
fahaa ifsahaa ‘to crave’ trns
xaara ixtaara ‘to choose’ trns

Archaic haadha ‘to need’ frames a notion of necessity, where some property of the subject causes the object to be necessary, not in general, but specifically for the subject. Similarly, the subject of fahaa ‘to crave’ requires the object, willing it to come into his or her possession. These verbs illustrate that in addition to physical acts of taking, mental and emotional acts may also be reflexive. The unmarked verb xaara ‘to choose’ is the base of the noun xayr ‘best, choicest’, and the notion BEST is the core meaning of the verb, since the chooser must assess at least two possibilities and take the best one (cf. Kemmer 1993: 80). A prototypical act of choosing may be imagined as a gesture where one party reaches out and brings another towards it from a set or line of possibilities, like choosing a book from a shelf of books, but it can also be a mental activity. Further instances of ‘mental taking’ are construed by the verbs in (40).

(40) šābara ‘to consider’ (archaic) ištābara ‘to consider’ ditrns
xabara ‘to test’ trns
iztābara ‘to test’ trns
nazara ‘to look at, watch’ trns/obl
intazara ‘to look out for, await’ trns
raqaba ‘to look at, monitor’ trns
irtaqaba ‘to look out for, await’ trns

Modern uses of ištābara ‘to consider’ are similar to those of English consider. An example in context is given in (41).

(41) 4 يعترفونا إهانة
ya-štabir-uuna-ha ʔihaamat-an
3M-consider-PL-it insult-ACC
‘They consider it an insult.’

There is a reflexive quality to the event described in (41), whereby the subject mentally takes in the object in a type of evaluation, similar to English they took it as an insult. This type of ‘cognitive taking’ is clear in the early use of unmarked šābara, which is ya-šbir in the imperfective, listed by Ibn Manzuur as equivalent in meaning to ištābara.

The subject of the verbs šabara and ifšabara in (42) does not simply look at the book, but scours it, extracting information bit by bit in order to understand the book’s content. The subject is therefore an agent that causes information to come to it. English consider seems to have originally described a similar cognitive process of taking in, ultimately developing from the morpheme con attached to sidus ‘constellation’. This produced a verb which literally meant ‘examine the stars’ in a search for meaning, referring to the Roman practice of divination (Barnhart and Steinmetz 1988). According to Ayto (1993) the ‘think it over’ meaning assigned to the English verb consider today dates back only to the sixteenth century. Thus both the Arabic and the English verbs appear to have once described the extraction of information: a reflexive action where an agent acts and receives.

The seeking of information is also discernable in the verb ixtabara ‘to test’, which is simply the verb xabar with additional marking. The unmarked verb is the base for the noun xabar ‘information, news’. To test something is an attempt to learn specific information about it, and so the subject acts on the object in order to extract this knowledge, which it then comes to possess.

Other reflexive verbs come about because certain uses of an unmarked verb denote reflexive actions, and the unmarked verb becomes marked in only those uses. An example is intazara ‘to look out for, await’. There is nothing inherently reflexive about the meaning of unmarked nazara, which can be used with the preposition ʔila ‘to’, to express ‘look at’. This is a perception verb where the subject directs his or her attention towards an object. Another use appears to have once been more similar to English monitor, however, and it is this use that now receives reflexive marking. Ibn Manzuur states that nazara and intazara are one and the same, both meaning ‘to stand (waqaafa) and contemplate something (taʔammala)’. He also states that raqaba, irtaqaba, and intazara all have a similar meaning to rašada ‘to monitor, keep an eye on’. The unmarked verb nazara therefore once had at least two uses, ‘to look at’ and ‘to monitor’, and came to be marked with /t/ in its ‘monitor’ use, when describing an action in which the subject not only looks at something, but scans it for information. The ‘await’ meaning of both intazara and irtaqaba has developed from their earlier ‘monitor’ meaning, and English wait has followed a similar path. Ayto (1993) traces
wait to Old Northern French *waitier‘look, spy’, used in the sense of keeping watch on enemy movements and being ready for signs of attack. This involves a state of anticipation and readiness that is still implicit in *wait*, while the original association with physically keeping watch need not always apply.

In sum, reflexive marking with */t/* appears on verbs that describe reflexive events. In some cases an unmarked verb has fallen out of use where the marked variant has taken over. An example is *gaala‘to seize, assassinate’, which has been replaced by marked *igtala*, of the same meaning. Other unmarked verbs were once used to cover reflexive and non-reflexive situations. An example is *naẓara*, which could mean ‘to look at’, whose subject makes visual contact with the object, or ‘to monitor’, where the subject scours the object for some type of sign. This latter use is reflexive since something potentially returns to the subject, and the verb has become marked with */t/*, resulting in *intazara‘to look out for, await*. This marked verb has replaced unmarked *naẓara* in this use only, while the unmarked verb remains current in its ‘look at’ use.

4.5 Summary and conclusion

The data presented in this chapter illustrate that some reflexive verbs can be analyzed as arising when a reduced reflexive pronoun attaches to a base verb. In such cases the reduced pronoun has the effect of co-indexing agent and patient roles present in the base verb, or it functions as an added beneficiary, also co-indexed with the agent of the base. Other reflexive verbs cannot be analyzed in this way. The reflexive marker in *istanaqa*‘to take by the neck, to embrace’ represents a co-indexed agent and recipient or goal-like argument, but neither of these are present in the base word *ʕunuq*‘neck’. Similarly, the subject of *istamaʕa*‘to listen to’ is an agent and a recipient, but it is the recipient, not the agent, that is present in the base verb *samiʕa*‘to hear’. With these verbs the reflexive marking represents an entire semantic structure, rather than simply sitting in an endpoint role co-indexed with the agent of the base. Reflexive marking also occurs on basic underived verbs that were once unmarked, and the reason is that these unmarked verbs, or at least certain uses of them, construe reflexive actions whereby something is directed at the subject. Based on this, I have argued here that some instances of reflexivization have created a verb pattern that is recognized as meaning-bearing independently of any particular verb, marking a reflexive semantic structure that may be fleshed out with a variety of base words, or which may be inherent in a base word already. The pattern is created by grammaticalization, a process in which full words are reduced, losing their lexical meaning and becoming grammatical markers instead.

This conclusion mirrors the well-documented observation that syntactic clause-level structures carry meaning independently of the words they house. Goldberg (1992, 1995, 1998) notes that the meaning attributed to a clause is usually assumed to
be determined by the main verb, but that this cannot be the case in all syntactic constructions. Caused motion does not seem to be an inherent property of the verb *sneeze*, but this is what is construed in (43), which Goldberg (1998: 204) attributes to Ahrens (1995).

(43)  Pat sneezed the foam off the cappuccino.

Goldberg notes that if the main verb is held to be responsible for the form and meaning of a sentence, a special sense of *sneeze* would need to be proposed here. She concludes that some of the meaning understood from the sentence in (43) should be attributed to the construction itself. That is, there is a linguistic pattern in English which may be paraphrased as shown in (44), where $x$, $y$, and $z$ are variables standing in for noun phrases, and this pattern itself construes the concept of caused motion.

(44)  $x$ verb $y$ preposition $z$

This formal pattern is a construction of the language, and Goldberg views language as consisting of a variety of these constructions, which may host words, like *sneeze*, that are not themselves associated with the larger meaning attributed to the construction. Some English verbs like *push* already lexicalize some type of caused motion, while others like *sneeze* do not, but can still flavor a caused motion construction. Borer (2005a, 2005b, 2013) makes a similar point with her argument that events have a conceptual structure represented at the level of the clause, and that vocabulary is used to represent meaning within that structure. She exemplifies this using the data from Clark and Clark (1979), where the verb *siren* appears in different contexts.

(45)  The factory horns sirened throughout the day.
  The factory horns sirened midday and everyone broke for lunch.
  The police car sirened the Porsche to a stop.
  The police car sirened up to the accident site.
  The police car sirened the daylight out of me. (Borer 2013: 26)

Borer argues for five different types of event which all involve the emission of a siren sound. The structure of each event is represented by the clause as a whole. For example, an event in which one party, a police car in this example, forces another to a stop, is represented by the clause *the police car __________ the Porsche to a stop*, and numerous verbs may be used to specify how exactly the stopping was brought about. Different verbs may be used to add semantic content to this structure: *sirened*; *flashed*; *bullied*; *bumped*; *fire-bombed*, and so on, but it is the structure itself that is associated with the concept of one party causing another to do something. It is not that all these different meanings reside within the verb *siren*, therefore, but rather that verbs are used to represent semantic content in larger structures, and meaning is assigned to the combination of verb and structure together.
This same principle of structure construing meaning is found not just at the level of the clause in Arabic, but also at the level of the word. Pattern VIII *iftalala* denotes a reflexive structure that is fleshed out by actions, states, and ‘things’ expressed as simpler verbs and nouns. The implication of this for the analysis of the other verb patterns is that any pattern containing reflexive /t/ denotes a structure where an initiator and endpoint are equally prominent, and it need not be the case that a corresponding non-reflexive verb exists.
5

Symmetry

5.1 Introduction

Chapters 3 and 4 have established that an unmarked Arabic verb denotes an asymmetric relation with a focused initiator, and that some relations deviate from this prototype, perhaps because the most prominent participant is an endpoint role, or because both initiator and endpoint roles are focused. This chapter examines a third way in which a semantic structure can diverge from the prototype: by being symmetric. My argument is that the long vowel /aa/ in pattern III faaʕala and in its reflexive counterpart pattern VI faaʕala is a marker of symmetry, and I aim to show that this realization enables a unified account of verbs describing a diverse range of seemingly unrelated situations. Outside of Arabic, it is often noted that reciprocal relations are symmetric (Lakoff and Peters 1993; König and Kokutani 2006; Dimitriadis 2008; Evans 2008; Siloni 2012), but that reciprocal marking also frequently marks other features such as collectivity and repetition (Lichtenberk 1985, 1999; Epps 2011). A related aim here is to explain this fact by pointing out that reciprocity is not a master category in and of itself, but rather one specific instantiation of a symmetrical structure that underlies a much larger number of ‘non-reciprocal’ situations as well.

In Section 5.2 I present a symmetric structure consisting of two complementary forces, in the sense of Talmy (1988), and I illustrate that one of the two semantic roles inherent in this model may be more prominent than the other. I then show that the long vowel /aa/ is a marker of this symmetric organization, and that faaʕala verbs describe situations of resistance, where the subject exerts energy that is counter to that exerted by another party; risk, where the subject is countered by a force that threatens to take away a stake; competition, where the subject vies with the object; and a number of related situation types in which the subject partners with the object in an activity. In Section 5.3 I move to symmetric events in which two semantic roles are equally prominent. These are construed by verbs of the pattern tafaaʕala, which describe reciprocal situations of opposition, equality, or interaction; what I term counterfactual situations, where an event participant feigns a state that is counter to its real state; co-action and chaining situations,
where equal parties partner or follow each other respectively; and progressive change, where one participant increases or decreases in a cyclical fashion relative to a prior version of itself. Having illustrated how a symmetric model can account for this diverse range of Arabic verbs under one analysis, I conclude in Section 5.4 with a discussion of the crosslinguistic validity of the approach developed here.

5.2 Symmetry

We saw in Chapter 3 that a prototypical transitive relation like kill consists of one participant exerting a force that is absorbed by another. There are two types of asymmetry here. First, the flow of energy is asymmetric since it travels only in one direction. Second, the prominence of the participant roles involved is also asymmetric because one, the killer, is focused, acting with reference to the second, the killed (Langacker 1990). A symmetric semantic structure deviates from this prototype in that there are now two abstract forces, each mirroring the other. The diagram in (1) is adapted from Lichtenberk’s (1985: 21) representation of reciprocal situations (see also Lyons 1977: 19; Kemmer 1993: 128).

(1)

Each of the participant roles in (1) is both an initiator that exerts a relational force towards the other, and an endpoint that absorbs the force of its counterpart (cf. Kemmer 1993). The structure is bi-directional and the asymmetric flow of energy characteristic of prototypical transitivity is lost. At the same time, the prominence awarded to these roles remains asymmetric: one role and the force it exerts is profiled against the background of the other. Talmy (1975: 420–1) accounts for an asymmetric slant on what is ultimately a symmetric notion with reference to a Figure–Ground orientation, whereby one party with a fixed location serves as the Ground: a reference point for a moving or potentially moveable Figure. For example, in the sentences in (2) a distance separates two entities, and this spatial configuration is symmetric because if A is near B, it is necessarily the case that B is also near A. However, in each case the inherent symmetry is presented as a Figure–Ground relation.

(2) a. The bike is near the house.
   b. The house is near the bike.

In (2a), the house serves as a fixed point, the Ground, by which the bike, the Figure, is located. The relation is reversed in (2b), which is odd because it conflicts with real-life experience in which moveable entities are typically located with reference to fixed points. The diagram in (1) captures both the underlying symmetry of this situation,
and the surface asymmetry, and in this chapter I expand the notion of a symmetric relation in which one party is Figure, and the other Ground, to cover any opposition or interaction in which one role is more prominent. By way of illustration, certain English verbs instantiate this symmetric structure.

(3) John interviewed Terry about his involvement in the coup.
    John equaled Terry in intelligence, but not in determination.
    John defended Terry from a pack of wild dogs.

The verb *interview* describes an interaction: the interviewer acts in relation to the interviewee and vice versa. Clearly however, the interviewer role is foregrounded. The action of the subject entails a response directed towards it by an animate being, but these two participant roles are not equally prominent. The use of *equal* in (3) is also asymmetric on the surface, because John is focused with respect to Terry, while the abstract concept *equal* before the roles it comprises are assigned in a specific situation, is symmetric. English *defend* construes an opposition in which the subject exerts a force against an attacker, implicit or overt, and meets a counterforce emanating from it. This struggle between defender and attacker is symmetric, but the role of the defender, and the force it exerts, is focused, while the attacker, although integral to the concept *defend*, is secondary. The third party here, the target of the attacker, is not involved in the symmetrical struggle itself. This is diagrammed in (4).

(4) ![Diagram](target defender attacker)

Note that the second participant role inherent in the symmetry, the attacker in (4), is not realized as the object of the verb, which is assigned the target role. This does not change the fact that the subject exerts one force and faces a counterforce however. A *defend* relation therefore itself consists of two sub-relations, neither of which can be considered an instance of defending on its own, but which are both integral to the concept.

My argument in what follows is that symmetry is discernable in all situations described by pattern III *faašala* and pattern VI *tafaašala* verbs (cf. LeTourneau 1997). Fassi Fehri (2012: 118) asserts that some *faašala* verbs construe events that are ‘collectively or distributively performed by a distributive plural agent, which surfaces in two argument positions, as subject and object, hence the transitivity’. It is my contention that Fassi Fehri’s observation can be extended to account for all *faašala* verbs, even those which do not obviously describe collective events, since collectivity is only one of several ways in which symmetry may be manifest. My argument that the long vowel /aa/ is a marker of symmetry need not
necessarily contradict Danks (2011), who argues that the function of the vowel lengthening patterns is to produce atelic verbs (describing actions that can continue indefinitely). Danks’ analysis is certainly valid. For example, pattern I qatala ‘to kill’ describes a punctual bounded action, while transitive qaatala ‘to fight’ and its intransitive reflexive form taqaatala both construe events that can continue indefinitely. I differ from Danks, however, in that I do not view the marking of atelicity as being the ultimate function of these verb patterns. Rather, the atelic nature of many pattern III and VI verbs is a consequence of symmetry. An event in which two parties engage in a back-and-forth interaction is always symmetric, and frequently, but not always, atelic. Hence taḍaaraba ‘to hit each other’ describes a symmetric exchange of blows that may be a punctual single exchange, or an unbounded event where multiple blows fly between participants. Only the latter possibility is atelic, but both are symmetric. The atelicity that Danks attributes to patterns III and VI, and the frequent association of those patterns with prolonged sustained activity, is achieved through symmetry therefore, which is present even when atelicity is lacking.

There are at least two possible origins for the long vowel /aa/ of faaʕala and tafaʕala. The first is that, just as reflexive morphemes typically develop from full reflexive pronouns, /aa/ was once a full word that conveyed the meaning ‘with’, or ‘together with’, that was reduced and incorporated into previously unmarked verbs. It is not inconceivable that some ancestor of idnaani ‘two’ or thunaʔa? ‘duo’ was once used at the level of the clause with a meaning similar to ‘with each other’ or ‘in tandem with’. Under such a scenario, an unmarked verb such as qatala ‘to kill’ would become qaatala ‘to fight’, perhaps originally used to describe mutual killing on the battlefield, when the freestanding word is reduced to /aa/ and attached directly to the verb, becoming grammaticalized. A second possibility is that the long vowel /aa/ arises due to reduplication of phonetic material of the base, hence the first /a/ of qatala is lengthened, resulting in qaatala. It is important to note, however, that while reduplication to mark a meaning contrast is common crosslinguistically (Rubino 2005), the vowel that is supposedly lengthened here is not present in the imperfective form. Strictly speaking, pattern I ya-qtul ‘to kill’ cannot become pattern III yu-qaatil ‘to fight’ through reduplication or vowel lengthening, since there is no short vowel /a/ in the base that can be extended. The vowel /aa/ would need to be inserted rather than lengthened, and this fact seems to favor the first possibility outlined above.

Regardless of the historical source of /aa/ however, its attachment to an unmarked verb has created a verb pattern associated with a symmetric semantic structure. A large number of verbs that instantiate this structure convey events of resistance, and the analysis in this chapter begins with these.

5.2.1 Resistance

Holes (2004a) and Wright (1859) observe that many pattern III verbs convey the effort or attempt of the subject to perform an action. This exertion of effort, I argue
here, results when the subject either resists or is resisted. In both cases there is a relation characterized by counterforce, which following Johnson (1987: 46) I define as the head-on meeting of two opposing forces. This is clearest when a faaʕala verb is compared to its faaʕala base verb, where no counterforce is present.

(5) qaama ‘to stand up’ int qaaawama ‘to stand up to; to resist’ trns qatala ‘to kill’ trns qataatala ‘to fight’ trns saaraʕa ‘to throw down’ trns saaraʕa ‘to wrestle; to struggle with’ trns tarada ‘to evict, throw out’ trns taarada ‘to chase’ trns mațala ‘to lengthen’ trns mațala ‘to delay, put off’ trns

Whereas the subject of qaama ‘to stand up’ simply exerts energy, in pattern III qaaawama ‘to stand up to’ this energy is aimed at a second party, which itself initiates an opposing force aimed at the subject. The concept resist consists of this opposition, but note that the verb is not reciprocal. While it is true that the subject and object are symmetrically opposed in an abstract sense, the verb qaaawama presents only the sub-relation headed by the subject, while the opposing sub-relation remains implicit. The same is true of qatala ‘to fight’ and saaraʕa ‘to wrestle’, which contrast with pattern I qatala ‘to kill’ and saaraʕa ‘to throw down’ in that the subject of the faaʕala verb attempts to perform an action on the object, and the object resists while attempting to perform that same action on the subject. As noted in the previous section, a likely path of development for qatala ‘to fight’ is that the verb was initially used to describe fighting on the battlefield, attempting to kill while also dodging an opponent, and subsequently became used in a wider range of contexts. Similarly, saaraʕa ‘to wrestle’ most likely originally described the attempt of the subject to throw down a resisting object, and then became used in other situations as well, such as wrestling a conscience, where the counterforce is still salient but the literal ‘throw down’ meaning associated with the base verb is bleached.

There is crosslinguistic evidence for this type of symmetric resistance verb. Enfield (2011) discusses what he terms a complementary reciprocal in Lao, spoken in Laos, Thailand, and Cambodia, that is marked by the same collective marker that marks reciprocity, kan3. It is used when participant roles are not the same but they ‘complement each other to make the situation complete’ (Enfield 2011: 140). In the example in (6), Enfield explains that two theatre actors are rolling around on the floor and one is attempting to remove the other’s tooth with a pair of pliers.

(6) lok3 khêew3 kan3

pull.out tooth coll

‘(They’re) pulling each other’s teeth out.’ (Enfield 2011: 141)

Enfield’s translation does not accurately capture the scene he describes, since it is not the case that each participant is attempting to pull out the teeth of the other. However, if the collective marker kan3 is reanalyzed as a marker of symmetry,
equivalent to the long vowel /aa/ in Arabic, the sentence above can be better translated as ‘he is pulling his tooth out and is meeting resistance’. In other words, the subject pulls and is opposed, and the exertion of effort here is the result of this opposition.

The base of the faʕala verbs in (5) is the simpler asymmetric pattern I verb, the meaning of which is augmented when reframed in a symmetric structure. The verbs taarada ‘to chase’ and maatala ‘to delay, put off’ incorporate the relations described by the respective pattern I verbs. With tarada ‘to evict’ and taarada ‘to chase’ the subject acts towards the object, but the object of the latter verb also evades the subject, and this evasive action is directly counter to the action of the subject towards it. Similarly, the subject of matala ‘to lengthen’ simply acts on the object, while with maatala ‘to put off’ the object is something that the subject should be doing, and the force it exerts takes the form of a responsibility or obligation directed at the subject, who exerts a counterforce, resisting what should be done.

In some cases the reframing of the conceptual content of the base verb involves the reorganization of its semantic roles. An example is given in (7).

(7) taalaba ‘to request’ trns taalaba ‘to demand from’ trns+obl

The example in (7) illustrates a frequent syntactic contrast between patterns I and III: the oblique object of pattern I is realized as a direct object in pattern III. This is demonstrated by the constructed examples in (8).

(8) a. طلبوا أوراقهم من الحكومة
    talab-uu ʔawraaq-a-hum min al-huкуumati
    requested-3mpl papers-ACC-their from the-government-GEN
   ‘They requested their papers from the government.’

   b. طالبوا الحكومة بأوراقهم
    taalab-uu ʔawraaq-i-him l-huкуumati
    demanded-3mpl the-government-ACC of-papers-GEN-their
   ‘They demanded (from) the government their papers.’

In (8a) the direct object of talaba ‘to request’ is the requested item, while the party receiving the request, the government, is an oblique object. This is reversed in (8b), where the government is the direct object of taalaba ‘to demand’, and the requested item is an oblique. Such a contrast is common crosslinguistically. Haspelmath and Sims (2010) observe that applicative affixes in several languages either create a new object, or shift a non-object to the object function. However, in the Arabic case at least, the different arrangement of arguments is accompanied by a meaning contrast. Only in (8b) above is there the expectation that the government will deny or continue to withhold the papers of the subject, and hence only in the faʕala verb does the subject meet resistance. The same basic meaning component is shared between these verbs but is structured differently in each case. The component consists of three semantic roles: a seeker, a sought, and a potential granter. Different events are perceived in which these
roles are organized in various configurations. When the most salient feature of an event is that someone wants something, the roles are structured in an asymmetric relation where the seeker requests the sought. This is described by pattern I talaba ‘to request’. The composition of this concept is diagrammed in (9), which shows the seeker in a relation with the sought, while the grantor is peripheral.

(9) 

seeker \rightarrow \text{sought} \rightarrow \text{grantor}

In a different type of event, a salient element is resistance: one party is at odds with another over something that has been or may be withheld. This opposition is conveyed by the derived verb taalaba ‘to demand from’, as illustrated in (10), which shows the seeker and the grantor in potential opposition.

(10)

seeker \leftrightarrow \text{grantor} \leftarrow \text{sought}

The asymmetric relation diagrammed in (9) is unmarked since it is in line with prototypical transitivity, and hence it is construed by an unmarked verb. The symmetric relation in (10) is marked because it diverges from the prototype, and the verb that conveys it is also marked, derived from the unmarked base through the infixation of the long vowel.

5.2.2 Risk

Any event of risk consists of at least a stake, and two parties that are opposed: one seeking to keep the stake, the other threatening to take it (see Fillmore and Atkins 1992 for a discussion of the other roles involved in an entire risk frame). To risk one’s life, for example, is to expose it to a danger that threatens to take it from you. The marked risk verbs in (11) all express the stake as an oblique object.

(11) rahana ‘to mortgage, pawn’ trns raahana ‘to bet’ int/trns+obl
qamara ‘to defeat in gambling’ trns qaamara ‘to gamble, bet’ int/trns +obl
xāṭura ‘to be dangerous’ (archaic) xaatara ‘to risk; to bet’ int/trns +obl

While the faafala verbs in (11) vary in meaning, what remains constant is that the subject seeks to keep the stake, and this runs counter to the threat emanating from a second participant, implicit or otherwise. In pattern I rahana ‘to mortgage, to pawn’ three participant roles are organized in a linear fashion, as shown in (12).

(12)

stake owner \rightarrow \text{stake} \rightarrow \text{stake taker}
The subject that owns the stake in (12) causes it to enter the possession of a potential stake taker, which holds it as some kind of security. The role of the stake is profiled by the derived noun *rahiina* 'hostage; security', where an owner and a taker are integral to the concept, but implicit. In pattern III *raahana* 'to bet', the stake owner is in direct opposition to the potential taker, as shown in (13).

![Diagram](image)

(13) stake owner stake taker

The verb need not appear with all of these participant roles overtly expressed, but they inhere nevertheless. When the verb is transitive, as in *raahana-nii* 'he bet me' the direct object is the potential stake taker. When it appears with an oblique, as in *raahana bi-bayt-i-hi* 'he bet his house', the stake taker remains implicit. A third possibility is that neither the stake nor the stake taker are expressed, as in *raahana *ʕala* 'he bet on (something)', but in this case too both arguments are present in the concept: a stake owner and a stake taker are opposed over a stake, and the 'something' that is bet upon will determine which party defeats the other.

The content of pattern I *xatura* 'to be dangerous, grave' is also reframed in the structure diagrammed in (13) to produce the concept conveyed by pattern III *xaatara* 'to risk'. The subject of *xatura* is in a state of danger or gravity, while the subject of *xaatara* 'to risk' is head-to-head with a dangerous or grave consequence that threatens its stake. While the conceptual content of these *faaʕala* verbs is considerably varied therefore, the way it is structured is identical.

### 5.2.3 Competition

A third type of pattern III verb describes competition or rivalry between the subject and the object.

(14) zaada ‘to increase’[^1] zaayada ‘to try to outdo or outbid’
daraba ‘to hit’ daaraba ‘to vie with’
xasama ‘to defeat’ xaasama ‘to feud with; to sue’
nafisa ‘to envy’ naafasa ‘to rival, compete with’

Rivalry is of course inherently symmetric, consisting of two mutually opposed participant roles. The exact nature of the rivalry is dependent on the semantic content framed in this symmetric relation. The base verb *zaada* ‘to increase, be

[^1]: 'int' for *intransitive*, 'trns' for *transitive*
more than’ frames the notion more, and this meaning component is reframed in derived zaayada ‘to try to outdo’ where the most prominent participant, the subject, exceeds another, but is then exceeded, so exceeds it again, and so on. The entire situation is a back-and-forth action of mutual exceeding, but the sub-relation headed by the subject is focused, while the action of the object is less prominent.

The semantic connection between daaraba ‘to vie with’ and the base verb daraba ‘to hit’ is not immediately obvious, but a situation where the subject and object attempt to hit and evade each other, as in jousting or boxing, is a likely possibility for an original use. Similarly, modern usage of naafasa ‘to rival’ has little to do with mutual envy, but it is not difficult see how this concept may have developed.

This type of competition verb forms one of several categories characterized by what Ryding (2014) terms associative action, or action involving another. In the following section another type of associative action involves a more cooperative type of interaction.

5.2.4 Interaction, exchange, and sharing

Interaction verbs formed in pattern III typically describe events of communication, where there is some back-and-forth between the subject and the object. They fall into two groups depending on whether the base is an asymmetric action that is doubled up in the symmetric verb, or a ‘thing’ that is exchanged between two participants. The faaʕala verbs in (15a) are derived from unmarked verbs, while those in (15b) are derived from nouns.

(15) a. kataba ‘to write’ trns kaataba ‘to correspond with’ trns
    qaala ‘to say’ trns qaawala ‘to converse with’ trns
    ḥaara ‘to return to’ obl ḥaawara ‘to dialogue with’ trns
b. ḥadiiθ ‘words, speech’ ḥaadaθa ‘to converse with’ trns
    kalaam ‘words, speech’ kaalama ‘to converse with’ trns
    risaala ‘letter’ raasala ‘to correspond with’ trns

Note that the verbs kaataba ‘to correspond with’ and qaawala ‘to converse with’ do not simply place a recipient in the object position, but rather the object is an agent who writes or speaks back to the subject. The notion of DIALOGUE expressed by ḥaawara appears to be constructed from the simpler notion of return, where two parties each return to the other, verbally, in a consecutive fashion. The verbs of communication in (15b) contain incorporated themes: speech or the spoken word, and letters, which are sent from one participant to another, and back from this other to the first in a symmetric event of transfer. This is diagrammed in (16) for ḥaadaθa ‘to converse with’, literally ‘to exchange speech with’.

(16) agent/ recipient SPEECH agent/ recipient
The diagram in (16) illustrates how the ‘thing’ SPEECH is incorporated into a symmetric structure of exchange, and this is reflected linguistically by the incorporation of hadith ‘speech’ into the derived verb haadada ‘to converse with’. The participant roles that head and terminate each sub-relation in (16) are identical in that each is agentive, sending speech to the other, and each is also a recipient of the other’s speech. The difference between them is down to their prominence within the concept: one role and its action are profiled, while the other role and its associated action are backgrounded. The verb focuses exactly half of a symmetrical concept therefore: just the ‘back’ or the ‘forth’ of an inherently back-and-forth action.

A similar incorporated theme verb construes not the exchange but the sharing of a ‘thing’.

(17) Sa sar ‘age, era’ Saāśara ‘to be contemporary of’

The point to be made here is that the semantic structure of EXCHANGE or SHARING is independent of any particular meaning component. For example, (18) shows how the concept conveyed by the verb Saāśara ‘to be contemporary of’ incorporates AGE into a symmetric structure where it is shared by two partners, but clearly the notion of sharing has nothing to do with the concept AGE itself. The notion of sharing exists independently of the content that fleshes it out here.

(18) partner AGE partner

With many faabl verbs the sub-relations headed by the two participant roles are identical: each writes, speaks, sends, or shares. This is not always the case however. The verbs in (19) describe interactions where the action of the subject and object do not match.

(19) hadara ‘to attend’ naadaa ‘to call out to’ naalaa ‘to confer, bestow upon’ saalaa ‘to ask’ djaaba ‘to go back and forth, tour’

The action of the subject here entails at least the expectation of complementary action from the object. A further example of Enfield’s (2011: 140) ‘complementary reciprocal’ in Lao is a verb whose subject tells a story and whose object listens. This is exactly the situation with pattern III haadara ‘to lecture’: the subject acts towards the object, and there is an expectation that the object will pay attention. The subject and the object are therefore both active in carrying out the action described. With naawala ‘to pass’, the subject holds something out towards the object, which in
turn reaches out to take it. In a similar vein, sa‘ā‘ala ‘to question’ carries the expectation of a response from the object, while dжаawaba ‘to respond to’ assumes that the object has first asked a question of the subject. A similar type of verb is found in the Amazonian language Hup. Epps (2011: 317) identifies a verbal prefix in that language which in addition to marking reciprocity also indicates ‘a more general interaction among mutually engaged co-participants, who need not be performing equivalent actions within the context of the broader interactive event’. This is clearly the case with Arabic verbs like ḥaaḍara ‘to lecture’ or sa‘ā‘ala ‘to question’, which describe one action in an ‘interactive event’, while the action of the object towards the subject is assumed but not focused.

5.2.5 Helping, hugging, shaking hands
A number of faaʕala verbs construe actions in which two body parts are put together. The verbs in (20) are derived from nouns.

(20) ʕunuq ‘neck’  śaanaqa ‘to embrace, hug’  śaanaqa ‘to embrace, hug’  śaanaqa ‘to embrace, hug’
śuʃ̣h ‘flat surface, palm’  śaafahā ‘to shake the hand of’  śaafahā ‘to shake the hand of’  śaafahā ‘to shake the hand of’
śaafid ‘forearm, hand’  śaʕada ‘to help’  śaʕada ‘to help’  śaʕada ‘to help’
zihr ‘back’  żaahara ‘to help’  żaahara ‘to help’  żaahara ‘to help’

We saw in Chapter 7 that the noun ʕunuq ‘neck’ is the base for pattern VIII iʕtanaqa ‘to embrace’, which once meant ‘to take the neck of’, but is now used for the embracing of ideas, religions, and so on. Pattern III śuʕanaqa ‘to embrace, hug’ is derived from this same noun, which is now framed in a symmetric structure where two necks are put together in a mutual embrace shared between the subject and the object. Just as with iʕtanaqa, the relevance of the concept neck has been lost as śuʕanaqa ‘to embrace’ is used in new situations over time, and in some cases the symmetry no longer applies either. The subject of the verb in (21) receives no reciprocal action from the object.

(21) ʕa şekuz-un śuʕanaq-at śaʃ̣arat-a z-zaytuun
old woman-NOM hugged-3PSG tree-ACC the-olives
‘An old woman hugged the olive tree.’

A similar derivation occurs with śaafahā ‘to shake the hand of’, which describes the coming together of two flat surfaces, one belonging to the subject, the other to the object. The base noun suʃ̣h ‘flat surface’ appears in Ibn Manzūr (c.1300) in the phrase suʃ̣h al-kaff ‘flat surface of the palm’, and is derived from pattern I safahā ‘to beat flat’. This derived noun is itself then a base for the pattern III verb. The two verbs

therefore share conceptual content, the notion FLAT, but while the pattern I verb is the ultimate base, there is an intervening layer of derivation.

The putting together of two hands is also captured by pattern III saaṣāda ‘to help’, derived from saaṣād ‘forearm, hand’. Helping is symmetric because it involves what Jackendoff (1990) terms ‘co-striving’, where two parties work with each other to achieve the same goal: if John helps Steve to do x, both John and Steve play a role in getting x done and are therefore co-actors. The subject of saaṣāda ‘to help’ works with, or co-strives with, the object towards a common end. The verb saaṣāda is the result of a linguistic innovation whereby an event is perceived in which one party joins another in some physical task, perhaps lifting with the hand and forearm, adding his or her strength to what this other is doing. From this situation in which one forearm literally joins another, the use of the verb is then extended metaphorically (Lakoff and Johnson 1980) to situations where forearm is no longer relevant. English lend a hand likely developed in the same way, from the literal sense where one hand joins another in lifting or pushing, to the metaphoric.

5.2.6 Co-action

Co-action verbs describe situations where the subject and object both do the same activity, and each is a partner or companion to the other.

(22) sakana ‘to reside’ int saakana ‘to reside with’ trns
fariba ‘to drink’ trns faaraba ‘to drink with’ trns
ʔakala ‘to eat’ trns aakala ‘to eat with’ trns
saara ‘to walk’ int saayara ‘to walk with; go along with’ trns
dʒalasa ‘to sit’ int dʒalasa ‘to sit with’ trns
daadjaʔa ‘to lie down’ int daadjaʔa ‘to lie with; have sex with’ trns

Benmamoun (2003b) argues that this type of verb describes a ‘shared event’, when a plurality of events is conceptualized as a larger whole. My view is different in that I take these verbs to describe only one event, wherein one relationship entails another: if the subject resides with the object, it is necessarily the case that the object also resides with the subject, and so on. The verbs themselves do not encode a plurality, but exactly two sub-relations characterized by whatever action is construed by the base verb. Each sub-relation is headed by an identical ‘co-actor’ role: co-resider; co-drinker; co-eater, and so on. This is represented in (23).

(23) co-actor co-actor

These two roles and the sub-relations they head comprise a ‘co-act’ relation (co-reside; co-drink; co-eat), and this is presented from the point of view of one party. This same
semantic structure is conveyed using with in certain American English constructions, with the effect that the action of the verb becomes an interaction.

(24)  
John visited the Pope.  
John visited the bathroom.  
John visited with the Pope.  
*John visited with the bathroom.

In the examples in (24) visit with is a back-and-forth action between two animate participants, hence the last sentence is unacceptable for semantic rather than grammatical reasons. The point is that although the verb visit has only one actor argument, visit with has two, and they are arranged in the same symmetric configuration represented by the Arabic verbs in (22).

These pattern III verbs of co-action are derived from an asymmetric action that is simply doubled up or repeated in a symmetric structure, but others frame semantic content that is inherently symmetric. Section 5.2.7 discusses such verbs in more detail.

5.2.7 Inherent symmetry

When symmetric conceptual content is framed in an asymmetric initiator–endpoint structure, the result is typically an externally caused change of state construed by an unmarked faṣala verb, with the relevant state falling on the object. When the same content is framed in the symmetric structure associated with the verb pattern faaṣala, two parties are construed as being in a state of collectivity, connection, or separation together. The contrast is illustrated in (25).

(25)  
dʒamaʃa ‘to combine, gather’ trns  
waʃala ‘to connect, join’ trns  
faraqa ‘to separate, part’ trns  
mazaʃa ‘to blend’ trns  
xaʃata ‘to mix’ trns  
dʒamaʃa ‘to make love to’ trns  
waaʃala ‘to make love to’ trns  
faaraqa ‘to leave, depart’ trns  
maazaʃa ‘to blend with’ trns  
xaalata ‘to mix with’ trns

A symmetrical state is applied to the object of the faṣala verbs in (25), which must be conceptualized as consisting of elements that either come together or move apart. In the derived faaṣala verbs, however, the symmetry is distributed over both the subject and the object. The states of collectivity, connection, and separation are now split, so that the subject is in the state with the object, and this entails that the object is in the state with the subject. The state therefore holds between the subject and the object, but the role of the subject is focused. In the act of making love, the subject and object become collective or connected, but the verbs dʒamaʃa and waasala, both meaning ‘to make love to’, present this as being instigated by one party. Similarly, a separation holds between the subject and object of faaraqa ‘to leave, depart’, but it is the subject who brings this separation about.
After Talmy (1975), Gleitman et al. (1996: 323) discuss symmetrical entailments, pointing out that symmetrical predicates can appear asymmetric depending on the construction in which they appear. They give the example in (26).

(26)  
a. Meryl Streep met my sister.
b. My sister met Meryl Streep.

In both instances in (26) an interaction takes place between two participants, but they are not equally salient (Tversky and Gati 1978). Gleitman et al. (1996) argue that a Figure–Ground interpretation is imposed on symmetrical predicates placed in a subject–complement structure, where the subject, the Figure, is focused against a reference point, the Ground. The sentence in (26a) is odd semantically because Meryl Streep is focused, and the meeting is presented as something that she experienced in relation to the sister. The sentence in (26b) is more expected, because the meeting is experienced by the sister and Meryl Streep is a type of reference point.

This is exactly the situation with a symmetric verb like faaraqa 'to leave'. The core meaning of transitive pattern I faraqa 'to separate, part' is SEPARATION, and this is reframed in derived faaraqa 'to leave'. It is not the case that the subject leaves the object and that the object leaves the subject, but it is the case that a SEPARATION holds between two parties. The meaning 'leave' results from a certain construal of this ultimately symmetric concept.

Pattern III faaʕala ultimately marks a deviation from a prototypical asymmetric relation. Conceptual content that is itself inherently symmetric can always be framed in the symmetric structure that the pattern denotes. It cannot always be framed in a prototypical asymmetric structure however, meaning that a contrast between a marked and unmarked verb is not always found. An example that illustrates this point is the pattern III verb faawauna 'to help'. Whereas saʕada 'to help' is derived from saʕid 'forearm, hand', there is no base noun or base verb for faawauna. The meaning component framed in saʕada is FOREARM, but the meaning component of faawauna can itself be paraphrased as CO-STRIVE, following Jackendoff (1990). This consists of two symmetrically organized semantic roles, as represented in (27).

(27)  

Neither of the semantic roles in this content can be construed as initiating an asymmetric relation, since a corresponding co-strive relation is always present, and hence no pattern I verb containing the same consonants as faawauna is found. The subject of faawauna 'to help' is focused, but the relation itself remains symmetric, as shown in (28).
There are two possibilities for how the phonological form of this specific verb has come about. The verb patterns of Arabic constitute a system of marking deviation from a prototype. My argument in this book is that this system of verb patterns has come into being as the result of affixation resulting from grammaticalization. Prior to the existence of a system of verbal marking, that is, before grammaticalization had occurred, different semantic structures would be construed by an unmarked verb either on its own, or in combination with another full word. Thus we might speculate that unmarked ǧasala could appear in a transitive clause to mean ‘wash (something)’ or with some reflexive pronoun, perhaps ǧasala ǧaat to mean ‘wash (one’s own body)’. Once the reduced pronoun attaches to ǧasala to form igtasala, the system of verbal marking comes into being, and all instances of washing one’s own body are then construed with the marked verb. In the same way, prior to the advent of systematic marking, symmetry would be expressed by an unmarked verb in combination with another word at the level of the clause. Perhaps the proto-Semitic equivalent of unmarked ǧaraba-hu ‘he hit him’ appeared as ǧaraba maš-hu ‘he hit with him’ or ǧaraba ǧiḥnaan maš-hu ‘he hit two with him’ to mean ‘engage in back-and-forth hitting with’. However this notion was once expressed, eventually the symmetry becomes marked on the verb, creating ǧaaraba ‘to hit back-and-forth with, to vie with’. The point is that prior to verbal marking, one verb is used for all instances of hitting, and then there is a specialization of function, whereby a new marked verb is created for symmetric hitting. Once this new verb exists, the function of the unmarked verb is reduced, since it is no longer used to construe symmetric events.

Returning to ǧaawana ‘to help’, prior to verbal marking, the verb may have existed as ǧaana ‘to help’, or ya-ǧuun in the imperfective. This hypothetical unmarked verb construed the symmetrical action help, two parties co-striving, and unlike ǧaraba ‘to hit’, there was never an asymmetric use. Once a system of verbal marking comes about, the verb is therefore marked consistently, becoming ǧaawana, yu-ǧaawin in every use, with its original form vanishing from record. Alternatively, it is possible that the verb was coined once verbal marking was already the norm, in which case it was marked from its very first use, taking the form of all other existing symmetric verbs.

This account is necessarily speculative, but it is able to explain why no pattern I verb ever expresses a symmetric relation between subject and object. The reason is that such relations are semantically marked, and their linguistic expression is marked accordingly. If unmarked verbs once construed symmetry but now bear the long vowel /aa/ in such uses, the fact that only their asymmetric uses remain unmarked is
explained. Verbs that were only ever used for symmetric events are now only found in their marked form.

Pattern III verbs that frame symmetric content contrast with a pattern VIII *iftašala* verb that presents both semantic roles as equally prominent, creating a type of reciprocal verb. Examples are given in (29).

(29)  

<table>
<thead>
<tr>
<th>Pattern I</th>
<th>Pattern III</th>
</tr>
</thead>
<tbody>
<tr>
<td><em>xalafa</em></td>
<td>‘to take the place of’&lt;sup&gt;trns&lt;/sup&gt;</td>
</tr>
<tr>
<td><em>ṣadala</em></td>
<td>‘to treat equally’&lt;sup&gt;obl&lt;/sup&gt;</td>
</tr>
<tr>
<td><em>sawiyah</em></td>
<td>‘to be worth’&lt;sup&gt;trns&lt;/sup&gt;</td>
</tr>
<tr>
<td><em>farika</em></td>
<td>‘to partner’&lt;sup&gt;trns (archaic)&lt;/sup&gt;</td>
</tr>
<tr>
<td><em>wafiga</em></td>
<td>‘to be fit for’&lt;sup&gt;trns (archaic)&lt;/sup&gt;</td>
</tr>
</tbody>
</table>

The pattern I verbs in (29) focus one participant against another in an asymmetric construal. The corresponding reflexive pattern VIII verbs present both participant roles as equal, and hence the symmetry can be discerned. The pattern III verb presents a state as split between subject and object, whereby the relation of the subject to the object is the same as that of the object to the subject. For example, I argued in Chapter 4 that the unmarked verb *xalafa* ‘to take the place of’ frames a symmetric notion of *alternation*. The subject of *xalafa* is an alternate relative to the object, hence it substitutes for it or takes its place, but the reverse does not hold true. Pattern III *xaalafa* ‘to be contrary to’ gives a symmetric construal of this content. The subject is alternate or different relative to the object, and this entails the reverse, creating a type of mutual opposition in which the subject and object do not match. In pattern VIII *ixtalafa* ‘to differ’ the subject takes both the *alternate to* and *alternated from* roles, meaning that it differs either within itself, in which case the subject must be conceptualized as consisting of elements, or in conjunction with another party, which can be left implicit or presented as an oblique object. A state of *evenness* is presented as one-sided in *sawiyah* ‘to be worth’, where the object defines the value of the subject. In pattern VIII *istawaa* ‘to be even, flat’ the subject is internally even, and is not compared to any other party. In pattern III *saawaa* ‘to equal’, the subject is even with the object, and this entails the reverse as well.

5.2.8 Implementing symmetry

In a small number of cases a pattern III verb has two uses: one where the subject is one party in a symmetry, which we have seen throughout this chapter, and one where it implements a symmetric configuration between two less prominent parties.
In the second use of each verb in (30) the symmetry obtains between elements of the object, or oblique object. For example, the object of *baaʕada* ‘to part, keep apart’ consists of elements that are equidistant, equally far from each other. Likewise, the subject of *saawaa* ‘to make equal’ causes equality between elements of the object set. The semantic structure for this type of verb is diagrammed in (31).

The white circles in (31) represent the two semantic roles that fall on the object set of a given verb, but it is important to note that this does not mean that the object can only consist of two participants. Rather, the two sub-relations hold for the object set as a whole, and individual members of the set take one of the two semantic roles inherent in the symmetry. For example, if the object of *saalaha* ‘to make peace between’ consists of five elements, perhaps five countries, any one element that we may select takes one role, and is in a state of mutual peace with all the others, which take the second role as a collectivity. Thus the object as a whole is in mutual peace, and this means that any specific individual is at peace with another element, and this other is at peace with the first.

As an intermediate summary, this first half of the chapter has argued that a symmetric semantic structure accounts for pattern III verbs of resistance, risk, competition, interaction, helping, and co-action, in addition to verbs in which the subject and object are in a symmetrical state and those where such a state is brought about in
the object by the subject. A symmetric structure consists of two complementary forces, but with pattern III one party in the concept is Figure, the other Ground. A second type of structure combines symmetry with reflexivity, eliminating the possibility that one participant role is more prominent. The combination of symmetry and reflexivity in the conceptualization of events is the topic of Section 5.3.

5.3 Symmetry and reflexivity

The symmetric structure associated with pattern III faaYala diverges from prototypical transitivity in that it is bi-directional, but like the prototype it does maintain a distinction between participant roles in terms of their prominence in a given concept. A reflexive symmetric structure, as diagrammed in (32), is two steps removed from the prototype: once because it is bi-directional, and once because both participant roles are equally prominent.

(32)

Verbs that instantiate this structure have the same bi-directionality as faaYala verbs. The difference is that both participant roles and both sub-relations are now equal, with the result that the entire back-and-forth is presented, rather than just one direction within it. The two equal participant roles fall on the subject of a verb, which is typically divided conceptually into elements that interact. Kemmer (1993) argues for essentially the same structure in her discussion of marking on reciprocal verbs crosslinguistically, but is unable to apply it consistently to a variety of related situation types, notably ‘chaining’ situations (Langendoen 1978) where one party follows another, and group events where many participants act in conjunction. I will illustrate here that these event types, plus several others, can be brought under one unified analysis based on a combination of symmetry and reflexivity. The important point is that a verb itself does not construe the real-life number of participants in a given situation, and neither does it spell out the actual number of relations between them. In all instances, a verb marked for symmetry and reflexivity construes the minimum number of relations required for the conceptualization of either reciprocity, for example two instances of Hitting taking place between elements of the subject; of chaining situations, where there are two instances of following; and of group action, with two instances of co-action. Any elaboration on this bare minimum is the result of interpreting the verb in context, and is not coded by the verb itself.

The Arabic verb pattern tafaYala denotes the semantic structure diagrammed in (32). It is marked with /aa/ for symmetry, and with /t/ for reflexivity. Both faaYala
and tafaʕala are ultimately derived, as patterns, from unmarked faʕala, but it is not necessary to insist that derivation of individual verbs always proceeds from faʕala, through fäʕala, to tafaʕala. In fact, there are multiple instances when this cannot be the case. Counterfactual verbs like tamaarad ‘to feign sickness’, for example, do not alternate with a pattern III verb, so an analysis in which there is always a pattern III base falls apart. Instead, each pattern denotes a semantic structure, and this is fleshed out with the content of a base word. A verb alternation arises when the same content is framed in both structures, but the faaʕala verb need not precede the tafaʕala verb diachronically. Hence both qaatala ‘to fight’ and taqaatala ‘to fight’ are derived from qatala ‘to kill’, and it is not possible to say with any certainty that one of these two derived verbs existed before the other. The word lists in the analysis to follow contrast tafaʕala verbs with their ultimate base, and I do not assume an intervening layer of derivation through fäʕala.

5.3.1 Reciprocity

It is well documented that a reciprocal event has a symmetric structure (Lakoff and Peters 1969; König and Kokutani 2006; Dimitriadis 2008; Evans 2008; Siloni 2012), and that reciprocal verbs are commonly marked for reflexivity crosslinguistically (Kemmer 1993; König and Gast 2008; Maslova 2008). The combination of symmetry and reflexivity creates a back-and-forth action that takes place between equal parties whose actions towards each other are exactly the same. Examples of reciprocal verbs marked with both /aa/ and /t/ are shown in (33).

(33)  qatala ‘to kill’ trns taqaatala ‘to fight’ int/obl
       šaraʕa ‘to throw down’ trns taʕaraʕa ‘to wrestle, struggle’ int/obl
       daʕara ‘to hit’ trns taʕaara ‘to vie; hit each other’ int/obl
       naʕara ‘to annihilate’ trns tanaẖara ‘to annihilate each other’ int/obl
       xanaqa ‘to stifle; choke’ trns taxeda ‘to quarrel’ int/obl

The reciprocal verbs in (33) incorporate the asymmetric relation described by the pattern I verb, and a change in meaning results due to the presence of a counterforce, hence taqaatala ‘to fight’ is literally ‘to mutually attempt to kill’, and similarly taʕaraʕa ‘to wrestle’ is ‘to mutually attempt to throw down’. When the tafaʕala verbs are intransitive, the two relations inherent in the symmetry are both headed by the subject, and the event takes place between elements of the subject set. Any single element that we may choose within the subject will fight with and be fought with, wrestle with and be wrestled with, and so on, and the opposing party entailed by the existence of these two relations is a member of the subject set too, equal in prominence to the first. In the diagram in (34), the dark circles represent the two semantic roles that are assigned to the subject. The white circles represent individual elements of a plural subject. For any one element, there is another that opposes it.
It is important to note that the actual number of elements in the subject, and the number of relations between them, is not a property of the verb itself. For example, consider the sentence in (35).

\[
\text{تضاوِرُ الرِجَال} \quad \text{tadaaraba} \quad r-\text{ridgaal-u}
\]

\[\text{mutually hit[3MSG] the-men-NOM}\]

'The men hit each other.'

There is no way to know from this description how many men are involved, how many instances of hitting occur, or how they are distributed. Perhaps each man hits every other man, or perhaps the men pair up and each member of a pair hits the other, three men may hit two men, and so on. The only thing that we know for sure from this verb is that some bi-directional hitting takes place and that the instigators of the hitting are all members of the plural subject ar-ridgaal 'the men'. It is this bi-directionality that the verb construes, allowing for all the different permutations noted above.

The back-and-forth nature of reciprocity is highlighted by Liu (1999: 124), who illustrates that in Mandarin reciprocity may be expressed by combining a verb with a construction containing the verbs lai ‘come’ and qu ‘go’, as illustrated with da ‘hit’ in (36).

\[
\text{Tamen da-lai-da-qu}
\]

\[\text{they hit-come-hit-go}\]

'They hit each other.'

This structure in Mandarin clearly shows that hitting occurs in two directions: coming towards, and going away. Just like the Arabic verb tadaaraba ‘to hit each other’, it is not the number of times a hit actually occurs that is coded, but the bi-directional nature of the concept itself, which consists of two symmetrically organized hit sub-relations.

With the type of Arabic reciprocal given in (33) the participant roles that head each sub-relation may be assigned to the subject set, or they may be split, with one on the subject and one on an oblique argument. These two possibilities are illustrated in (37) with taqaatala ‘to fight’.

\[
\text{ناَقَتَتِ القَطَّةٍ والْكَلْب} \quad \text{taqaatala-t al-qittat-u wa l-kalb-u}
\]

\[\text{fought-3FSG the-cat-NOM and the-dog-NOM}\]

'The cat and the dog fought.'
b. 

\[
\text{taqaatala-t} \quad \text{al-qi{\=t}tat-u} \quad \text{ma}\{\text{f} \quad \text{al-kalb-i}
\]

fought-3SG the-cat-NOM with the-dog-GEN

‘The cat fought with the dog.’

In (37a) the entire event takes place between elements of the subject, whereas the construction in (37b) is an example of what Dimitriadis (2008) refers to as a discontinuous reciprocal, where the logical subject of the verb is split between the syntactic subject and a with phrase. Now only one of the roles inherent in the symmetry falls on the subject, with the other falling on the oblique argument, and the bi-directional action of the verb takes place between the two. Since the syntactic subject now takes only one role, this situation is similar to the pattern III verbs discussed in Section 5.2, where the subject initiates only one force and terminates another. The difference is that those verbs profile only one sub-relation in a matching pair, while verbs marked with /t/ profile both complementary forces. In both cases a Figure–Ground orientation is imposed (Talmy 1975, 1985), and what differs is the level at which this occurs. A pattern III verb construes a concept like resist, that is inherently Figure–Ground: it is initiated by one participant against another, whose counterforce is entailed but implicit. One participant role is more prominent than the other within the concept itself here, and the verb describes one action of a back-and-forth pair: just the back, or just the forth. This is not the case with a pattern VI verb, where both participant roles and therefore both sub-relations are equally prominent. A Figure–Ground orientation does not inhere in the concept described by the verb here, but is imposed at the level of the discourse: the verb indicates that two equal parties initiate identical actions towards each other in the concept described, but one is foregrounded against another in the discourse, at the level of the clause (cf. Gleitman et al. 1996).

Many of the transitive pattern III verbs of competition, interaction, exchange, sharing, and helping discussed in the first half of this chapter alternate with an intransitive reciprocal marked with /t/, with the difference being that only with the reflexive verb can the action be interpreted as taking place entirely within the subject set.

(38) zaada ‘to increase’ int/trans zaayada ‘to try to outdo or outbid’ trans

xasama ‘to defeat’ tran xaasama ‘to feud with; to sue’ trans

taxaasama ‘to feud’ int/obl

naafasa ‘to rival, compete with’ trans
tanaafasa ‘to compete’ int/obl

kaataba ‘to write’ trans

kaataba ‘to correspond with’ trans
takaataba ‘to correspond’ int/obl

haara ‘to return to’ obl

haawara ‘to dialogue with’ trans
tahaawara ‘to dialogue’ int/obl
The meaning of the base is incorporated into two different structures in (38), only one of which is reflexive. The reflexive pattern bears additional marking since it is two steps away from prototypical transitivity, but it can frame conceptual content independently of its non-reflexive counterpart, leading to ta₇a₈a₇a verbs for which no corresponding fa₇a₈a verb exists. The next section presents examples of such verbs.

5.3.2 Counterfactuals

Pattern VI produces a small number of ‘feigning’ verbs (Wright 1859), or what I term counterfactuals, where the subject feigns a state or activity.

(39)  
\[
\begin{array}{ll}
\text{marida} & \text{’to become sick’} \\
\text{maata} & \text{’to die’} \\
\text{naama} & \text{’to sleep’} \\
\text{nasiya} & \text{’to forget’} \\
\text{hamiqa} & \text{’to be stupid’} \\
\text{djaahila} & \text{’to be ignorant’} \\
\end{array}
\]

The fact that the verbs in (39) do not alternate with a pattern III verb clearly shows that the reflexive marker /t/ does not simply attach to a non-reflexive verb. Instead, it denotes an important semantic characteristic of the event described. While these verbs are very different from reciprocals, they still instantiate a symmetric reflexive structure where an opposition takes place within one conceptual unit, the subject. I call these verbs counterfactuals because the state denoted by the pattern I verb is simply a claim in the pattern VI verb, and the way that the subject behaves is counter to his or her actual state: the subject plays dead but is not dead; feigns sickness but is not sick; pretends not to know but does know, and so on. The subject therefore represents both halves of an opposition: be x and not be x.

To take ta₇a₈a₇a ‘to feign ignorance’ as an example, a participant acts in a certain way. This action is one force, and it is counter to or contradicted by a second force, also stemming from the same participant: his or her actual knowledge of a given entity or event. The subject therefore represents the initiator of two complementary forces that between them comprise the notion of feigning, behavior that runs counter to one’s actual state. These counterfactual verbs exemplify a divided self (Talmy 1988, 2000) wherein one entity exerts conflicting forces. This type of
In both examples, the subject represents both halves of a struggle, seeking to contain an opposing tendency to fall apart, or burst out, which it also generates. In a similar way, the verbs of optimism and pessimism in (40) describe situations where the subject has two potential tendencies: to see either the best or the worst. With tafaaʔala ‘to be optimistic, look on the bright side’ the subject counters its potential to see something negative, while this potential wins out in tafaaʔama ‘to be pessimistic, fear the worst’, where the positive side of the subject is overcome.

This type of pattern VI verb is problematic for any account where that pattern is viewed as simply reciprocal, and in most analyses, if feigning verbs are treated at all, they are listed as arising from a separate function of the pattern. What this means in effect is that two affixes, /aa/ and /t/, are assigned different functions, one of which is to mark reciprocity, while another is to mark ‘feigning’. In the approach that I take here this is not necessary. Various events are perceived as sharing a symmetric feature like opposition or internal conflict, and hence the verbs describing them take the same linguistic form. Reciprocity is only one type of event that shares this
semantic feature, and marking on reciprocal verbs is not ‘reciprocal marking’ as such, but marking of both symmetry and reflexivity. Other events that share these two features are examined in the sections that follow.

5.3.3 Chaining situations

Chaining situations are usually characterized by a string of participants organized in succession: A follows B; B follows C; C follows D; and so on (Fiengo and Lasnik 1973; Dougherty 1974; Langendoen 1978). The pattern VI verbs in (42) describe such situations.

(42) \( \text{walada 'to give birth to'} \), \( \text{tawaalada 'to generate each other'} \), \( \text{waliya 'to follow'} \), \( \text{tawaalaa 'to follow in succession'} \), \( \text{lahiqa 'to follow'} \), \( \text{talaahaqa 'to follow in succession'} \), \( \text{talaalaa 'to follow in succession'} \), \( \text{waritha 'to inherit'} \), \( \text{tawaaratha 'to successively inherit'} \), \( \text{naqala 'to transfer'} \), \( \text{tanaaqala 'to exchange; pass down'} \)

Neither Lichtenberk (1985) nor Kemmer (1993) view chaining situations as symmetric, reserving symmetry for prototypical reciprocity. The diagram in (43) is based on Lichtenberk’s (1985: 24) representation of a chaining situation.

(43) A \( \rightarrow \) B \( \rightarrow \) C \( \rightarrow \) D \( \rightarrow \) E

Kemmer (1993) asserts that reflexive marking on a chaining verb marks the fact that all of these participant roles fall on the same entity, the subject, and this makes sense. For example, the subject of the verb \( \text{tawaalada 'to generate each other'} \) must be plural, and one element produces another, which produces another, and so on. An example of the verb in context is given below.

(44) \( \text{al-as'ilat-u tawalad bi-sur'a} \)
the-questions-NOM FSG-generate each other with-speed
‘The questions quickly generate each other.’ (question leads to question)

The problem is that the arrangement in (43) is not symmetric, and so my argument that /aa/ is a marker of symmetry cannot hold. I suggest however that chaining verbs do in fact construe a symmetric arrangement of relations, even if the temporal or spatial organization of participants in an actual event is linear. No chaining verb

\(^4\) Munif (2003: 141).
describes the exact distribution of participants shown in Lichtenberk’s diagram in (43), where there are five participants and four follow relations. If it did, such a verb would be overly specific, and could not also be used to describe chaining situations consisting of more or less than five participants. Instead, I argue that chaining verbs can describe any chaining event because they do not encode any specific situation but rather the concept of chaining itself, leaving the number of participants and the exact number of times that following occurs unspecified. I have already argued that this is true of standard reciprocal verbs. With tadaaraba ‘to hit each other’ for example, we do not know how many instances of hitting take place, but we do know that the hitting is mutual. In other words, the linguistic encoding of an event of mutual hitting is not exact, but what is consistently construed by tadaaraba is that hitting runs in two opposing directions. The verb therefore encodes the bare minimum number of relations for the conceptualization of mutual hitting: two parties exchanging blows, and two instances of hitting, and so can be used to describe any event in which this bare minimum is discerned.

The same applies to a chaining verb. For tawaalada ‘to generate each other’ the bare minimum for the conceptualization of mutual generation is still only two instances of generation. Just as with mutual hitting, this concept consists of two relations, both headed and terminated by the subject set. This is diagrammed in (45), where elements of the subject set are represented by the white circles.

Due to the semantics of generation, the subject set must contain at least three participants, but can be interpreted as containing any number above three as well. In all cases the verb itself, independent of context, simply conveys mutual generation within the subject set, and the semantic structure of a chaining verb is therefore identical to that of a reciprocal and a counterfactual.

5.3.4 Co-action (again)

We saw in Section 5.2 that one type of pattern III verb describes co-action, where the subject is assigned one co-actor role and the object is assigned the other. In a reflexive verb of co-action both co-actor roles are equally prominent, and either both are assigned to the subject, or they are split between the subject and an oblique.

(46) saaha ‘to shout’ int rakada ‘to run’ int wafada ‘to arrive; visit’ obl kataf ‘shoulder’

tasaayaha ‘to shout together’ int/obl taraakada ‘to run together’ int/obl tawaafada ‘to flock to’ obl takaatafa ‘to stand shoulder to shoulder’ int
The \textit{tafaa\textsuperscript{ala}} verbs in (46) all describe collective events in which one participant is necessarily partnered by at least one other. Every participant involved in the event is a co-actor, and this semantic role entails the existence of another that is identical, as illustrated in (47).

Eliminating either of these roles automatically reduces the other simply to actor, rather than co-actor, and the concept of co-action falls apart. The two relations here are ‘act-with’ relations, and the nature of the action depends on the semantic content that is framed in this structure. In the case of \(\text{tasaayaha}\) ‘to shout in a group’, two ‘co-shouter’ roles are assigned to the subject, and any element selected at random will be a ‘co-shouter’ relative to the remainder of the subject set, which takes the other role. Other times a salient element of a collective event is a thing, like \(\text{shou}d\) in \(\text{takaatafa}\) ‘to stand shoulder to shoulder’ where two co-actor roles put shoulders together, or a manner of behavior associated with a thing, like \(\text{dog}\) in \(\text{takaalaba}\). This latter verb can be reciprocal, meaning ‘to fall on each other like dogs’, or collective, meaning ‘to attack together’, again like dogs. The two meanings arise because the same semantic content is discerned in two different events which both have a symmetric structure. The difference is that the collective event involves a third participant role, the target of the attack, that is acted upon by the two co-attackers, as shown in (48).

The symmetric nature of these co-action verbs is not due to the fact that two participant roles act on each other, but rather in conjunction with each other. A third possibility discussed in the next section is that the two roles are points of comparison for each other, resulting in a type of progressive change.

\subsection*{5.3.5 Progressive change}

The pattern VI verbs in (49) describe a progressive or incremental change in the subject.
The incremental nature of the change here rests on comparison: the subject increases, gets worse, becomes higher, and so on relative to its prior state. With *tafaaqama* ‘to get increasingly worse’, for example, the subject is worse than it was, then worse than that, then worse again, ad infinitum. Such repeated change is typically mirrored linguistically in English by repeating a comparative adverb or adjective, or a preposition: *more and more; worse and worse; higher and higher; up and up*. These phrases construe the incremental nature of a change and are not taken to mean that something changes only twice, becoming worse, then worse again, then stopping. The important point is that a change is repeated, and two instances of change are the bare minimum required for the conceptualization of this repetition. It is this that is encoded by both these English phrases and the Arabic verbs in (49), which construe events of going up, becoming more, or decreasing more than once. There is an opposition here between ‘versions’ of the subject, and each version counters or contradicts the previous one by being more, worse, or higher. The verb *tazaayada* provides a useful example here, since it may be interpreted in two ways. It is contrasted with a pattern III verb in (50).

(49)  

<table>
<thead>
<tr>
<th>Arabic Word</th>
<th>English Meaning</th>
</tr>
</thead>
<tbody>
<tr>
<td>zaada</td>
<td>‘to increase’ (int/tns)</td>
</tr>
<tr>
<td>faqima</td>
<td>‘to become grave’ (int)</td>
</tr>
<tr>
<td>faniya</td>
<td>‘to perish’ (int)</td>
</tr>
<tr>
<td>saida</td>
<td>‘to mount’ (tns)</td>
</tr>
<tr>
<td>radafa</td>
<td>‘to return’ (obl)</td>
</tr>
<tr>
<td>rakama</td>
<td>‘to heap up’ (tns)</td>
</tr>
<tr>
<td>kathafa</td>
<td>‘to be dense’</td>
</tr>
<tr>
<td>tazaayada</td>
<td>‘to progressively increase’ (int)</td>
</tr>
<tr>
<td>tafaqama</td>
<td>‘to get increasingly worse’</td>
</tr>
<tr>
<td>tafaanaa</td>
<td>‘to slowly waste away’</td>
</tr>
<tr>
<td>tasaafa</td>
<td>‘to go higher and higher’</td>
</tr>
<tr>
<td>taradafa</td>
<td>‘to retreat; recede; regress’</td>
</tr>
<tr>
<td>taraakama</td>
<td>‘to accumulate’ (int)</td>
</tr>
<tr>
<td>takathafa</td>
<td>‘to become increasingly dense’</td>
</tr>
</tbody>
</table>

In the pattern III verb, the subject is in competition with the object, trying to exceed it, but meeting a counterforce. There is a back-and-forth here, where the subject increases relative to the object, which increases relative to the subject, and this is repeated as the event progresses. With the reflexive pattern VI verb, the two complementary ‘back-and-forth’ forces both originate with the subject. In the ‘compete’ meaning, the subject is broken down into elements that progressively exceed each other in a back-and-forth interaction. This is illustrated in (51).

(50)  

(51)  

There are two *exceed* relations here, both headed and terminated by the subject set, with the result that a repeated increase takes place entirely within it. This repeated
increase is also present in the ‘progressively increase’ meaning of the verb, and the difference is that the elements of the subject are no longer distinct participants but rather ‘prior versions’ of the same entity. Thus the subject increases relative to its previous state, exceeding what it had been, and then this new increased version of the subject is itself surpassed again by a third version. This is illustrated in (52), where the subject set consists of multiple ‘versions’ of the subject, again represented by the white circles. One version of the subject exceeds another, and a third then exceeds this initial version.

\[(52)\]

\[
\text{exceed} \quad \rightarrow \\
\text{exceed}
\]

Just as a chaining verb encodes the concept of chaining rather than describing a specific individual event, the verb here encodes the concept of repeated change itself, and this concept consists of exactly two instances of change. With a chaining verb the two instances of following require three elements in the subject, one of which both follows another and is itself followed by a third. In a verb of progressive change, the two instances of change require three versions of the subject, one of which both changes relative to another and is itself a point of comparison for a third.

Although they are clearly not reciprocal then, the tafaasala verbs in (49) all instantiate the same symmetric structure that underlies reciprocity, counterfactuals, chaining verbs, and verbs of co-action. The difference is due to the semantic content that is framed in such a structure. A reciprocal typically frames a transitive action; a counterfactual frames a physical, emotional, or mental state; a chaining verb frames a sequential configuration; and co-action typically frames a one-participant action. Verbs of progressive change frame states and certain types of motion that can be conceptualized as gradable.

5.3.6 Co-symmetry

Chapter 4 established that some pattern VIII verbs are symmetric due to their conceptual content. Examples include ixtalafa ‘to differ’ and iltaqa ‘to meet’. The basic meaning components of these verbs are concepts that themselves consist of two symmetrically organized participant roles, and when this is framed in a structure with no distinction between an initiator and endpoint, as denoted by pattern VIII, the result is a symmetrical predicate. A small number of pattern VI verbs contrast with pattern VIII in that the symmetry flavors two relations rather than one.

\[(53)\]

\begin{align*}
\text{tasaawaa} & \quad \text{‘to be equal’ int/obl} \\
\text{tafaadala} & \quad \text{‘to tie, be equal’ int/obl} \\
\text{tawaașala} & \quad \text{‘to be interconnected’ int/obl} \\
\text{‘to continue’ int} \\
\text{‘to communicate’ int/obl} \\
\text{istawaaw} & \quad \text{‘to level out, be flat’} \\
\text{iytadala} & \quad \text{‘to be moderate, even’} \\
\text{ittasala} & \quad \text{‘to connect with’ obl}
\end{align*}
Pattern VI *tasaawaa* ‘to be equal’ and pattern VIII *istawaa* ‘to level out, be flat’ share a notion of **evenness**, which I represent in (54).

\[ (54) \]

\text{EVENNESS}

The approximation in (54) captures the fact that at a minimum **evenness** consists of two equal points. In pattern VIII *istawaa* ‘to level out’ this content is framed in a non-prototypical semantic structure that disallows the separation between an actor and an affected party that is inherent in prototypical transitivity. The composition of pattern VIII *istawaa* is diagrammed in Figure 5.1. Since there is no conceptual separation between initiator and endpoint, the subject of *istawaa* is **even** internally, becoming flat, level, or in some uses evenly cooked.

In pattern VI *tasaawaa* ‘to be equal’, there are two instances of **evenness**. This ‘mutual evenness’ is diagrammed in Figure 5.2. An element of the subject set is even with another, and this entails a relation where this other is even with the first. Thus **evenness**, itself symmetric, is discernable once when the subject is flat or level, but twice when elements of a subject set are equal to each other.

**Figure 5.1** Content and structure of *istawaa* ‘to level out’

**Figure 5.2** Content and structure of *tasaawaa* ‘to be equal’
The notion of connection put forward in Chapter 2 consists of two roles that are ‘at’ each other. In pattern VIII ittasala ‘to connect with’ only one instance of connection occurs, but pattern VI tawaşala ‘to be interconnected’ denotes two instances of connection, the bare minimum number necessary for interconnection to exist as a concept. The presence of two connect sub-relations accounts for the various meanings assigned to the verb tawaşala. The subject set is ‘interconnected’ because it connects more than once; it ‘continues’ because any random part of it we may select seamlessly connects to both the part before it and the part after it, hence there are two connections; and it ‘communicates’ because it connects and is connected with in a back-and-forth reciprocal fashion.

This ‘doubling up’ of a symmetrical concept in a symmetric relation is somewhat rare, and a symmetrical meaning component is more usually presented in a pattern VIII reciprocal. Nevertheless, the three examples discussed here illustrate that such a process of meaning construction does occur.

5.4 Summary and conclusion

My aim in this chapter has been to show that symmetry is a semantic category instantiated by a wide range of events. I argued for a symmetric structure consisting of two semantic roles. In the conceptualization of a specific event, one of these roles and the force it exerts may be focused against the background of the other. Situations of resistance, risk, competition, interaction, exchange, helping, and co-action all instantiate this pairing of forces, where the initiators of each force are distinct, and one is Figure, while the other is Ground. Such events are described by pattern III verbs, where the long vowel /aa/ marks the symmetry. In other situations the initiators of each force are equally prominent. Pattern VI combines symmetry and reflexivity, and produces reciprocal verbs of mutual action undertaken by elements of the subject set or by the subject in conjunction with an oblique object. Other situations that instantiate this same structure are counterfactuals, where the subject feigns a state, countering a force that emanates from within itself; co-action, where the subject again acts mutually; chaining situations; collective events; and progressive change. Several of these event types are recognized as being associated with collectivity and reciprocity (Lichtenberk 1985, 1999; Creissels and Nouguier-Voisin 2008; Moldonado 2011), but the fundamental importance of symmetry as an underlying organizing principle has largely remained unnoted. The analysis developed in this chapter is aimed at addressing this.

Recognizing the importance of symmetry in the construction of meaning enables a unified account of Arabic verb patterns which have until now been analyzed as serving different functions, such as marking the exertion of effort, associative action, or shared events. It also enables the reanalysis of certain supposed denominal verbs.
For example, Wright (1859) has gone unchallenged in his conclusion that saafara ‘to travel’ is derived from the noun safar ‘travel, journey’. Presumably the logic here is that the verb must be denominal, because if it were basic it would be formed in pattern I. Under the analysis outlined in this chapter, there is no need for this assumption. Ibn Manzuur (c.1300) lists pattern I safara bayn ‘to mediate between’, where the subject is located between two other entities. Pattern III saafara ‘to travel’ presents this same configuration with the addition of an implicit counterforce that forces the subject to exert effort as it moves from one location to another. The earlier conceptualization of TRAVEL as a type of opposed motion is difficult to accept today, but English travel appears to have developed along similar lines from Old French travail ‘painful effort, hard work’, reflecting the once arduous nature of making a long journey (Ayto 1993).

Symmetry can also account for an aspectual contrast between certain pattern I verbs and the pattern III verbs derived from them.

\[(55) \begin{align*}
\text{hadara} & \quad \text{to attend}^{\text{trns}} \\
\text{balaga} & \quad \text{to reach}^{\text{trns}} \\
\text{saada} & \quad \text{to revert to, return}^{\text{trns/obl}} \\
\text{haadara} & \quad \text{to lecture}^{\text{trns}} \\
\text{baalaga} & \quad \text{to exaggerate, go too far}^{\text{obl}} \\
\text{saawada} & \quad \text{to persevere in}^{\text{trns}}
\end{align*}\]

The pattern I verbs in (55) all present telic actions that finish when the subject arrives at a location, and these contrast with the pattern III verbs whose action is atelic, continuing indefinitely. As noted at the beginning of this chapter, this type of data leads Danks (2011) to argue that the primary function of pattern III and pattern VI is the formation of atelic verbs, but it is difficult to stretch this account to cover pairs such as talaba/\text{taalaba} ‘to request/to demand from’, where neither member is more or less telic than the other, or \text{fadala}/\text{tafadala} ‘to act fairly/to reach a tie’, where the supposed atelic pattern VI verb does have an inherent endpoint in time, once the tie is reached, but the pattern I verb of the same root does not. The atelic nature of certain pattern III verbs observed by Danks is not a function of the pattern as such, but rather it is a consequence of symmetry. Pattern III haadara ‘to lecture’ describes an interaction between a speaker and an audience that listens, and this interaction happens to be atelic. Likewise, the action undertaken by the subject of baalaga ‘to exaggerate’ is restricted or countered by an implicit point after which the action is deemed to have continued too far or beyond the realm of acceptability. These two counterforces together create the concept exaggeration. While symmetry is not retrievable in modern usage of \text{saawada} when it is used in expressions like \text{saawada an-na}zar fii ‘to rethink, reexamine’, historical data suggest the notion of perseverance or persistence in the face of adversity. Ibn Manzuur likens the verb to pattern III waazaba ‘to persist in, persevere in’, and lists the two examples in (56).
In both cases here the subject persists in some type of struggle with the object: in (56a) the object is assumedly resisting or struggling to throw off the fever, and in (56b) there is the implication that the object resists the subject’s questioning. The repetition here is a function of this back-and-forth struggle, and it is this, rather than the atelic nature of the event itself, that is marked by the long vowel /aa/.

Crosslinguistically, a symmetrical organization of participant roles is common. I argued earlier that English interview and defend encode interaction and counterforce respectively, with a Figure–Ground orientation inherent in the concept. We may add confront to this as well, where the morphology suggests two fronts facing off, but the entire concept is viewed as instigated by one party against another. Enfield’s (2011) complementary reciprocal in Lao, and the interactional marker in Hup found by Epps (2011) appear to mark the same symmetric structure. Epps (2011: 325) notes that this marker appears on a verb used to describe a situation ‘in which one person looks repeatedly at another, who looks straight ahead—apparently willfully ignoring the other’. There is an opposition here similar to that found in Arabic šaarada ‘to chase’, where the object evades the subject. In the Hup case, one person exerts abstract force towards another, trying to get him to look at her, and the second opposes that force by ignoring her. Examples such as these strongly suggest that symmetry is marked on the verb not only in Arabic but in other languages too, and that it is therefore a major semantic category in the conceptualization and linguistic construal of events.
6

Causation and actionalization

6.1 Introduction

The previous chapters have provided numerous examples of events that are conceived of by incorporating a basic concept into a more complex semantic structure. This chapter continues to investigate the ways in which this can occur, focusing on four verb patterns that I argue denote the presence of an agent that is almost always external to the base word. This agent may be viewed as a causer, bringing about a change in some other party, or it can simply act without impacting any other event participant. Derived causative verbs are formed in both pattern II faYala, characterized by gemination of the second consonant, and pattern IV ʔafYala, with an initial glottal stop. Pinpointing the difference between these patterns is complicated by the fact that many of the functions of pattern IV are performed by pattern II in the spoken dialects, where pattern IV is rarely found (MacDonald 1963: 98). An added complication is that pattern II serves more than one function: it is either intensive, signifying that action takes place in repeated phases, or it is causative, describing externally controlled action. Occasionally these functions overlap, as illustrated in (1).

(1) Intensive: safaqa ‘to clap the hands’ safsaqa ‘to applaud’
Causative: qadama ‘to precede, be in front’ qaddama ‘to put in front’
Both: nazaala ‘to descend’ nazzala ‘to send down in stages’

Intensive verbs are the focus of Chapter 7 and I will not discuss them further here. Once they are eliminated, a tendency may be observed in which pattern II verbs construe the actionalization of a stative situation or a thing. Actionalization is a term adopted from Talmey (2000) to refer to a mental operation whereby a static concept is incorporated into an activity. For example, the base verb bariṣa ‘to be innocent’ is static, and this concept is actionalized in causative barraṣa ‘to absolve’. Similarly, inert silaah ‘weapon’ is incorporated into an action in sillaha ‘to arm’. In contrast, causatives formed from base verbs that already denote actions tend to be formed in pattern IV, hence daxala ‘to enter’, already dynamic, is causativized as ʔadxala ‘to put in, insert’. The function of pattern IV also extends beyond causation to derive verbs in which the agentive subject simply acts, as with ʔaqdama ‘to act boldly, embark
upon’, from qaduuum ‘bold’, ʔawraqa ‘to burst into leaf’, from waraq ‘leaf’, and ṭabbara ‘to go to sea’, where the base noun is bahar ‘sea’. The reflexive counterparts of these patterns follow similar trends. With pattern V tafaʕala the subject assumes a state under its own control, as in tabarrafia ‘to clear oneself’, again from static bariya ‘to be innocent’, or causes something to come to it, as with ḥasallaha ‘to take up arms’, incorporating silaah ‘weapon’. The reflexive partner to ʔafiala is pattern X istafiala, where just like the glottal stop in ʔafiala the /s/ affix serves to mark an agent. Pattern X istafiala construes externally controlled action that is oriented towards the external controller, as with ḥadara ‘to summon’, from ḥadara ‘to attend’, where the subject causes the object to come to it.

The analysis begins in Section 6.2 with ʔafiala causatives derived from base verbs that construe spontaneous events. This verb pattern is also associated with the semantic structure of giving and sending, and this is illustrated in Section 6.3. A number of ʔafiala verbs denote simple actions rather than causation, and these are examined in Section 6.4 on ‘activated state’ verbs whose subject acts in a certain manner, in Section 6.5 on verbs whose subject produces the entity denoted by the base noun, and in Section 6.6 which treats verbs where the base noun is a time or place to which the subject moves. The focus then shifts to reflexive istafiala. I show in Section 6.7 that this pattern is used to describe actions on the self incorporating base concepts that do not contain a causal agent, and in Section 6.8 the analysis extends to a variety of ‘causer-oriented’ actions in which the subject orients the object towards it. In Section 6.9 I turn to pattern II faʕala and pattern V tafalala, where I show that these patterns construe result states derived from static verbs, stative adjectives, and nouns, and in Section 6.10 I treat a common type of denominal verb in which the entity denoted by the base noun serves as a theme that moves to the object of a faʕala verb or to the subject of its reflexive counterpart. The conclusion in Section 6.11 summarizes the additional evidence for a word-based approach to derivation that this chapter puts forward.

6.2 Marked causatives

The discussion of anticausativity in Chapter 4 established that some pattern I verbs represent externally controlled events (Smith 1970) where some change or other effect is brought about by one party on another. A subset of these verbs, such as kasara ‘to break (something)’ and qataʕa ‘to sever, terminate’, construe externally caused changes of state (Levin and Rappaport Hovav 1995). These verbs are unmarked causatives, and they alternate with the marked verbs inkasara ‘to break’ and inqataʕa ‘to terminate, cease’ which present the change as occurring spontaneously, without a distinct causal agent. This direction of derivation, from causative to spontaneous, is not consistent across the language. In the data in (2) it is the base verb that describes a spontaneous event, while the derived causative is marked with a glottal stop.
The fact that some pattern I verbs such as transitive kasara ‘to break’ are unmarked causatives while others such as dāḥika ‘to laugh’ are unmarked spontaneous-event verbs results in two different types of alternation. With one type, the anticausative alternation, the base is causative, and the verb describing the spontaneous change is marked. In the second type of alternation, the causative alternation, the base is the spontaneous-event verb, and the causative is the marked verb of the pair. Both types of alternation are common crosslinguistically. Haspelmath (1993) gives the examples in (3) from Russian and French.

(3) Anticausative alternation in Russian:

<table>
<thead>
<tr>
<th>English</th>
<th>Arabic</th>
</tr>
</thead>
<tbody>
<tr>
<td>roll</td>
<td>ḫatat $-$ ṣja'</td>
</tr>
<tr>
<td>roll</td>
<td>ḫatat $'$</td>
</tr>
</tbody>
</table>

Causative alternation in French:

<table>
<thead>
<tr>
<th>English</th>
<th>Arabic</th>
</tr>
</thead>
<tbody>
<tr>
<td>melt</td>
<td>waqafa</td>
</tr>
<tr>
<td>take</td>
<td>ḥa'aara</td>
</tr>
<tr>
<td>return</td>
<td>ḥa'aada</td>
</tr>
</tbody>
</table>

In Croft’s (1990) terms, prototypical transitivity wherein an agent has some impact on a patient is a semantically marked view for actions like laugh or hear, which do not have an agent as part of their semantics, and hence the addition of causation to these concepts results in a marked Arabic verb. Meaning components like spoil and melt are patient-oriented processes, and so the unmarked verb is the one that construes this process in its simplest form, without causation, while the presence of a causal agent is marked. This is not the case when a meaning component is essentially a static notion rather than a process. For example, height, discontinuity, separation, and so on can be construed as the results of an activity but they can be abstracted from that activity in a way that spoil and melt cannot. Spoil and melt are activities themselves, and any resulting state entails the fact that the activity

6.2 Marked causatives
has occurred. Hence spoiled and melted apply to things that have completed the relevant actions. This is not so with height or discontinuity, which can be conceptualized separately from the actions raise and sever. When height and discontinuity are result states, the default view is one in which they come about under the control of an external party, and this action is construed by an unmarked causative verb. Chapter 4 on reflexive marking illustrated that the spontaneous action verb is derived from this causative through reflexivization, so that the participant on whom the state falls is also the participant conceptualized as initiating the change.

The verbs in (2) illustrate that the glottal stop of pattern IV ꔺʕala marks the presence of an agent that is not part of the base concept. This is diagrammed in (4).

\[
\text{(4) Agent} \\
\text{\rightarrow}
\]

An approach where the glottal stop codes an agent, rather than a causer specifically, is able to account for the relatively large number of ꔺʕala verbs that cannot easily be characterized as causative (see Zaborski 2007). While the pattern is certainly used to construe caused events, the following sections illustrate that it also produces verbs whose subject acts without affecting any other participant. For this reason, a more encompassing explanation is that the glottal stop in pattern IV represents an agent that is combined with an existing concept in the perception of a novel event (cf. Doron 2003a, 2003b for Hebrew). As an example, the notion make laugh is formed by framing the independent event laugh in the semantic structure of an externally controlled event. Linguistically, a glottal stop representing the external agent in this event is added to the base verb dahika ‘to laugh’, resulting in causative ꔺdakha ‘to make laugh’, diagrammed in (5).

\[
\text{(5) Agent} \\
\text{\rightarrow laugher}
\]

Based on the contrast between the pattern I verbs and the derived ꔺʕala verbs in (2), a reasonable conclusion is that the pattern simply adds an agent to the base. This is correct in part, but as with the other verb patterns analyzed so far, my argument is that the pattern marks a semantic feature of the event construed, and that in conceiving that event the base concept is incorporated into a new semantic structure. The difference is important because an ‘agent plus base’ approach predicts that an ꔺʕala verb will have only the roles of its base, plus an agent. In contrast, the
approach I take here is that the glottal stop of ʔafṣala marks the presence of an agent in an independent semantic structure that may contain roles, in addition to this agent, that are not present in the base concept that it hosts. A good example to illustrate this point is presented by the verbs of giving and sending in the following section.

6.3 Giving and sending

Arabic verbs of giving and sending are either basic or derived. Three basic unmarked verbs are provided in (6).

(6) manaha  ‘to grant, award’ ditrans/trans+obl
    wahaba  ‘to give, donate’ ditrans/trans+obl
    baṣaθa  ‘to emit; to send, dispatch’ trans/trans+obl

The first two verbs in (6) participate in the dative alternation: they can appear in a ditransitive construction in which both objects take accusative case, or a to construction consisting of a direct object and an oblique. These two possibilities are illustrated in (7) for wahaba ‘to give, donate’.

(7) 1 وهبته امال
    wahaba-t-hu  l-maal-a
    gave-3sg-him the-money-acc
    ‘She gave him the money.’

2 وهبته نفسها لله
    wahaba-t  nafs-a-ha  li-l-lah
    gave-3sg self-acc-her to-the-god
    ‘She gave (devoted) herself to God.’

Much work on the dative alternation posits that it arises because two different semantic structures are expressed (Pinker 1989; Jackendoff 1990; Goldberg 1992, 1995). Typically, the double object construction is assumed to construe caused possession, where the subject causes the first object to possess the second. The to construction is taken to represent caused motion, where the subject causes the object to move to a goal. Rappaport Hovav and Levin (2008) have recently challenged this, arguing that English give consistently represents caused possession regardless of the structure that hosts it, while send represents either caused possession or caused motion depending on the context. For Arabic, the dative alternation arises only

1 BYU: Ghado2—reference: A:\401701\S\[MainPage]\Do3-06-2011.
when the core meaning of a verb has a possessor argument and a possessed. Because these arguments are inherent in the semantics of the verb, caused possession is construed regardless of how they are organized: in the ditransitive construction an agent causes the possessor to have the possessed, and in the to construction an agent causes a theme, the possessed, to go to a goal, the possessor. The two possibilities are diagrammed in (8).

(8) Double object construction:

```
Agent ───> cause ───> possessor ───> possessed
```

To construction:

```
Agent ───> cause ───> possessed ───> go to ───> possessor
```

The verbs manaha ‘to award’ and wahaba ‘to give’ are therefore able to participate in the dative alternation because they lexicalize an agent, a possessor, and a possessed which can be arranged in either of the constructions shown in (8) while still construing caused possession. In contrast, ba‘atha ‘to emit, to send’ clearly does not represent possession since there is no possessor inherent in emitting a sound or smell, and sending something does not entail that it enters the possession of some other party. The verb conveys caused motion rather than possession, and in all uses the subject causes the object to move away. The two inherent arguments here are a causal agent and a theme that moves, and with the addition of an optional goal argument the verb construes sending. It cannot appear in the ditransitive construction in (8) because this construction is incompatible with its semantics: there is no possessor argument that can be realized as a direct object. The derived verbs of giving or sending in (9) follow this same restriction.

(9) rasila ‘to be long and flowing’ int ʔarsala ‘to let flow; to send’ trns/trns+obl
Yaţa ‘to get’ trns (archaic) ʔaţaa ‘to give’ ditrans/trns + obl
salima ‘to be free of, safe from’ obl ʔaslama ‘to surrender’ trns + obl
sabaqa ‘to abound’ int ʔasbaqa ‘to bestow’ trns+obl
daţaa ‘to be copious’ int ʔadţaa ‘to grant, award’ trns+obl

Pattern IV ʔarsala ‘to let flow; send’ construes externally controlled motion, and this is present in both uses of the verb in (10).
The base verb *rasila* ‘to be long and flowing’, said of hair, describes a type of motion that is not under the control of some other party, whereas such an external agent is present in both uses of derived *ʔarsala* in (10). The incorporation of spontaneous motion into an externally controlled event also seems to have resulted in English *send*, which Ayto (1993) ultimately traces to a base meaning ‘go, journey’. In both the Arabic and the English cases, at some point in time a language user has innovated, deriving a causative verb. For *ʔarsala* ‘to send’, this involves the addition of a glottal stop to the base, signaling the presence of an agent, and placing the resulting derived verb in a *to* construction. Neither an agent nor a goal argument are inherent in the base verb here, but they are part of a semantic structure in which the meaning of the base is reframed.

In contrast to *ʔarsala* ‘to send’, pattern IV *ʔaʕtaa* ‘to give’ is derived from a base verb that lexicalizes possession, and hence it enters into the dative alternation. Unmarked *ʕataa*, which I have translated as ‘to get’, is archaic and unlikely to be recognized by native speakers of Arabic today. Ibn Manẓūr (c.1300) gives several examples of the verb in context.

The subject of *ʕatā* brings the object into its possession, and it seems reasonable to conclude that a possessor, or at least a getter, is inherent in the semantics of the verb. Derived *ʕatā* ‘to give’ reframes the meaning of the base as caused possession, and the verb may therefore appear in either a ditransitive construction, where the subject causes the possessor to have the possessed, or in a to construction, where the subject causes the possessed to go to the possessor. Both constructions are illustrated in (12).

The situation described by transitive pattern IV *ʔaslama* ‘to surrender, give up’ differs from giving and sending in that an agent allows a theme to fall to a recipient, and this recipient somehow targets or wants the theme. To surrender a weapon, for example, is to cease holding out against a recipient who seeks it. In pattern I *salima* ‘to be free of, escape from’, the subject is in a relation with something that targets it. I will term the semantic role of the subject the sought, and that of the thing that relates to the subject the seeker, so that *salima* ‘to be free of, escape from’ describes a situation where the sought is free of the seeker. In pattern IV *ʔaslama* ‘to surrender, to give up’, these two participant roles are organized into an externally controlled event where an agent makes the sought available to the seeker. The verb may be paraphrased as ‘forsake’ or ‘betray’, when the subject leaves the object at the mercy of some implicit party; ‘surrender’ or ‘give up’, when the subject causes the object to go to a recipient that seeks to take it, or ‘resign’, as in *ʔaslama ʕamr-hu l-ʔallah* ‘he resigned his cause to God’ or *ʔaslama ruuh-a-hu* ‘he gave up his spirit (to God)’. In all of these possible meanings the semantic content of the base, which consists of just the sought and the seeker, is reframed in a larger semantic structure headed by a causal agent, as shown in (13).
6.3 Giving and sending

The remaining verbs in (9) represent the incorporation of different semantic content into a similar structure. Unmarked *sabaḡa* ‘to abound’ and *dafaa* ‘to be copious’ construe situations in which one party comes forth in abundance, while the subject of the marked verbs *ʔasbaḡa* ‘to bestow’ and *ʔafdaa* ‘to grant’ makes the object abundant for a beneficiary.

The same semantic structure, where an agent causes a theme to go to a beneficiary, may also be fleshed out or flavored by a thing rather than an action. The verbs of giving in (14) are denominal, and the base noun is given by the subject to the object.

The verbs in (14) are incorporated theme verbs (Jackendoff 1990), where a thing is incorporated into an event of giving. Neither the agent who gives nor the recipient who receives are present in the base, but they are nevertheless part of the semantic structure construed. An example of the verb *ʔaqţaḡa* ‘to give land’ in context is provided in (15).

The referent of the base noun *qutţa* ‘plot of land’ is transferred from the subject to the first object -*hum* ‘them’ in (15). The second object, *araadiya ziraatīyat-an* ‘agricultural lands’, provides further information about the plot of land that is transferred. This is an instance of argument fusion (Jackendoff 1990), where an incorporated theme places semantic restrictions on what an overt theme can be. Only a noun denoting land can appear in the second object position in (15) because the verb itself incorporates the theme *qutţa* ‘land’. The semantic structure of the verb is diagrammed in (16).

---

The other denominal verbs in (14) share this structure, differing only in the nature of the theme that is given. Giving land, respite, news, or a gift are identical actions in terms of their semantic roles and the relationship between them, and this abstract structure is independent of any one instantiation of giving.

6.4 Activated states

What I call ‘activated state’ verbs describe the quality of an action carried out by the subject. Examples are provided in (17).

(17) hasan ‘good’ ḥaḥṣana ‘to do well’ int/trns
dʒayyid ‘good’ ḥaddʒaada ‘to do well; to master’ trns
sayyi? ‘bad’ ḥasaaʔa ‘to do badly; to mis-’ int/trns
xaatiʔ ‘wrong’ ḥaxṭaʔa ‘to do wrong; to mis-’ int/trns
baṭiiʔ ‘slow’ ḥabṭaʔa ‘to do slowly’ trns
kaṭiʔ ‘a lot’ ḥakṭara ‘to do a lot of’ obl
faṭiʔ ‘compassionate’ ḥaffaʔa ‘to take pity on’ obl
duqum ‘bold, audacious’ ḥaqdama ‘to act boldly, embark upon’ int/obl

The base adjective in (17) acquires an adverbial quality in the derived ḥaffaʔa verb, describing the manner of the subject: that it acts well, badly, incorrectly, and so on. In Carlson’s (1977) terms, the base adjectives of this type of verb denote individual predicates that are generally true of an attributant, while the derived verbs represent stage predicates that hold of the subject for a limited period of time. For example, someone may be faṭiʔ ‘compassionate’ or duqum ‘bold’ as a general quality, but pattern IV ḥaffaʔa ‘to take pity on’ or ḥaqdama ‘to act boldly’ involves the activation of that quality on a specific occasion. Two examples from this set are shown in context in (18).

(18) 8

lā yu-dʒiːd-ʔuːn al-qirāʔat-ʔa wa l-kītaːbat-a
NEG 3-do well-MPL the-reading-ACC and the-writing-ACC
‘They don’t read and write well.’

lānna l-burtuːqalʕalʔ-ʔiːn kān-ʔuːn yu-siiʔ-ʔuːn at-taːsarruf-a
because the-portuguese-PL was-3MPL 3-do badly-MPL the-conduct-ACC
daʔtīnman
always
‘Because the Portuguese were always behaving badly.’

8 BYU: Ahram99 reference: 0228g9ECON04.
6.5 Base as product

Verbs derived from nouns reflect the fact that the semantic structure they construe incorporates a thing (Clark and Clark 1979; Levin 1993; Kiparsky 1997). The majority of Arabic denominal verbs are formed in pattern II, which I treat later in this chapter, but a limited set is found in pattern IV. Clark and Clark (1979) identify a class of intransitive English denominal verbs exemplified by the cow calved, where the calf comes to exist due to the action of the subject. In Arabic this type of production verb is formed in pattern IV, where the base noun names the item produced. Typical examples include the putting out of leaves or flowers, and weather verbs, whose subject is feminine singular, referring to as-samaa ‘the sky’.

(19) 

<table>
<thead>
<tr>
<th>waraq</th>
<th>‘leaf’</th>
<th>?awraq</th>
<th>‘to put out leaves’ int</th>
</tr>
</thead>
<tbody>
<tr>
<td>zahr</td>
<td>‘flower’</td>
<td>?azhara</td>
<td>‘to flower, blossom’ int</td>
</tr>
<tr>
<td>thamar</td>
<td>‘fruit’</td>
<td>?aθmara</td>
<td>‘to bear fruit’ int</td>
</tr>
<tr>
<td>məṭar</td>
<td>‘rain’</td>
<td>?amṭara-t</td>
<td>‘to rain’ int</td>
</tr>
<tr>
<td>bələz</td>
<td>‘to snow’</td>
<td>?aθladţa-t</td>
<td>‘to snow’ int</td>
</tr>
</tbody>
</table>

Figure 6.1 contrasts the semantic structure of the base adjective ḍjayyid ‘good’ with that of the derived verb ḍaḍaada ‘to do well’. The state of goodness represented by the square/rectangle is predicated of any entity in the adjective ḍjayyid ‘good’, but specifically of an agent in the verb ḍaḍaada ‘to do well’, where it therefore characterizes the entire action. The perception of an event in which something is done well, badly, wrongly, and so on requires the combination of a ‘doer’, a ‘done’, and a quality: good, bad, or wrong. The resulting concept is represented linguistically by merging the relevant adjective with a verb pattern that signifies an agent, and placing this verb in a clause with an object. In the contextualized example of ḍaḍaada in (18), the action of reading and writing is the ‘done’, while the base adjective functions as a comment on how the agent acts. The next two sections examine situations in which a thing, rather than a state, is combined with an agent.
The entity represented by the noun is incorporated into an action here. This is illustrated in (20) for ʔaðmara ‘to bear fruit’.

The agent of ʔaðmara produces fruit, while in other instances the agent brings about a thing by doing it, as in ʔaðnaba ‘to sin’, or by making it, as in ʔafaara ‘to indicate, make a sign’. These roles of producer, doer, or maker differ slightly due to the exact nature of the event, but the important point is that they are all instantiations of a larger agent role that incorporates these possibilities. In the case of ʔafbaha ‘to resemble’ the subject produces or brings to mind a likeness of someone or something, activating this otherwise inert concept.

6.6 Base as goal

Several denominal ʔafīala verbs describe activities in which the subject goes to a time or place denoted by the base noun, or causes the object to do so.

The verbs in (21) are derived when the concept paired with the noun is salient in a perceived event. As the verb is used in new contexts over time, the relevance of the base noun may fade. Hence the subject of ʔafaqa, the sun, rises in af-farq ‘the East’, and shines, and now the verb may take other subjects that shine, such as wadḥ ‘face’ or mustaqbal ‘future’, where the relationship with the East is no longer retrievable. Similarly, the modern use of ʔasbaha to mean ‘begin morning’ is limited to the formulaic expression said to wish someone goodnight: tusbih ʔala xayr ‘may you begin morning in light’, more commonly with a different pronunciation in spoken Arabic. Aside from this the verb is used to mean ‘become’, and this use has likely
developed due to an association between ‘entering upon morning’ and fresh starts or new beginnings.

Just as the subject of ʔabhara goes to sea (bahr), the subject of ʔarmala ‘to be widowed’ goes to sand (raml). Lane (1865) paraphrases the feminine singular form ʔarmal-at as ‘cleaving to sand’, meaning to become destitute upon the death of a husband, and hence ‘to become a widow’. The nouns ʔarmala ‘widow’ and ʔarmal ‘widower’ appear to be a back-formation from this verb rather than a base from which it is formed.

The final two examples in (21) are further examples of an intervening layer of derivation between a derived word and its ultimate base. The noun fitr ‘fast breaking time’ is used in the name of the holiday at the end of Ramadan, Siid al-fitr ‘holiday of the fast breaking’. It is derived either from unmarked faṭara ‘to breakfast’ or from some earlier ancestor that it shares with this verb, and the noun is then itself the base for ʔaftara ‘to break one’s fast’. This is the verb used to describe breaking the fast at nightfall during Ramadan, when the subject arrives at this specific time of day. Similarly, pattern IV ʔaabaaʕa ‘to put up for sale’ is derived from the base noun bayʕa ‘sale’, itself derived from pattern I baaʕa ‘to sell’. This noun presents the action of selling as a thing: one instance of the action. Talmy (2006: 78) discusses a cognitive operation of reification, where an event or an action is conceptualized as an object or a mass, which can then take part in the same activities as a physical object, such as being given and received. In this instance, the action sell is profiled as a thing by the noun bayʕa ‘sale’, and this thing is then incorporated into the concept of ‘putting up for sale’ where it functions almost as a location into which the subject places the object. Both ʔaftara ‘to break the fast’ and ʔaabaaʕa ‘to offer for sale’ therefore contrast with their unmarked pattern I counterparts faṭara ‘to breakfast’ and baaʕa ‘sell’ in that they describe actions whose semantic content is a thing that is action-alized when it is incorporated into a relation.

As an intermediate summary for this analysis of pattern IV ʔaftala, the glottal stop in this verb pattern denotes an agent that is not part of the immediate base concept. This agent is frequently a causer that affects another party, but it may also act in a certain way, produce something, or go to a time or place. The reflexive counterpart to ʔaftala is pattern X istaftala, where the /s/ stands in place of the glottal stop and the /t/ marks reflexivity. The analysis now turns to verbs marked with these affixes.

6.7 Actions on the self

I illustrated in Chapter 4 that a reflexive marker signals identity between two semantic roles: an initiator that typically acts, and an endpoint on which the result of that action falls. Affixation of a reflexive marker to an unmarked pattern I verb assigns the endpoint role of its object to its subject instead. Two examples are repeated in (22).
The subject of the marked verbs in (22) both acts and undergoes the result of that action, being washed or changing position. This type of action on the self is also described by a number of istafʕala verbs, which alternate with non-reflexive ʔafʕala. Both verbs in the alternation are derived from a pattern I base.

I have already argued that the subject of pattern I salima ‘to be free of, safe from’ is some type of target, the sough, to which the oblique object, the seeker, is oriented. These two arguments are incorporated into an event of transfer in transitive ʔaslama ‘to surrender’, where an agent makes the sought available to the seeker. In reflexive istaslama ‘to surrender to’, the subject is both the initiating agent and the party that is transferred, moving under its own control. Just like the glottal stop of ʔaslama, the /s/ affix here marks the addition of a controlling agent that is not part of the base concept. The reflexive /t/ marks identity between this agent and the theme-like sought argument that moves to the seeker. The contrast between the two derived verbs is illustrated in (24).

The diagrams in (24) capture the fact that the subject of both the derived verbs is agentive, but that only the subject of istaslama ‘to surrender to’ acts and undergoes the effect of the action. The diagrams also show that semantically, the structure denoted by istaslama is that of ʔaslama with the addition of reflexivization. It is not
necessary to posit that every individual istafyala verb is derived from an ʔafyala one however, nor is this desirable since first it would require an explanation of how and why the glottal stop has consistently mutated to become /s/ in all reflexivized ʔafyala verbs, and secondly because many istafyala verbs do not have an ʔafyala counterpart. Rather, my conclusion is that both verb patterns have come into existence because different markers have been affixed to a pattern I base: the glottal stop in one case, the /s/ and /t/ morphemes in another.

The analysis presented for istaslama ‘to surrender to’ also holds for pattern X istarsala ‘to let oneself go’. Pattern I rasila ‘to flow freely’ describes an independent event in which the subject is unimpeded by any other participant. The notion of movement is incorporated into an event with an external agent in pattern IV ʔarsala ‘to let flow; to send’, and this agent is also present in pattern X istarsala ‘to let oneself go’, where it allows itself to relax, and is therefore both controller and the entity affected by the control exerted.

Pattern X istadaara can mean ‘to turn around’ or ‘to assume a circular form’, both of which are changes of configuration. Intransitive pattern I daara ‘to revolve; go round’ describes a one-participant event in which the subject makes a circular motion, often completing a circuit as in (25).

(25)  
كان يدور مرة راكباً ومرة راجلاً  
kaana ya-duur marrat-an raakib-an wa marrat-an  
was[3MSG] 3MSG-go round time-ACC rider-ACC and time-ACC  
raaʤil-an  
walker-ACC  
‘He used to go round once riding and once on foot.’

Such an event involves the exertion of energy, but there is no change of configuration, and so this energy is not absorbed by a second participant. Transitive pattern IV ʔadaara ‘to turn’ describes the action of an agent on a patient, which is caused to turn or become reconfigured. This is illustrated by the example in (26).

(26)  
أدار ظهوره  
ʔadaara zahr-a-hu  
turned[3MSG] back-ACC-his  
‘He turned his back.’

The subject of pattern X istadaara ‘to turn around’ is both an agent and the party that is reconfigured, affected by the action it undertakes. An example is provided in (27).

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(27) istadaara hataa raṣbaha yu-waadžih al-qawm
turned[3MSG] so that became[3MSG] 3MSG-face the-tribe
‘He turned in order to face the tribe.’

In describing an action in which an agent alters its own configuration, this pattern X verb instantiates the same semantic structure as pattern VIII ʿiltafata ‘to turn’. The difference is that this latter verb is derived from the base verb lafata ‘to turn (something)’, in which a causal agent is already present. This is not the case with the intransitive base verb daara ‘to revolve’, and so the presence of a causal agent is marked in both ṭadaara ‘to turn (something)’ and istadaara ‘to turn (one’s body) around’. Other types of action undertaken by the subject of an ʿistaʃāla verb involve a second participant that is oriented towards the subject. These are treated in the following section.

6.8 Causer-oriented actions

Several ʿistaʃāla verbs describe events in which the subject causes the object to come to it, or to be otherwise located relative to it.

(28) hadara ‘to attend’ trns istahdara ‘to summon’ trns
baqiya ‘to remain’ int/obl istabqa ‘to keep back’ trns
ṭaada ‘to return’ int istaʿaada ‘to reclaim’ trns
ɡariqa ‘to drown’ int istaʿgraqa ‘to last, take up’ trns

The ʿistaʃāla verbs in (28) differ from their base verbs in that a causal agent is now present, hence the subject of the base verb becomes the object of the derived verb. The presence of this agent is marked with /s/, while reflexive /t/ marks the fact that the action of the verb also terminates at this same agent. The subject of istahdara ‘to summon’ causes or attempts to cause the object to come to it, just as the subject of istabqa ‘to keep back’ causes the object to remain with it and the subject of istaʿaada ‘to reclaim’ causes the object to return to it. These are externally caused events in which the external causer is also the location towards which the causee is oriented. The semantic structure of istahdara ‘to summon’ is contrasted with that of the base verb hadara ‘to attend’ in (29).

(29) Attender location Agent attender location

`hadara ‘to attend’ istahdara ‘to summon’`

This same reflexive structure is also instantiated by *istağraqa* ‘to last, take up’. While the subject of pattern I *gariqa* ‘to drown, to sink’ becomes immersed in a medium, typically water, but also work, debt, and so on, the object of *istağraqa* is used up or taken in by the subject. Two examples of this verb in context are given in (30).

(30)  
الطريق استغرقت سبعة أيام  
at-ṭariq-u  stağraqa-t  sab‘at ʔayaam  
the-road-NOM  took-3FSG  seven days  
‘The journey took seven days.’

The events described by pattern X *istağraqa* in (30) are externally controlled, since it is now the object that becomes immersed. When the object of the verb is a period of time, as in the first example in (30), it is used up or consumed by the subject. This notion of consumption is equally applicable in the second example, where the subject, the sweeping gazes, takes in the object, the last moment.

The fact that the *istafšala* verbs in (28) encode an external agent encourages an analysis where an agent is simply added to the base. This analysis cannot account for the verbs in (31) however, since the subject of the base verb is already agentive.

(31)  
dʒamaʃa ‘to gather’  
istadʒmaʃa ‘to summon (will, strength)’  
daʃaa ‘to call on, invite’  
istaʃjaʃa ‘to summon’  

No agent is added in the derivation of the verbs in (31), and hence the subject of the base verb is not demoted to object status in the *istafšala* verb. The pattern does not encode the addition, but rather the presence, of an external agent here. Pattern I *dʒamaʃa* ‘to gather’ describes an externally controlled change of state, whereby the subject causes the object to enter a state of collectivity. Reflexivization of this unmarked verb results in intransitive pattern VIII *idʃamaʃa* ‘to gather, meet’, where the subject enters the state of collectivity itself. The distinction between an external agent and the party that changes state is eliminated in this verb, but is maintained in pattern X *istadʒmaʃa*, where the subject causes the object to be collective at the subject. An example in context is given in (32).

The *ista'ila* verb therefore reframes the meaning of the base in a structure with an external agent and a reflexivized endpoint. In the same vein, *istad'aa* 'to summon' reframes the meaning of *da'aa* 'to call on, invite'. The unmarked verb denotes a relation in which an agent obliges another party to act or refrain from acting. A contextualized example is provided in (33).

another participant, which is realized as an object or oblique. In derived pattern X  
\textit{istardaa} 'to ingratiate oneself with' and \textit{istahwaa} 'to seduce, enchant', the subject is  
an agent that causes the object to be positively disposed towards it. As a rough  
paraphrase, the subject of \textit{ista'bada} 'to enslave; to enthral' causes the object to serve  
or worship it, the subject of \textit{istahwada} 'to serve' causes the object to serve it, and the  
subject of \textit{ista'mala} 'to use' causes the object to work for it. It is important to reiterate  
here the point made in Chapter 4 regarding combinations of concepts within word  
boundaries and conceptual closeness (Haiman 1983). Of course the verb \textit{istaxdama}  
'to use' is not equal to the phrase 'x cause y to serve x', but these concepts are present  
in the meaning of this verb nevertheless. The subject acts. The object performs some  
kind of service as a result. The subject benefits. These elements of meaning are  
lumped together and construed as one event, and the linguistic items that represent  
them are combined within the bounds of a single word. There is a higher degree of  
conceptual closeness between the causing event, which is the action of the subject,  
and the caused event, what the object does, than there is in the phrase 'x causes y to  
serve x', and there is obviously a high degree of conceptual closeness between the  
causer and the beneficiary, to the extent that they are inseparable. This is reflected in  
the degree of linguistic closeness between the linguistic items that represent these  
concepts.

A similar point is made by Shibatani (1976), who in discussing data from Fodor  
(1970) observes that a lack of exact equivalence between a phrase and a verb does not  
automatically entail that they do not consist of the same semantic components.  
Fodor (1970: 431–53) offers three reasons why the verb \textit{to kill} is not equivalent to  
\textit{cause to die}. These are based on the observation that the phrase \textit{cause to die} allows for  
the separation of the causing event from the dying event in a way that \textit{to kill} does not.  
First, the constituent parts of \textit{cause to die} retain a degree of independence, and this  
allows the subject of \textit{cause} and the subject of \textit{die} to be singled out by the phrase \textit{did so}  
in the examples in (35a), whereas (35b) illustrates that the \textit{did so} phrase cannot single  
out the subject of the dying event supposedly present in \textit{to kill}.

(35)  
\begin{enumerate}[a.]  
\item John caused Mary to die, and it surprised me that he did so. (singles out John)  
\hspace{1cm}  
John caused Mary to die, and it surprised me that she did so. (singles out Mary)  
\item John killed Mary and it surprised me that he did so.  
\hspace{1cm}  
*John killed Mary and it surprised me that she did so.
\end{enumerate}

Fodor also illustrates that cause and effect may be separated temporally for \textit{cause to  
die}, but not so for \textit{to kill}, as demonstrated in (36), where the causing action and the  
dying event need not take place at the same time if the phrase \textit{cause to die} is used, but  
must co-occur when construed by the verb \textit{kill}.

(36)  
\begin{enumerate}[a.]  
\item John caused Bill to die on Sunday by stabbing him on Saturday.  
\hspace{1cm}  
*John killed Bill on Sunday by stabbing him on Saturday.
\end{enumerate}
A further difference advanced by Fodor is that the instrumental adverbial *by swallowing his tongue* may be attributed to the subject of the *cause* constituent or the subject of the *to die* constituent when the phrase *cause to die* is used, while this same adverbial may only refer to the subject of *to kill*.

(37) John caused Bill to die by swallowing his tongue.
    John killed Bill by swallowing his tongue.

Shibatani (1976) explains Fodor’s observations by pointing out that there is a difference in the way that the causing action and the dying event are packaged. The lexicalization of these components in one verb, *to kill*, represents the creation of a cohesive unit that, because it is cohesive, may only describe one event, whereas keeping two predicates separate in *cause to kill* creates what Shibatani terms a two-event causative. Both situations therefore have the same semantic makeup, but they are more closely integrated when construed by a single verb. It is this closer level of conceptual integration that accounts for the difference between the paraphrase ‘x cause y to serve x’ and the meaning construed by the verb *istaxdama* ‘to use’. Linguistically the component parts of the verb are fused into one unit: the base verb *xadama*, the external agent morpheme /s/, and the reflexive morpheme /t/. Semantically, the causation, the service, and the co-indexation between causer and beneficiary are also integrated, yielding the meaning ‘use’.

A related verb type here is one in which the object has a certain quality specifically for the subject.

(38)  \( \text{t petroleum} \quad \text{to be subservient} \quad \text{obl} \quad \text{ist petroleum} \quad \text{to have in one’s power} \quad \text{trns} \\
    \text{w petroleum} \quad \text{to be necessary} \quad \text{obl} \quad \text{ist petroleum} \quad \text{to warrant, deserve} \quad \text{trns} \\
    \text{h petroleum} \quad \text{to be just, right} \quad \text{int} \quad \text{ist petroleum} \quad \text{to deserve} \quad \text{trns} \\

The subject of pattern I *t petroleum* ‘to be subservient’ is disposed to fall into the power of another party and do what it is told. This disposition is activated in pattern IV *\( \text{t petroleum} \) \text{to obey}', where the subject is actively subservient in a specific instance, rather than as a general quality. In pattern X *ist petroleum* ‘to have in one’s power, be able to’, the subject causes the object to be subservient to it. Since the object falls within the power of the subject, the resulting interpretation is one of ability, as the example in (39) illustrates.

(39) \( \text{الله يستطيع كل شيء} \quad \text{17} \\
    \text{the-god-nom} \quad \text{3msg-have in power} \quad \text{every-acc thing} \\
    \text{God can do everything}.

\( \text{17} \) www.lifechangingtruth.org/Arabic/Articles/R_Ghabbour/Job.htm
The subject here is not prototypically agentive, but due to some inherent property it does bring about a situation where it has control over another party. Similarly, a property of the subject of *istawḍُّaba* 'to warrant, deserve' causes the object to be necessary not in general terms, but specifically for the subject, while *istahَاqqِqa* 'to deserve' describes a situation where the subject causes the object to be right or just, again not generally, but specifically for the subject.

Denominal verbs formed in this pattern typically describe events in which the subject is both an agent and a beneficiary.

(40)  

<table>
<thead>
<tr>
<th>Arabic</th>
<th>English</th>
</tr>
</thead>
<tbody>
<tr>
<td><em>ʕawn</em></td>
<td>'help, aid'</td>
</tr>
<tr>
<td><em>giyaaθ</em></td>
<td>'succor'</td>
</tr>
<tr>
<td><em>raaθa</em></td>
<td>'comfort'</td>
</tr>
<tr>
<td><em>faaʔida</em></td>
<td>'benefit'</td>
</tr>
<tr>
<td><em>mutʕa</em></td>
<td>'pleasure'</td>
</tr>
<tr>
<td><em>qiʕa</em></td>
<td>'piece'</td>
</tr>
<tr>
<td><em>xabar</em></td>
<td>'news'</td>
</tr>
<tr>
<td><em>istaʔaana</em></td>
<td>'to seek or get help from'</td>
</tr>
<tr>
<td><em>istaḡaaθa</em></td>
<td>'to seek aid; ask for help'</td>
</tr>
<tr>
<td><em>istaraaθa</em></td>
<td>'to relax; take a break'</td>
</tr>
<tr>
<td><em>ista фаada</em></td>
<td>'to benefit; make use of'</td>
</tr>
<tr>
<td><em>istaṯτaʕa</em></td>
<td>'to enjoy, get pleasure from'</td>
</tr>
<tr>
<td><em>istaqaʕa</em></td>
<td>'to deduct'</td>
</tr>
<tr>
<td><em>istaxbaru</em></td>
<td>'to inquire about'</td>
</tr>
</tbody>
</table>

These verbs are similar in function to the pattern VIII denominals presented in Chapter 4, where the subject takes the object. Examples include *iṣταʔaqa* 'to take the neck of, embrace' from *ʕunuq* 'neck' and *irtadaa* 'to put on, wear' from *ridaaʔ* 'robe, garment'. In both cases the object of the verb is oriented towards the subject due to the action that the subject takes, but the *ista фаala* verbs encode a beneficiary role. As a result the subject of the verbs in (40) gains or attempts to gain by receiving the object, while no such positive connotation is discernable in pattern VIII denominals.

A final causer-oriented action construed by *ista фаala* verbs is a type of mental evaluation.

(41)  

<table>
<thead>
<tr>
<th>Arabic</th>
<th>English</th>
</tr>
</thead>
<tbody>
<tr>
<td><em>ɣaɾiib</em></td>
<td>'strange'</td>
</tr>
<tr>
<td><em>baʔiʔid</em></td>
<td>'far'</td>
</tr>
<tr>
<td><em>ḥasana</em></td>
<td>'good'</td>
</tr>
<tr>
<td><em>djaʔaʔyd</em></td>
<td>'good'</td>
</tr>
<tr>
<td><em>xaʕif</em></td>
<td>'light'</td>
</tr>
<tr>
<td><em>tʔaʔiil</em></td>
<td>'heavy'</td>
</tr>
<tr>
<td><em>istaḡraʔa</em></td>
<td>'to find strange'</td>
</tr>
<tr>
<td><em>istaɓyada</em></td>
<td>'to consider unlikely'</td>
</tr>
<tr>
<td><em>istaḥsana</em></td>
<td>'to consider good'</td>
</tr>
<tr>
<td><em>istaʔaʔada</em></td>
<td>'to consider good'</td>
</tr>
<tr>
<td><em>istaʔaffa</em></td>
<td>'to scorn; consider light'</td>
</tr>
<tr>
<td><em>istaϯʔada</em></td>
<td>'find heavy; burdensome'</td>
</tr>
</tbody>
</table>

Events of evaluation involve what Kemmer (1993) refers to as mental energy, where the evaluator focuses his or her attention on an object, and comes to some conclusion. The subject of the verbs in (41) causes the object to take on the state denoted by the base adjective, not in the 'real world' but in the subject's own mind. A rough paraphrase of the concept construed by *istaḡraʔa* 'to consider strange' is therefore 'x cause y to be strange at x', since this captures the fact that the relevant state is taken on by the object only in the mind of the subject. As with all other *ista фаala* verbs, the core meaning of the base is incorporated into a semantic structure headed by an
external agent here, and this agent is co-indexed with the endpoint role that terminates the structure, which in this case has a location-like quality.

In sum, the /s/ in the verb pattern istaf\'ala denotes an agent, while the /t/ indicates that this agent is also assigned an endpoint role. Having illustrated how causation and actionalization are construed by verbs formed in patterns IV and X, the remainder of this chapter is devoted to patterns II and V.

6.9 Result states

A change of state involves both action and a result state that obtains of an event participant once that action is complete. Result state verbs derived from static concepts are primarily formed in pattern II fa\(^\text{ʕʕ}\)ala. The same base concept may be framed as an activated state denoted by an \(\text{ʔaf}\text{ʕala}\) verb. The contrast is illustrated in (42).

\[(42) \begin{align*}
\text{hasan} & \quad \text{‘good’} & \text{ḥassana} & \quad \text{‘to improve’}_{\text{trns}} \\
\text{ṭayyīṭ} & \quad \text{‘subservient’} & \text{ṭawwā\text{ʕ}a} & \quad \text{‘to subdue, render obedient’}_{\text{trns}} \\
\text{ḥaqqa} & \quad \text{‘to be right, true’}_{\text{int}} & \text{ḥaqqa\text{ʕa}} & \quad \text{‘to make come true, realize’}_{\text{trns}} \\
\end{align*}\]

The fa\(^\text{ʕʕ}\)ala verbs in (42) construe externally caused result states. The subject acts, and the object takes on the state presented by the base word. With the \(\text{ʔaf}\text{ʕala}\) verbs the relevant state is predicated of an agent, who acts well, subserviently, or truthfully. There is no result state obtaining of an object here. This distinction is not a hard and fast rule, since caused result states are also occasionally construed by \(\text{ʔaf}\text{ʕala}\) verbs, resulting in a degree of overlap between the two verb patterns. This is illustrated by the data in (43).

\[(43) \begin{align*}
a. \text{qariib} & \quad \text{‘near’} & \text{garraba} & \quad \text{‘to bring near’}_{\text{trns}} \\
\text{qawwii} & \quad \text{‘strong’} & \text{qawwaa} & \quad \text{‘to strengthen’}_{\text{trns}} \\
b. \text{baṣiīd} & \quad \text{‘far’} & \text{ʔabṣā\text{ʕa}} & \quad \text{‘to take away’}_{\text{trns}} \\
\text{daṣiīf} & \quad \text{‘weak’} & \text{ʔadṣā\text{ʕa}} & \quad \text{‘to weaken’}_{\text{trns}} \\
\end{align*}\]

All of the verbs in (43) convey a caused change of state, and the choice of fa\(^\text{ʕʕ}\)ala for some states and \(\text{ʔaf}\text{ʕala}\) for others is apparently random. As noted in the introduction to this chapter however, \(\text{ʔaf}\text{ʕala}\) is extremely rare, sometimes non-existent, in many spoken dialects of Arabic, where fa\(^\text{ʕʕ}\)ala dominates. The existence of both patterns in formal Arabic is the result of codification, which likely mixed elements from different varieties and registers of Arabic to create a standard form. What can be stated with certainty is that even in formal Arabic, change-of-state verbs derived from a static base are predominantly formed in fa\(^\text{ʕʕ}\)ala and its reflexive counterpart...
pattern V *tafaYYala*. The base verbs in (44) present static situations, while the derived verbs present this same situation as arising due to some action.

\[\text{(44) } \begin{array}{ll}
\text{bari}\
\text{malaka}\
\text{walla}\
\text{xalla}\
\text{galaba}\
\text{dariba}\
\text{kana}\\
\text{‘to be innocent of’} & \text{‘to absorb’} \\
\text{‘to own’} & \text{‘to make own’} \\
\text{‘to be in charge’} & \text{‘to put in charge’} \\
\text{‘to be free of’} & \text{‘to rid’} \\
\text{‘to dominate’} & \text{‘to put above’} \\
\text{‘to be accustomed to’} & \text{‘to train’} \\
\text{‘to be’} & \text{‘to form’} \\
\end{array}\]

The derived verbs in (44) actionalize the static situation of the base, making it a result state. For example, pattern I *bari* ‘to be innocent of’ construes an essentially locative relation between two semantic roles: some type of potential charge such as sin or blame, and the innocent party, towards which this potential charge is oriented. The verb denotes a relation where the charge is not at, or does not apply to, the subject. There is no dynamism here, but the derived verbs *barra* ‘to absolve’ and *tabarra* ‘to clear oneself’ present actions in which innocence is brought about. With *barra* there is a separation between the causal agent and the party on whom the result state falls, while these two semantic roles are reflexivized in *tabarra*.

The difference is diagrammed in (45).

\[\text{(45) } \begin{array}{cc}
\text{Agent} & \text{innocent} \\
\text{*barra* ‘to absorb’} & \text{*tabarra* ‘to clear oneself’} \\
\end{array}\]

The semantic structures construed by the verbs in (44) are identical to those construed by pattern I *nahara* ‘to kill, annihilate’, where an agent causes a patient to become dead, and reflexive pattern VIII *intahara* ‘to commit suicide’, where an agent causes itself to enter that state. The difference is simply that the base is the action KILL in one case, but the simple state INNOCENT in the other. The semantic structure of a caused result state is therefore lexicalized by the base verb *nahara* ‘to kill’, but is built by combining an external agent and a simpler concept in *barra* ‘to
absolve’ and tabarraʔa ‘to clear oneself’. Further result state verbs are derived from stative properties, as in (46a), and things, as in (46b).

(46) a. baarid  ‘cold’       barrada  ‘to chill; make cold’  
dʒamiil  ‘beautiful’       dʒammala  ‘to beautify’  
ʔakiid  ‘certain, definite’ ʔakkada  ‘to confirm, assure’  
kabiir  ‘big’           kabella  ‘to enlarge’  
harik  ‘agile, mobile’  harraka  ‘to mobilize; to move’  
ʔaʃiin  ‘inaccessible’ ʔaʃana  ‘to fortify’  
ʃabiih  ‘like’      ʃabbaha  ‘to liken’  
b. ʔayr  ‘other’  ʔayyara  ‘to change’  
baʃ ′some; part’  baʃYaδa  ‘to divide into parts’  
dʒuzʔ  ‘part’  dʒazzaʔa  ‘to divide, part’  
ḥadʃar  ‘stone’  ḥadʃəra  ‘to turn to stone’  
zawδ  ‘one of a pair; pair’  zawwaδa  ‘to pair; marry’

The subject of the faʃYaδa verbs in (46) causes the object to become whatever concept is denoted by the base word: BEAUTIFUL, BIG, STONE, or ONE OF A PAIR, for example. The denominal verbs in (46) reframe the thing from which they are derived, presenting it as a type of state, but a larger number of denominal verbs formed in this pattern represent a type of transfer. These are examined in Section 6.10.

6.10 Transfer

Denominal verbs of transfer describe situations in which the entity denoted by the base noun is a theme-like argument that comes to ‘be at’ an event participant: either the subject or the object of the verb. Prototypical transfer involves a distinct initiator and endpoint. An external causer is the expected default, and the lack of a distinct causer is therefore marked with reflexive /t/. 
(47) 

<table>
<thead>
<tr>
<th>Arabic</th>
<th>English</th>
</tr>
</thead>
<tbody>
<tr>
<td>baraka</td>
<td>‘blessing’</td>
</tr>
<tr>
<td>tabarraka</td>
<td>‘to invoke a blessing’</td>
</tr>
<tr>
<td>sallah</td>
<td>‘weapon’</td>
</tr>
<tr>
<td>sallaha</td>
<td>‘to arm’</td>
</tr>
<tr>
<td>tasallah</td>
<td>‘to take up arms’</td>
</tr>
<tr>
<td>ṣaffa</td>
<td>‘dinner’</td>
</tr>
<tr>
<td>ṣaffaa</td>
<td>‘to feed dinner’</td>
</tr>
<tr>
<td>taṣaffa</td>
<td>‘to eat dinner’</td>
</tr>
<tr>
<td>ṣīr</td>
<td>‘perfume’</td>
</tr>
<tr>
<td>ṣīṭṭara</td>
<td>‘to perfume’</td>
</tr>
<tr>
<td>ṣiṭṭara</td>
<td>‘to put on perfume’</td>
</tr>
<tr>
<td>ḡadāa</td>
<td>‘lunch’</td>
</tr>
<tr>
<td>ḡaddaa</td>
<td>‘to feed lunch’</td>
</tr>
<tr>
<td>taḡaddaa</td>
<td>‘to eat lunch’</td>
</tr>
<tr>
<td>ḡidda</td>
<td>‘nourishment’</td>
</tr>
<tr>
<td>ḡidda</td>
<td>‘to nourish’</td>
</tr>
<tr>
<td>taḡidda</td>
<td>‘to feed on’</td>
</tr>
<tr>
<td>ḡitaa</td>
<td>‘cover’</td>
</tr>
<tr>
<td>ḡitṭaa</td>
<td>‘to cover’</td>
</tr>
<tr>
<td>taḡitṭaa</td>
<td>‘to cover up’</td>
</tr>
<tr>
<td>ṣaadā</td>
<td>‘custom’</td>
</tr>
<tr>
<td>ṣawwada</td>
<td>‘to accustom’</td>
</tr>
<tr>
<td>taṣawwada</td>
<td>‘to get accustomed to’</td>
</tr>
<tr>
<td>ṭawā</td>
<td>‘stain, blot’</td>
</tr>
<tr>
<td>ṭawwā</td>
<td>‘to stain, pollute’</td>
</tr>
<tr>
<td>talawwā</td>
<td>‘to become polluted’</td>
</tr>
<tr>
<td>ʔaθr</td>
<td>‘a mark, trace’</td>
</tr>
<tr>
<td>ʔaθara</td>
<td>‘to influence; affect’</td>
</tr>
<tr>
<td>taʔaθara</td>
<td>‘to be impressed’</td>
</tr>
<tr>
<td>fakkala</td>
<td>‘form’</td>
</tr>
<tr>
<td>taʃakkala</td>
<td>‘to take shape’</td>
</tr>
</tbody>
</table>

The object of the faYYala verbs in (47) is a goal to which a theme moves, while this goal role is assigned to the subject of the reflexive taʃaʃalla verbs. We have already seen examples of this same semantic structure expressed by an ʔafšala verb like ḡaxbara ‘to tell’, from xabar ‘news’, which in many dialects is expressed instead by pattern II xabar, also ‘to tell’. The reflexive structure is also construed by pattern VIII denominals like ṣaadā ‘to get accustomed to’, which is identical in meaning to pattern V taṣawwada, listed in (47). In all cases a thing is incorporated into an event of transfer, and what differs is the choice of how this is encoded linguistically.

The reflexive verbs in (47) vary with regard to the degree of agency that can be attributed to the subject. With verbs like tabarraka ‘to seek a blessing’ or taḡaddaa ‘to eat lunch’ the subject is clearly agentive, causing or attempting to cause something to come to it. In other instances, most notably with talawwā ‘to become polluted’ or taʔaθara ‘to be impressed, influenced’, it makes little sense to talk of the subject causing the event, and the verbs have an almost passive quality. The action is still construed as beginning with and affecting the subject however, rather like English the window fogged up or John teared up, where no external causer is implied. The reflexive /t/ marks the fact that the separation between initiator and endpoint characteristic of prototypical transfer is lacking in these Arabic verbs. A similar phenomenon is found in the reflexive denominals in (48).
The subject of pattern II *kallama* and *ḥaddāba*, both meaning ‘to talk to’, directs speech at the object. Reflexive *takallama* and *ṭahaddāba*, both meaning ‘to talk, speak’, are used in ways similar to English *talk about* or *speak French*, where no recipient of the speech is construed. The subject is agentive, but it is not also a recipient in any obvious sense, in contrast to a denominal like *taqaddaa* ‘to eat lunch’. Just like the /t/ in *talawwa* ‘to become polluted’, the /t/ in these speech verbs marks the lack of a distinction between an initiating agent and an endpoint goal argument, with the result that the speech remains with the subject rather than being transmitted to another party.

### 6.11 Conclusion

The analysis in this chapter provides additional evidence for a word-based approach to derivation from a semantic perspective, and for my argument that Arabic verb patterns represent morphological constructions paired with semantic structures, into which the meaning of a base word is incorporated. The morphologically marked words in the right-hand column in (49) are derived from specific words.

(49) a. *qadama* ‘to be in front of’ *trns*  *qaddama* ‘to put in front’ *trns*  *ʔaqdama* ‘to act boldly, embark on’ *int/obl*
   *qaduum* ‘bold’  *ʔaqdama* ‘to act boldly’  *qaqdam* ‘to be front’

b. *qataʕa* ‘to sever, cut off’ *trns*  *inqataʕa* ‘to cease’ *int*  *ʔaqtaʕa* ‘to give land’ *ditrns*
   *qutʕa* ‘plot of land’

c. *salima* ‘to be free, safe from’ *obl*  *ʔaslama* ‘to surrender’ *trns*+*obl*  *sallama* ‘to greet’ *trns*
   *salaam* ‘peace’  *əslama* ‘to surrender’  *əslama* ‘to greet’

Words sharing the same consonants are related by an abstract meaning, but this cannot be taken to mean that they are all derived from a consonantal root that is paired with this abstraction. In (49a) the shared meaning can be paraphrased as *[front], but *qaddama* ‘to put in front’ causativizes *qadama* ‘to be in front’, while *ʔaqdama* ‘to act boldly’ actionalizes *qaduum* ‘bold’. A word-based approach can easily explain this by asserting that each verb is derived from a different base. In a root-based approach there is only one base however, the root, and so there is no way to account for the different meanings of these derived verbs. The point is cemented further by (49b), where *inqataʕa* ‘to cease’ is derived by reflexivizing *qataʕa* ‘to sever, cut off’, while *ʔaqtaʕa* ‘give land’ is a denominal from *qutʕa* ‘land’. Pattern I *salima* ‘to be free of, safe from’ and the noun *salaam* ‘peace’ in (49c) both encode freedom from some potential danger or disruption, albeit framed differently in each case. The verb *salima* construes
a relation between a ‘sought’ party, and a ‘seeker’ that would potentially harm it. Pattern IV ‗aslama ‘to surrender’ takes this pattern I verb as its base, incorporating its two roles into an event of sending, where the agentive subject makes the ‘sought’ available to the ‘seeker’. Pattern II sallama ‘to greet’, in contrast, is derived from the noun salaam ‘peace’, specifically as it appears in the greeting as-salaam-u ‘Yalay-kum ‘peace be upon you’. A root-based approach would need to explain how the root can produce these two different verbs without recourse to base words.

The data in (49) also illustrate that verbal marking in the form of verb patterns does not simply indicate the addition of arguments to a base. The glottal stop on derived qaqtā‘a ‘to give land’ marks an agent not present in the base qutā‘a ‘land’, but there is also a recipient here which is not indicated morphologically. It is difficult to explain where this recipient comes from if the verb pattern just adds an agent, but if the pattern adds a recipient too, it is equally difficult to explain why it does not do this consistently. If, on the other hand, the pattern spells out an agent present in a semantic structure that exists as an independent mental concept, the recipient is accounted for. An event of giving or caused possession is conceived in which a salient element is the identity of the theme that is given. In conceiving the event, the thing land is incorporated into a structure consisting of agent, theme, and recipient. The event is then encoded linguistically through an innovation that reflects this incorporation, combining the noun qutā‘a with a glottal stop denoting an external agent. The other semantic roles inherent in the event are represented at the clause level, appearing as objects of the verb. A related phenomenon is illustrated by the alternation between pattern I ḍāma‘a ‘to gather (something)’ and pattern X istadḥna‘a ‘to gather (one’s strength, etc.)’. Although the /s/ morpheme of the derived verb almost always indicates an external agent not present in the base, pattern I ḍāma‘a is already agentive. The subject of both verbs causes the object to be collective, but the subject of istadḥna‘a causes the object to be collective at the subject. The /s/ morpheme here does not encode the addition of an agent, but rather the presence of an agent in the event described by the verb. In other words, an event is conceived by merging the existing notion ‘cause to become collective’ with the semantic structure of a causer-oriented action, producing ‘cause to become collective at oneself’. The event is then spelled out linguistically using a verb pattern associated with causer-oriented actions. The pattern does not add an external agent here, it just encodes the fact that one is present.

The analysis of pattern II fa‘Yala and reflexive pattern V tafa‘Yala in this chapter has been limited to verbs in which static situations and entities are actionalized, and this has necessarily involved overlooking a large number of verbs that construe events characterized by repetition. Verbs of repeated action are formed in these two patterns, alongside a third pattern, fa‘fa‘a, consisting of two reduplicated consonants. Chapter 7 examines these repeated action verbs.
Repetition

7.1 Introduction

The Arabic verb patterns faʕala and tafaʕala are typically labeled as intensive, iterative, or incremental. The aim of this chapter is to illustrate that these functions can be subsumed within the larger semantic category of repeated action (Greenberg 1991; Fassi Fehri 2012), and to distinguish between the types of repetitive event expressed by these patterns and a third pattern, faʕasa, in which the first and second consonants are reduplicated. In Section 7.2 I define what I mean by repetition, drawing on Cusic’s (1981) proposal that certain events are broken down conceptually into phases (see also Wood 2007), and I highlight two different types of reduplication that mark repeated action in Arabic. The first type of reduplication, gemination of the second consonant of the base, is the focus of Section 7.3, where I divide geminate verbs into those that construe repeated division, repeated reconfiguration, incremental change, and repeated taking. Verbs marked by reduplication of the first and second consonants are typically sound symbolic (Procházka 1993; Versteegh 2009). In Section 7.4 they are divided into verbs of repeated sound and verbs denoting rhythmic actions. That section also gives an overview of Bohas’ (1997, 2000, 2002) conception of the biconsonantal etymon, and considers the extent to which it is useful in establishing the origins of such verbs and their derivational relationship to other semantically similar verbs containing the same two consonants. In Section 7.5 I address overlapping functions, specifically the fact that two Arabic verb patterns mark causation, and I put forward a possible explanation for how it is that a causative function for pattern II faʕala has apparently arisen from its repetitive function. I conclude the chapter in Section 7.6 by considering how it strengthens the argument that verb patterns mark semantic structures.

7.2 Repetition and linguistic marking

The early grammarians of Arabic assigned pattern II faʕala and its reflexive counterpart pattern V tafaʕala either an intensive function, for actions carried out with great energy or vigor, or an extensive function, for events extending over time or
Goetze (1942: 2) notes that the label ‘intensive’ is poorly defined in Semitic studies, but a subsequent body of work on verbal plurality, notably by Cusic (1981), Dressler (1968), Durie (1986), Lasersohn (1995), Newman (1990), Swadesh (1946), Wood (2007), and Wood and Garrett (2002), provides a semantic typology of plural marking crosslinguistically which sheds more light on both the intensive and extensive uses of these Arabic verb patterns. Greenberg (1991) concludes that pattern II marks verbal plurality, which, following Swadesh (1946), he breaks down into verbs of temporal repetition, spatial dispersion, action by many, and action on many.

To capture both singularity and plurality in matter and in action, Talmy (2000: 48–9) uses the term ‘plexity’, defining it as ‘a quantity’s state of articulation into equivalent elements’. A uniplex quantity consists of a single element. English bird, for example, names a uniplex matter, while sigh names a uniplex action. These lexical items may combine with grammatical elements denoting a multiplexity, however, as in birds or he kept sighing. Such elements produce a multiplex quantity: matter consisting of identical repeated entities, and action consisting of identical repeated acts. Talmy argues for a cognitive operation named ‘multiplexing’, whereby ‘an original solo referent is, in effect, copied onto various points of space or time’ (Talmy 2000: 48). The Arabic verb patterns to be discussed in this chapter mark this type of repetition themselves, without relying on a larger syntactic context. This type of distinction is discussed by Wood (2007), who, building on Cusic (1981), distinguishes between repetition of events, as in John repeatedly lied and repetition in events, as in John’s heart fluttered. In the former instance the verb lie is not in and of itself repetitive, but becomes so in a given context. Repetition is a semantic feature of the verb flutter itself however, irrespective of context. It is inherently repetitive, describing an event consisting of what Cusic (1981) calls repeated event phases, here repeated movements of a heart. This notion of an event phase forms the basis of the analysis in this chapter, and subsequent sections illustrate how Arabic encodes events consisting of identical phases that occur either simultaneously or in succession.

The linguistic marking of repetition on the Arabic verb results in a reduplication construction (Inkelas 2005; Inkelas and Zoll 2005): a linguistic pattern in which two semantically identical constituents are brought together. One reduplication construction is characterized by gemination of the second consonant to produce pattern II faʕʕala. It is conceivable and perhaps likely that this pattern is predated by full reduplication, whereby the base word is repeated in its entirety. Miller (2003: 290–1) provides several examples of full reduplication in Juba Arabic of Southern Sudan, among them gāta-gāta, literally ‘cut-cut’, which mirrors the repetitive nature of the event described through total repetition of form. The verb pattern faʕʕala, where reduplication is only partial, may well be a reduced form of such a construction. Whether or not this speculation is correct, the important point is that faʕʕala and its reflexive counterpart tafaʕʕala involve reduplication of some portion of the base verb.
from which they are derived, namely its middle consonant, and that they construe an action that is reduplicated or repeated over time or space. They are therefore iconic, since repetition in an event is matched by repetition of phonological material.

A second reduplication construction is the verb pattern \( faʕfaʕa \), where the first and second consonants are reduplicated. This second pattern is often referred to as full or total reduplication (Zanned 2011: 185), with the implicit assumption that there exists a base that is copied. However, the majority of Arabic verbs formed in the \( faʕfaʕa \) pattern are sound symbolic (Procházka 1993; Versteegh 2009), encoding environmental sounds and rhythmic movements, and frequently they exist with no corresponding base. For this reason, I avoid referring to full reduplication, viewing \( faʕfaʕa \) as a reduplication construction that mirrors the repetitive nature of a certain set of events, and that does not consistently require a base to copy. I now turn to a more in-depth analysis of both types of reduplication construction, beginning with those characterized by gemination of the second consonant.

7.3 Gemination

Although repetition may vary in how it is manifest in a given event, what remains constant is the presence of more than one event phase. The unmarked verbs in (1) construe a single-phase action, and this is multiplied in the derived geminate verbs.

(1) \( saʕafaqa \) ‘to clap’ \( \text{int} \) \( saʕafaqa \) ‘to applaud’ \( \text{int} \)
  \( dalaka \) ‘to rub, stroke’ \( \text{trns} \) \( dallaka \) ‘to massage’ \( \text{trns} \)
  \( ḏabāha \) ‘to slaughter’ \( \text{trns} \) \( ḏabbāha \) ‘to massacre’ \( \text{trns} \)
  \( qatala \) ‘to kill’ \( \text{trns} \) \( qattala \) ‘to massacre’ \( \text{trns} \)

The pattern I verbs in (1) denote relations headed by an agent. They are either prototypically transitive, construing the action of an agent on a patient, or are close enough to the prototype to remain unmarked semantically, and therefore linguistically. Hence, although \( saʕafaqa \) ‘to clap’ has no affected object, it is initiated by an agent, and so its pattern is the default \( faʕala \). After Inkelas (2005) and Inkelas and Zoll (2005), each of these relations is a single constituent that is doubled up in the \( faʕala \) verbs. This is captured by the semantic structures in (2), which are represented by pattern II \( faʕala \) and pattern V \( tafaʕala \) respectively.

(2) \( faʕala \) \( tafaʕala \)
The arrows in the diagrams in (2) represent repeated action. In the non-reflexive structure denoted by faFFala the event is instigated by an agent, and prototypically a second participant is affected. Morphologically, these patterns arise when verbs are derived through reduplication of the second consonant of the base verb, with the additional affixation of reflexive /t/ in the case of tafaYYala.

Depending on the semantics of the base, an affected party is not always present, as with saffafa ‘to applaud’ in (1). In the reflexive structure denoted by tafaYYala, an affected endpoint role is present, but it is assigned to the subject of the verb, which is depicted as undergoing a change under its own steam, without a distinct external controller. The meaning component of the base is reframed in these structures, and it determines whether or not a given verb can describe action on a singular object. In the case of dallaka ‘to massage’, for example, the subject and object can be uniplex entities rather than groups comprised of elements, since one participant can repeatedly make physical contact with another. This is not possible when an event phase is an act of slaughter or killing, since there is a result state, death, that once entered cannot be entered again by the same entity. The object of the verbs dabbaha and qattala, both meaning ‘to massacre’, must therefore be multiplex, a plural or collective noun referring to a group of animate beings. This allows more than one act of killing to be initiated by the subject on the object, which can die many times only because it consists of multiple individuals. Fassi Fehri (2012) notes that certain uses of a geminate verb can lead to ambiguity, as in (3).

(3) ʤarrahya l-ʤundiyy-u l-ʔatfaal-a
wounded.INTENS.3SG the-soldier-NOM the-children-ACC
‘The soldier inflicted many wounds on the children’
‘The soldier wounded many children’ (Fassi Fehri 2012: 107)

The verb in (3) construes multiple instances of wounding, but Fassi Fehri observes that these may be distributed differently. In the first reading, the subject inflicts many wounds on the object as a whole, while the plurality of the object allows a second reading in which the high quantity of the elements that comprise it is emphasized. It is important to note that this ambiguity arises because the verb itself only construes multiple action from subject to object, so that further specifications regarding the distribution of that action are dependent on context.

While every meaning component is unique, I group verbs of repeated action here into those framing states of division, configurations, actions that become incremental when repeated, and reflexive acts of taking. I begin with verbs of repeated division.
7.3.1 Repeated division

The geminate verbs in (4) describe events where multiple divisions are either inflicted by one party on another, or occur spontaneously, when the verb also bears reflexive marking.

\[(4) \begin{array}{ll}
\text{ḥntāma} & \text{‘to break’} \text{trns} \\
\text{ḥntāma} & \text{‘to break into pieces’} \text{trns} \\
\text{ṭhntāma} & \text{‘to break into pieces’} \text{int} \\
\text{faraqa} & \text{‘to part’} \text{trns} \\
\text{ṭaraqa} & \text{‘to scatter, disperse’} \text{trns} \\
\text{ṭafaqra} & \text{‘to scatter, disperse’} \text{int} \\
\text{fatta} & \text{‘to split’} \text{trns} \\
\text{ṭattata} & \text{‘to disperse’} \text{trns} \\
\text{ṭafaqra} & \text{‘to scatter, break up’} \text{int} \\
\text{faqqa} & \text{‘to split’} \text{trns} \\
\text{ṭaqqa} & \text{‘to split; burst’} \text{trns} \\
\text{ṭafqqa} & \text{‘to split; burst’} \text{int} \\
\text{fakk} & \text{‘to undo’} \text{trns} \\
\text{ṭakkaka} & \text{‘to deconstruct’} \text{trns} \\
\text{ṭafqkkaka} & \text{‘to disintegrate’} \text{int} \\
\text{qatṭa} & \text{‘to sever’} \text{trns} \\
\text{ṭqṭṭa} & \text{‘to cut up’} \text{trns} \\
\text{ṭaqṭṭa} & \text{‘to cut in and out’} \text{int} \\
\text{kasara} & \text{‘to break’} \text{trns} \\
\text{kqssara} & \text{‘to break into pieces’} \text{trns} \\
\text{ṭqkssara} & \text{‘to break into pieces’} \text{int} \\
\text{ḥlla} & \text{‘to undo’} \text{trns} \\
\text{ḥllala} & \text{‘to disintegrate, analyze’} \text{trns} \\
\text{ṭḥllala} & \text{‘to dissolve, disintegrate’} \text{int}
\end{array}\]

The object of each pattern II verb in (4) divides more than once, with each individual event phase being one instance of externally controlled division, repeated within an event of breaking up, scattering, and so on. The development of pattern II ḥllala ‘to disintegrate, analyze’ is strikingly similar to that of English analyze, which Ayto (1993) explains developed from Greek ana lūsis ‘undoing’ or ‘loosening’, with the effect that ‘the component parts are separated and revealed’ (Ayto 1993: 26). Thus, while in modern-day usage of ḥllala and of English analyze the connection to division is far from transparent, it seems that to analyze something was originally viewed as undoing it bit by bit, reducing it to its base elements.

With the pattern V verbs in (4) multiple instances of division occur without a distinct external controller bringing them about. This is coded linguistically by the gemination of the middle root consonant to mark repetition, and the reflexive /t/ to mark the lack of a distinction between an initiator and endpoint that is characteristic of prototypical transitivity. The absence of this separation renders some of the meanings available to a pattern II verb impossible for pattern V. For example, while the object of pattern II qatṭa ‘to cut up’ can be virtually anything that can undergo multiple instances of severing: meat, wood, paper, and so on, the subject of pattern V taqṭṭa ‘must be something that can separate more than once of its own accord, such as a telephone line with a bad reception, or an emotional voice that cuts in and out, as in the example in (5).
A further example is *tahallala* ‘to disintegrate’, where the ‘analyze’ meaning attributed to *hallala* is not an option because it requires a distinct animate, cognizant ‘undoer’ and an ‘undone’ participant.

### 7.3.2 Repeated configuration and motion

While the geminate verbs in the previous section frame a certain type of state characterized by division, others construe changes of configuration or location.

(6)  

<table>
<thead>
<tr>
<th>Arabic</th>
<th>Meaning</th>
<th>Arabic</th>
<th>Meaning</th>
<th>Arabic</th>
<th>Meaning</th>
</tr>
</thead>
<tbody>
<tr>
<td><em>lawaa</em></td>
<td>‘to bend’</td>
<td><em>lawwaa</em></td>
<td>‘to bend, twist’</td>
<td><em>talawwaa</em></td>
<td>‘to bend, twist, squirm’</td>
</tr>
<tr>
<td><em>lafata</em></td>
<td>‘to turn’</td>
<td>—</td>
<td><em>talaffata</em></td>
<td>‘to turn back and forth’</td>
<td></td>
</tr>
<tr>
<td><em>fanidga</em></td>
<td>‘to contract’</td>
<td>—</td>
<td><em>tafannadga</em></td>
<td>‘to convulse, spasm’</td>
<td></td>
</tr>
<tr>
<td><em>naqala</em></td>
<td>‘to move’</td>
<td><em>naqqala</em></td>
<td>‘to move many things’</td>
<td><em>tanaqqala</em></td>
<td>‘to move around, cruise’</td>
</tr>
<tr>
<td><em>radda</em></td>
<td>‘to reply; to react’</td>
<td><em>raddada</em></td>
<td>‘to repeat constantly’</td>
<td><em>taraddada</em></td>
<td>‘to hesitate; go back and forth’</td>
</tr>
</tbody>
</table>

The events described by the marked verbs in (6) involve repetition of a certain movement. A participant bends, turns, or contracts repeatedly, or moves from one point to another and then another. There is some flexibility of use regarding the distribution of the event phases with some verbs. The subject of pattern II *naqqala* may move a single-element object back and forth between two points, as in (7) where the phases are consecutive.

(7)  

> وهو ينقل نظرة بين الورقة التي ظلت مفتوحة وبين وجه الترجمان  

> wa huwa yu-naqqil-u nazaraat-i-hi bayna l-waraqat-i  

and he 3MSG-move-IND glances-ACC-his between the-paper-GEN  

> that remained-FSG open-ACC and between face-GEN the-translator  

> ‘...as he transferred his glances back and forth between the paper that remained open and the translator’s face’

Alternatively, the multiple instances of movement may be concurrent, when the subject transfers all of the elements that comprise an object at once. This is the case in (8), where the gerund *tanggil* is used instead of the verb *naqqala*.

---

Repetition

Parents of students living in the Awlaad Nasr area have been surprised this year by the transfer of the students to a school far away.

The event phases that comprise a repeated reconfiguration are typically distributed across time, as with *talawwa* ‘to writhe’ where the subject bends back and forth consecutively. Phases are also occasionally distributed simultaneously across space, however. Two examples illustrate this point. The data in (9) show how a single-phase pattern I verb and its reflexive pattern VIII counterpart contrast with plural-phase pattern II and pattern V.

(9) a. madda ‘to extend’ trns maddada ‘to expand, dilate’ trns
    imtadda ‘to extend’ int tamaddada ‘to expand, sprawl’ int

b. *ʤama* ‘to gather, combine’ trns *ʤamma* ‘to amass’ trns
    *idżama* ‘to meet’ int/obl *tażamma* ‘to come together’ int

The meaning component framed by pattern I *madda* ‘to extend’ is a notion I will paraphrase as LINEAR EXTENSION, and this is discernable without a causal agent in the derived noun *mudda* ‘period of time’, which names a section or stretch that can be conceptualized as a line between two points. This concept of LINEAR EXTENSION fleshes out a single-phase relation in unmarked transitive pattern I *madda* ‘to extend’, and in reflexive *imtadda*, both shown in context in (10).

(10) مدد به وضغط بكفمه على كتفه
    madda yad-a-hu wa ʤaŋa bi-kaff-i-hi
    *ʕala katab-ii*
    upon shoulder-my
    ‘He extended his hand and pressed with his palm on my shoulder.’

يمتد نهر كولورادو بطول
    ya-mtadd-u nahr-u koloraad bi-țul-i
    3MSG-extend-IND river-NOM colorado by-length-GEN
    ‘The Colorado river extends to a length of…’

---

In both examples in (10), one participant covers a linear distance. The subject of \textit{madda} causes the object, his hand, to move outwards in one direction, while it is the subject of \textit{imtadda} itself, the river, that extends along a course. In contrast, the intransitive plural-phase verb \textit{tamaddada} ‘to spread out’ describes extension in more than one direction.

\begin{quote}
\textit{badaʔa dğasad-}\text{-}\text{u ʔumm-}\text{-}\text{hi ya-tamaddad-}\text{-}\text{u ʔala as-sariir}
began[3MSG] body-NOM mother-GEN-his 3msg-stretch-IND upon the-bed
‘His mother’s body began to spread out on the bed.’
\end{quote}

The ‘spread out’ meaning of the verb in (11) consists of more than one instance of linear extension taking place simultaneously, distributed over space. The subject extends from a central point to at least two other points. This contrasts with single-phase \textit{imtadda} ‘to extend’, whose subject simply extends from one point to another.

The presence of plural phases is less clear with transitive \textit{maddada} ‘to expand’. Ibn Manzuur provides the passive participle \textit{mumaddad}, formed from \textit{maddada} in the example in (12), where a tent is stretched out in all directions.

\begin{quote}
\textit{tiraaf-}\text{-}\text{un mumaddad-}\text{-}\text{un ʔay mamduud-}\text{-}\text{un bi-l-ʔatnaab}
tent-NOM spread out-NOM that is extended-NOM by-the-ropes
‘A spread out tent, that is, stretched by its ropes.’
\end{quote}

Pattern I \textit{dʃamaʕa} ‘to gather’ and its derivatives in (9b) exhibit the same contrast between single and plural phases, with the difference being the direction of movement. Whereas the object of \textit{madda} ‘to extend’ moves away from a fixed point, the object of \textit{dʃamaʕa} moves towards one. The subjects of both pattern I \textit{dʃamaʕa} ‘to gather, combine’ and pattern II \textit{dʃammaʕa} ‘to amass’ cause the object to enter a state of collectivity, with the difference being that the latter verb is incremental. Elements of the object are brought together in phases of collection that are repeated over time. The same contrast is found between pattern VIII \textit{idʃamaʕa} ‘to meet’ where elements of the subject come together with no particular emphasis on incrementality, and pattern V \textit{taʃammaʕa} ‘to congregate, to converge’, where multiple phases are distributed over time, with elements of the subject becoming co-located, then more arriving in a second phase of co-location, then a third and so on. This verb also has an interpretation wherein phases are distributed over space.

\footnote{BYU: sayd—reference: daeyat_nohakatergi104.}
Repetition

With every scream the night endlessly expands, and then contracts.

In the example in (13), the subject of tdaemon moves in towards a single point from multiple directions, and the event phases, multiple instances of coming together, therefore occur simultaneously.

7.3.3 Incrementality

Repeated action can be punctual or durative. A verb like intransitive takassara ‘to break into pieces, shatter’, for example, conveys plural instances of division that can come about simultaneously in an event with almost no duration, or that can be organized consecutively, as the subject breaks up over time. This latter possibility is incremental, where each phase builds on the last, creating the notion of progress by degree. Incrementality is most easily discernable in the contrast between pattern I and pattern V verbs.

(14)  mafa ‘to walk’ int   tamaffa ‘to stroll, progress’ int
    nazala ‘to descend’ int   tanazzala ‘to descend slowly’ int (archaic)
    daxala ‘to enter’ int/trns   tadaxala ‘to enter little by little’ int/trns (archaic)
    ?akala ‘to eat’ trns   ta?akkala ‘to erode, corrode’ int

In modern usage pattern V tamaffa frequently describes walking for exercise or entertainment, similar to French se promener ‘walk around’, whereas older uses emphasize the fact that a distance is covered slowly in increments. Lane (1865) refers to slow steps taken with effort, and Ibn Manzuur (c.1300) gives an example in context.

(15) tamaffa-t fii-hi huwayy-an al-ka?is-u
    spread-3SG in-him fever-ACC the-cup-NOM
    ‘The cup spread through him like a fever.’

Whatever is in the cup moves through the body here, assumedly spreading warmth as it progresses. It is this incremental spreading quality that is captured by the verb, which differs from pattern I mafa ‘to walk’ not in durativity, since both verbs may describe continuous actions, but rather in its emphasis on the internal makeup of the event, presenting it as broken up into consecutive stages with each building on the last.

A similar phenomenon accounts for the difference between unmarked *nazala* ‘to descend’, where no information on the nature of the descent is supplied, and archaic *tanazzala*, which Ibn Manzuur defines as *an-nuzuul fi muhla* ‘descent at leisure, over time’. As with *tanaffaa* ‘to stroll’, the leisurely pace is conveyed by multiplying the action of the pattern I verb to create incremental phases: the subject moves forward or downwards once, then a bit more. This is clear as well in *tadaxxala*, defined by Ibn Manzuur as *daxala qaliilan qaliilan* ‘enter little by little’. The use of this verb has changed over time, moving from describing this incremental durative process to ‘to interfere’ in modern Arabic, where the incrementality has been bleached.

The reflexive marking on these derived verbs spells out the lack of a separation between a controlling agent and a participant that changes location or is affected in some other way. The verbs describe motion or change of location that takes place under the control of the party that moves. Similarly, intransitive pattern V *taʔakkala* ‘to erode, corrode’ describes an incremental change that affects the subject and which is not brought about by any external party. A similar type of attrition falls on the object of pattern I *ʔakala* ‘to eat’, where a separation between an agent and patient is clearly present.

### 7.3.4 Repeated taking

A set of pattern V verbs consists of verbs that construe events of repeated ‘taking’, where the subject is an agent that either causes or attempts to cause something to come to it. A reflexive relation consisting of three participant roles is duplicated in the construal of such events. I represent this as shown in (16).

![Diagram](image.png)

In this semantic structure one participant acts in relation to a second, which becomes located at or oriented towards the first as a result, and this cycle is then repeated. Verbs that instantiate the structure are listed in (17).

<table>
<thead>
<tr>
<th>Verb</th>
<th>Meaning</th>
</tr>
</thead>
<tbody>
<tr>
<td><em>nafas</em></td>
<td>‘breath’</td>
</tr>
<tr>
<td><em>masa</em></td>
<td>‘to sip, suck’</td>
</tr>
<tr>
<td><em>lamasa</em></td>
<td>‘to touch; request’</td>
</tr>
<tr>
<td><em>fariba</em></td>
<td>‘to drink’</td>
</tr>
<tr>
<td><em>famma</em></td>
<td>‘to smell, sniff’</td>
</tr>
<tr>
<td><em>daaqa</em></td>
<td>‘to taste’</td>
</tr>
<tr>
<td><em>talaba</em></td>
<td>‘to request’</td>
</tr>
<tr>
<td><em>faqada</em></td>
<td>‘to lose, not find’</td>
</tr>
<tr>
<td><em>fahaṣa</em></td>
<td>‘to test, examine’</td>
</tr>
<tr>
<td><em>tanaffasa</em></td>
<td>‘to breathe’</td>
</tr>
<tr>
<td><em>tamaṣṣaṣa</em></td>
<td>‘to sip repeatedly’</td>
</tr>
<tr>
<td><em>talammasa</em></td>
<td>‘to request repeatedly’</td>
</tr>
<tr>
<td><em>tafarraaba</em></td>
<td>‘to soak up’</td>
</tr>
<tr>
<td><em>tajammama</em></td>
<td>‘to sniff repeatedly’</td>
</tr>
<tr>
<td><em>taḍawwaga</em></td>
<td>‘to taste repeatedly’</td>
</tr>
<tr>
<td><em>tajallaba</em></td>
<td>‘to request repeatedly’</td>
</tr>
<tr>
<td><em>tafaqqada</em></td>
<td>‘to seek; to inspect’</td>
</tr>
<tr>
<td><em>tajalhaṣa</em></td>
<td>‘to search for; to examine’</td>
</tr>
</tbody>
</table>
The action of taking in breath is naturally repetitive, and Talmy (2000: 49) notes that a single uniplex phase of breathing only once is more likely to be construed by a phrase such as take a breath in English, than with the verb breathe, which usually describes the repeated action. The same applies to Arabic tanaffasa, whose subject typically takes in breath after breath. The difference between a one-phase and a multi-phase action is occasionally reflected in a contrast between pattern VIII and pattern V. For example, pattern I massa and pattern VIII imtassa both mean ‘to sip or suck’. In each case the subject brings the object to itself, and the only difference is that the reflexive nature of this relation is marked with /t/ in pattern VIII. Pattern V tamaasasa ‘to sip repeatedly’ construes the same reflexive relation, but here it is repeated. Similarly, pattern I lamasa and pattern VIII iltamasas may both be used to mean ‘seek, request’, where the subject attempts to bring the object into its possession, and this attempt is multiplied in pattern V talammasa ‘to request repeatedly’. The fact that this verb construes the repeated attempts of the subject to obtain the object means it is also used to mean ‘grop about for’, which is perhaps its most common use.

The role of the subject as both an agent and some type of recipient is common to the other pattern V verbs in (17) as well. The subject of tafarraba ‘to soak up’ takes in the object in increments, while the subject of tafammama and tadowswaqa repeatedly takes in the smell or taste of the object. As with some of the verbs discussed in the previous section, there is flexibility here as to how the event phases are distributed: in the case of tadowswaqa ‘to taste repeatedly’ the object might be one dish which the subject samples again and again, or many different dishes where the subject samples each. What remains constant is that the subject samples the object many times, and it is the internal makeup of the object itself that can vary.

Lane (1863) reports that pattern I faqada ‘to lose, not find’ construes more than simply losing something in that the object is outside the subject’s ‘range of perception’, and this suggests that the subject is conceptualized as looking for the object. There are two participants here: A seeks or desires B, which is unavailable. Ibn Manzur (c.1300) gives examples of pattern VIII iftaqada ‘to seek, to miss’ which he states are identical in meaning to the unmarked pattern I verb, and further discusses the noun faqiid ‘deceased’, used to describe someone whose loss is felt and who is missed. The point is that losing something typically implies a desire to have it on the part of the loser, hence losing something contrasts with being rid of it, where no such desire is implicit. The relationship between the seeker and the sought is singular or uniplex in faqada and iftaqada, both of which may be paraphrased as ‘seek and not find’. In pattern V tafaqqada however, the subject repeatedly seeks the object.

### 7.4 Reduplication of the first and second consonants

The gemination of the second root consonant discussed in the previous section exists alongside another type of reduplication construction wherein both the first and
second consonants are repeated, resulting in the pattern faʕfaʕa. Both patterns
denote repetition, with the difference being that gemination operates on a base
verb, while faʕfaʕa verbs are not so consistently derived. Procházka (1993) illustrates
that a large number of the verbs formed in this pattern are sound symbolic,
construing sounds perceived in the environment, rhythmic or continuous motion,
or certain kinds of optical effects. As such, whereas faʕala verbs are symbolic only to
the extent that repeated phonological material corresponds with repeated action,
faʕfaʕa verbs are often doubly sound symbolic: their pattern denotes repetition, and
the sounds that instantiate it are also an attempt to mimic a sound or some other
aspect of what a speaker perceives.

7.4.1 Repeated sound

Many faʕfaʕa verbs of repeated sound are onomatopoeic, whereby the verb results
from an attempt to copy the sound a speaker wishes to convey. Examples are
provided in (18).

(18) qahqaha ‘to guffaw’
waswasa ‘to speak under the breath’
taʕtaʕa ‘to stammer’
tamata ‘to stutter’
xafxafaf ‘to rustle’
faxfaxa ‘to blow repeatedly; to boast’
qarqara ‘to rumble, rattle’
qaʕqaʕa ‘to clatter, clank’
barbara ‘to babble, jabber’

The meaning component of each of these verbs is simply the sound represented.
Ibn Manzuur (c.1300) spells this out in many cases.

الوسعة: الصوت الخفي من الريح
al-waswasa: aš-sawt-u l-xafii min ar-riih
the-waswasa: the-sound-nom the-hidden from the-wind
‘Waswasa: the hidden sound of the wind.’

خشخشة: صوت السلاح والليبوت
xafxafaf: sawt-u s-silaah-i wa l-yanbuut
xashxasha: sound-nom the-weapon-gen and the-mesquite
‘Xashxasha: the sound of a weapon and of the mesquite shrub.’

الفخفخة: حركة القراتس واللوبي الجديد
al-faxfaxa: ḥarakat-u l-qitraas-i wu alus-awb-i l-ʤjadiid
the-faxfaxa: movement-nom the-paper-gen and the-robe-gen the-new
‘Faxfaxa: the movement of paper or a new robe.’
In an analysis of imitative English words naming noises, Oswalt (1994: 297) observes that stops, being short and abrupt, represent ‘short abrupt sounds and actions: bob, pop, tap, tick’. Similarly, fricatives involve air turbulence in the vocal tract, and appear in words like hiss, buzz, or fizz in which air turbulence is characteristic of the sound named. This also applies to Arabic verbs like qahqaha ‘to guffaw’, and taʕtaʕa ‘to stammer’, where the sounds of laughing and stammering consist of a series of short abrupt outbursts. The fricatives in waswasa ‘to speak under the breath’, xafxaʕ ‘to rustle’, and faxfaxa ‘to blow repeatedly’ create the less fractured ‘hissy’ sounds these verbs are used to represent. Theoretically, it is possible to isolate a single instance of any of these sounds: one /qah/ in a laugh, one /taʕ/ in a stammer, one /was/ in a whisper, but no Arabic verb exists to name it. The reason is that these sounds are typically repetitive, and the imitation of this repetition leads to the creation of a verb pattern. The same imitation of repetition is found in certain bird names in Arabic: waqwaqa ‘cuckoo’, bulbul ‘nightingale’, ʔaqʔaq ‘magpie’ (Versteegh 2009), and in certain mass nouns that name quantities made up of small identical components: simsim ‘sesame’, filfil ‘pepper’.

7.4.2 Rhythm

Hinton et al. (1994: 3–4) argue that human responses to rhythmic music, such as clapping the hands, tapping the feet, or dancing, are evidence of a close link in the human neural system between rhythms of sound and those of movement, and that ‘just as humans are capable of translating rhythmic sounds into rhythmic movements, they are also capable of the reverse: translating rhythmic movements into sounds, including sound symbolic language form’. The same Arabic reduplication construction that conveys the repeated sounds listed in the previous section is also used for a variety of repetitive rhythmic actions.

(20) daʕdaʕa ‘to tickle, to titillate, to chew’
    taraʕraʕa ‘to grow, develop, thrive’
    zaʕzaʕa ‘to shake violently’
    daʕdaʕa ‘to tear down, demolish’
    talaʔlaʔa ‘to glisten, glitter’

The repetition in some of the verbs in (20) is not immediately obvious, but can be observed in historical data. For example, (21) shows Ibn Manẓūr’s definition of the noun ar-raʕraʕa.

(21) ar-raʕraʕa: idṭiraab-u l-maaʔ-i  tụ-saʔafii l-raqiq-i
     the-raʕraʕa: disturbance-NOM the-water-GEN the-clear the-pure-GEN
     ʃala wadʃh-i l-ʔard
     upon face-GEN the-earth
     ‘Raʕraʕa: the disturbance of pure clear water on the face of the Earth.’
7.4 Reduplication of the first and second consonants

Repetition in the disturbance of water perhaps takes the form of multiple concentric circles moving out from a central point, one after the other. This appears to be conceptualized as repeated waves or incremental phases of growth in the verbs ṭaḥraṣa ‘to raise’ and reflexive ṭaḥraṣa ‘to thrive’, both defined by Ibn Manzūr in (22).

The voiced pharyngeal fricative in ṭaḥraṣa ‘to thrive’, zaįżaṣa ‘to shake violently’, and ḍaįdaṣa ‘to tear down, demolish’ captures the tumultuous nature of these events, while the glottal stop in ṭaľaʔaṣa ‘to glisten, glitter’ punctuates short glimpses of light reflecting off a surface. The symbolism here is not a direct imitation of an environmental sound therefore, but a sonic representation of some other salient aspect of an event. No discussion of this type of sound symbolism in Arabic is complete without considering its relationship to the biconsonantal etymon, and this is undertaken in the following section.

7.4.3 Sound symbolism, etymons, and phonesthes

Bohas’ (1997, 2000, 2002, 2008) matrix and etymon theory is an attempt to establish semantic relationships between words based on the articulatory features of two of their consonants. A matrix is a grouping of these articulatory features. For example, one matrix consists of a labial non-nasal consonant and an unvoiced continuant, as shown in (23).

(23) Matrix: [+ consonantal], [+ consonantal] [+ labial] [- voiced] [+ nasal] [+ continuant]

A matrix is realized by a biconsonantal etymon, several of which may correspond to a single matrix. The etymons ḥa, ḥa, ḩa, and ḥa, for example, all consist of a labial non-nasal and an unvoiced continuant, and hence all realize the matrix in (23). A matrix is associated with a semantic nucleus, essentially an abstract meaning component, and Bohas argues that in many cases this association is mimophonic, meaning that the execution of the articulatory features in a given matrix reproduces an environmental sound, or mimics a gesture, movement, or shape. An abbreviated example from Bohas (2002: 17–18) is given in (24), where the various etymons highlighted in bold all construe the semantic nucleus.
movement of air’. This movement, and the sound it makes, are directly imitated by
the articulation of the phonetic features that comprise the matrix, since the speaker
is required to blow.

(24)  
\[\text{fahfaha} \quad \text{‘to wheeze while sleeping’}\]
\[\text{fahaa} \quad \text{‘to perfume meals with aromas’}\]
\[\text{lafaha} \quad \text{‘to blow (said of a warm wind)’}\]
\[\text{nafaha} \quad \text{‘to blow (said of a cold wind)’}\]
\[\text{faaaha/fawaha} \quad \text{‘to exude a perfume, to smell good or bad’}\]
\[\text{faxxa} \quad \text{‘to snore and wheeze’}\]
\[\text{nafaxa} \quad \text{‘to breathe through the mouth; to let loose a fart’}\]
\[\text{faaxa/fawaxa} \quad \text{‘to spread (said of an odor); to whistle; to let loose wind’}\]
\[\text{fasaa/fawasa} \quad \text{‘to let loose wind (that one cannot hear)’}\]
\[\text{nafasun} \quad \text{‘respiration, breath, puff’}\]
\[\text{faʃʃa} \quad \text{‘to make air exit from a goatskin by compressing it; to belch’}\]
\[\text{nabaha} \quad \text{‘to hiss (snake)’}\]
\[\text{baxxa} \quad \text{‘to snore while sleeping’}\]
\[\text{baxara} \quad \text{‘to let loose steam (cooking pot)’}\]
\[\text{baxira} \quad \text{‘to stink’}\]
\[\text{baʃʃa} \quad \text{‘to have rank breath’}\]

A further example is the matrix [[+ pharyngeal] [+ labial]], paired with the semantic
nucleus ‘constriction’, a concept that is imitated by the constriction of the pharyngeal
cavity in pronouncing words like \text{habasa} ‘to confine, restrict’ (Bohas 2008). Another
matrix is [[+ labial] [+ dorsal]], where the dome shape made by the tongue in
producing the dorsal consonant mimics a curve present in body parts with a convex
or concave shape, such as \text{rukha} ‘knee’, in addition to other objects and actions
involving some type of curvature (see Bohas 2002: 19–31).

Critical reactions to Bohas are largely concerned with problematizing his claim
that the etymon functions as an organizing unit of the lexicon. The hypothesis that
etymons play some role in how native speakers of Arabic store and access vocabulary
is one that must be tested empirically, and I will not address it directly here except to
say that it is somewhat supported by Boudela and Marslen-Wilson (2001), but
ultimately dismissed by Bentin and Frost (2001), Idrissi and Kehayia (2004)’ and
Prunet (2006). As Prunet (2006: 55) points out however, there is a diachronic value to
the etymon to the extent that it helps to form a theory of how Arabic has developed.
Bohas’ bare-bones argument is that at least some words of Arabic contain a mimo-
phonic device, and this should not be at all controversial since it is true of many
languages, and is very likely a feature of language in general. In an analysis of aural
images in English for instance, Rhodes (1994) argues for a type of sound symbolism
in which there is a correlation between an acoustic reference and a recurrent element
in a word set. An example is -ack in \text{clack, crack, whack}, and \text{smack} (see also Rhodes
and Lawler 1981, and ultimately Bolinger 1950, 1968). This recurring onomatopoeic element bears a strong similarity to the etymons in (24), since in both cases the speaker reproduces the sound he or she wishes to convey. Bohas’ assertion that ‘mimophonic’ extends past onomatopoeia and that there is a relationship between at least some concepts and the shape made with the mouth in naming them seems entirely in line with Calvin and Bickerton’s (2000) suggestion that when human protolanguage emerged at least one and a half million years ago it consisted initially of vocalizations produced to accompany a non-vocal repertoire consisting of postures, eye movements, and physical gestures. It was, therefore, a supplement to other types of mime.

A potential criticism of Bohas is that the mimophonic nature of the etymon is inconsistent, and that supposed etymons exist, paired with recurring meaning, where there is no clear relationship between their phonetic quality and the meaning they allegedly denote. This again, however, is relatively common with recurring elements in English, where meaning regularly becomes associated with sub-word elements, termed phonesthemes once they are meaning-bearing (Firth 1930, 1937). The examples in (25) are from Bolinger (1950: 119–35).

(25) a. twist
twirl
tweak
twill
tweed
tweezer
twiddle
twine
twinge
b. spit
spate
spurt
spout
c. glitter……flitter
glow……..flow
glare……..flare

The initial consonant cluster /tw/ in (25a) has become associated with ‘twisting motion’, while Bolinger asserts that /sp–t/ in (25b) is a discontinuous morpheme denoting ‘rush of liquid’ (Bolinger 1950: 135). The words in (25c) each contain two phonesthemes. Initial /gl/ connotes ‘phenomena of light’, and /fl/ ‘phenomena of movement’. The remainder of each word further elaborates on the type of light and movement respectively, with /itʃ/ being ‘intermittent’, /ow/ ‘steady’, and /ɛɾ/ ‘intense’
Word sets like these arise because part of a word comes to carry a specific meaning. Bloomfield (1895: 409–10), cited in Hinton et al. (1994: 5), explains that ‘the signification of any word is arbitrarily attached to some sound-element contained in it, and then cogenic names are created by means of this infused, or we might say, irradiated, or inspired element’. New words are therefore coined by analogy, and this is ultimately a type of derivational morphology (Rhodes 1994), since there is a base word and an element within it that is copied and reused.

If some English phonesthemes are sound symbolic while others are linked to a semantic element without directly replicating a sound, movement, or gesture, it is not unreasonable that the same should be true of the etymon in Arabic. Under this hypothesis there are two possible sources for an Arabic etymon. Sometimes an etymon enters the language as a mimophonic device. In such cases it is not unusual to find several etymons with similar phonetic features representing the same semantic notion, as with the etymons fḥ, fxf, fff, and b to in (24), which all capture the expulsion of air. The presence of an apparently arbitrary third consonant in some words is accompanied by the further elaboration and specification of meaning, but does not imply derivation. The etymon recurs not because it is lifted from a base word, but because it is the mimophonic expression of an element common in a set of concepts. Alongside this, non-mimophonic etymons are created when two consonants are noticed in one or more words and then used to coin others with a related meaning. Samuels (1972: 47) observes that the historical study of phonesthemes shows that they can grow from small coincidental identifications between words to much larger patterns, and Bolinger (1950) argues that even a single high-frequency word can serve as a source. The important point is that meaning becomes attached to a set of phonemes, which then become ‘potential centers of phonesthetic radiation’ that spread through the language (Bolinger 1950: 130). Fox (1982) argues that Arabic words with similar consonants and meanings, such as qasṣa ‘to cut’, qasama ‘to divide’, qasaba ‘to cut up’, and qaṭaṭa ‘to sever’, contain what he refers to as feature phonesthemes, where certain phonetic features have become associated with a semantic core (see also bar Lev 2005–2006 and more generally Magnus 2010).

Word sets like these may result from phonological processes of assimilation and dissimilation, and occasionally contamination in which two words merge to form a third (Zaborski 2006: 314), but the feature phonestheme is preserved. As Fox notes, just as with the gl- in glitter, glare, and glow or the sq- in squelch, squash, and squeeze, it does not automatically follow that any of these two-consonant Arabic feature phonesthemes ever stood alone as an independent word. This view stands in direct opposition to an account in which related triconsonantal words are ultimately derived from a biconsonantal base, discussed in the following section on the direction of derivation.
7.4 Reduplication of the first and second consonants

7.4.4 On the direction of derivation

There are several possibilities regarding the derivation of a faʕfaʕa verb, and no single hypothesis is able to account for all the data in a satisfactory way. Ibrahim (1982) asserts that the direction of derivation is from a faʕala base verb whose second and third consonants are identical, to a derived faʕfaʕa verb. Under this account, the only phonological material that is reduplicated is in fact the first consonant of the base, a copy of which is inserted between consonants two and three to create the faʕfaʕa verb. The data in (26) are from Ibrahim (1982: 85).

(26) famma ‘to smell’ famsama ‘to sniff’
   laffa ‘to wrap’ laflafa ‘to wrap up’
   hazza ‘to shake’ hazhaza ‘to shake repeatedly’

While Ibrahim’s theory works well for the data in (26), the faʕfaʕa verbs of repeated sound and rhythmic action presented earlier are problematic for such a view, since there is no corresponding pattern I base. A second possibility is that some faʕfaʕa verbs are derived from a now extinct base verb consisting of only two consonants. Zaborski (2006: 313–15) asserts that fewer triliteral roots existed in the prehistoric period, and that the number of biradical roots was much larger. In his view, some words containing four consonants result from the reduplication of a biconsonantal base. He notes that a number of affixes were once used to derive deverbal nouns from biconsonantal verbs, and that triconsonantal verbs were then derived from these nouns. One of his examples consists of xadxda, xadda, and maxada, all meaning ‘to shake’. Assumedly a now unattested verb xad is the base for reduplicated xadxda here, and is extended through gemination of the final consonant in xadda and with an affix in maxada. Similarly with galgala and waqala, both meaning ‘to penetrate’, a now obsolete biconsonantal base, gal, is reduplicated or extended through affixation to produce two different verbs. Following this line of argument, a biradical base may be posited for the verbs in (27). The verbs in each set share a thread of meaning akin to turbulence or disturbance, which the hypothetical bases raʕ and zaʕ would have once construed.

(27) tarafaraʕa ‘to grow, develop, thrive’ (to move with vigor)
   raʕada ‘to thunder’
   raʕafa ‘to tremble’
   zaʕazaʕa ‘to shake violently’ trns
   zaʕadʕa ‘to disturb’
   zaʕaqa ‘to yell, shriek’
   zaʕila ‘to become angry’

The additional consonants in some of these verbs would be an extension of the biradical base, perhaps through affixation or merger with another existing word, while the faʕfaʕa verb is straightforward reduplication.
A third possibility that is equally plausible in my view is that none of the verbs in (27) is derived. As noted previously, the voiced pharyngeal fricative in the syllables /raʕ/ and /zaʕ/ is mimophonic, creating air turbulence in the vocal tract that imitates the turbulence in the events described. Given that these consonant combinations are selected once to construe a turbulent event, there is no reason why they would not be selected multiple times, and hence none of the verbs in (27) need be considered a base for the others. Under this scenario, the third consonant in some verbs is not the extension of an existing base, but is original, rather like the initial consonant cluster in English *whack*, *crack*, and *smack*, where the remainder of the syllable is onomatopoeic. The same sound is repeated not due to derivation, but because it mimics something perceived in the speaker’s environment.

This also applies to onomatopoeic *taqtqa* ‘to rattle, crackle’, often said of gunfire, and *taqqa* ‘to pop, burst’. The perceived sound /taq/ is repetitive in the former verb and a singular instance in the latter, where the final consonant is doubled up in order to avoid a biconsonantal verb. However, it does not follow from this that the verb *taqqa* ‘to pop, burst’ predates and is therefore a base for *taqtqa* ‘to rattle, crackle’. The relevant meaning component is a sound, and there is no reason why a single instance of that sound should be encoded before the repeated instance. Likewise, *baqqa* ‘to emerge, abound’ and *baqbaqa* ‘to spout, splutter’ share a semantic connection I will paraphrase as BUBBLING UP. Ibn Manzur (c.1300) defines the sound itself, al-*baqbaqa*, as that made by a jug immersed in water or a pot boiling, assumedly as it releases air bubbles. A single /baq/ sound, as in Ibn Manzur’s example in (28), is again encoded with a verb whose final consonant is doubled.

The point is that the sound /baq/ may be conveyed as a single instance or as a repeated string, but because the sound itself is taken directly from the environment, each verb can be considered a direct encoding of that sound, without one verb being derived. The advantage of this view is that the absence of a *faʕala* base for a given *faʕala* verb is not problematic, while at the same time semantic connections between verbs that share two consonants can be explained.

A final possibility is that a *faʕafa* verb is on occasion a base for a *faʕala* verb (cf. Procházka 1993: 101–2), reversing the direction of derivation proposed by Ibrahim (1982). For example, repetitive *gamgama* ‘to mutter’ and *γamma* ‘to veil, conceal’ both frame a notion of DARKNESS or OBSCURITY that is present in several other concepts described by words containing the consonants /g/ and /ml/.
7.4 Reduplication of the first and second consonants

(29)  
\[
\begin{align*}
\text{\texttt{\textasciitilde gama}} & \quad \text{‘to mutter, mumble’} \\
\text{\texttt{\textasciitilde gamma}} & \quad \text{‘to veil, conceal; to fill with sadness, distress’} \\
\text{\texttt{\textasciitilde gamada}} & \quad \text{‘to sheathe; to shelter, protect’} \\
\text{\texttt{\textasciitilde gamaza}} & \quad \text{‘to wink’} \\
\text{\texttt{\textasciitilde gamasa}} & \quad \text{‘to dip, submerse’} \\
\text{\texttt{\textasciitilde gaamid}} & \quad \text{‘unclear, obscure’} \\
\text{\texttt{\textasciitilde gaamiq}} & \quad \text{‘dark (color)’}
\end{align*}
\]

If the consonants /\texttt{\textasciitilde g}/ and /\texttt{\textasciitilde m}/ comprise a phoneme that has become associated with obscurity in Arabic, it is plausible that \texttt{\textasciitilde gama} ‘to mutter, mumble’ is the original base that gave the phoneme its start, construing as it does a repeated muffled sound, and that \texttt{\textasciitilde gamma} and the other words in (29) are derived from it. By this I mean that the consonants have become paired with the notion obscurity because they are first used to denote an obscure sound, and are then reused to coin other words naming concepts in which different notions of obscurity, no longer only related to sound, are relevant. Similarly, rather than proposing an extinct biradical base, it is conceivable that the \texttt{\textasciitilde fa\textasciitilde fa\textasciitilde a} verbs in (30) are sources of a phoneme.

(30)  
\[
\begin{align*}
\text{\texttt{\textasciitilde da\textasciitilde da\textasciitilde a}} & \quad \text{‘to tear down, demolish’} \\
\text{\texttt{\textasciitilde da\textasciitilde fa\textasciitilde a}} & \quad \text{‘to be weak’} \\
\text{\texttt{\textasciitilde wa\textasciitilde da\textasciitilde a}} & \quad \text{‘to put down, place’} \\
\text{\texttt{\textasciitilde wa\textasciitilde fa\textasciitilde a}} & \quad \text{‘to be lowly, humble’} \\
\text{\texttt{\textasciitilde raha\textasciitilde a\textasciitilde a}} & \quad \text{‘to beat around the bush’} \\
\text{\texttt{\textasciitilde rahra\textasciitilde a\textasciitilde a}} & \quad \text{‘wide, broad, flat’} \\
\text{\texttt{\textasciitilde rahiba}} & \quad \text{‘to be spacious’}
\end{align*}
\]

The verbs in (30) containing the consonant pair /\texttt{\textasciitilde d}/ all construe some notion of lowness or downward orientation. It may be that the consonants appeared first in \texttt{\textasciitilde da\textasciitilde da\textasciitilde a} ‘to tear down, demolish’, where the pharyngeal fricative captures the turbulence of the event, and became associated with lowness as a result, being reused to name other concepts in which lowness is salient. The combination /\texttt{\textasciitilde r}/ in (30) is employed to capture the notion of vastness. The meaning of ‘beat around the bush’ attributed to the verb rahraha combines this with repetition, whereby the subject stays wide of the point, perhaps coming close before moving away again and so on. It is plausible that this consonant pair is noticed in this word, paired with vastness, and employed again to coin the others.

While there is no definitive analysis that captures all the data, perhaps all of these accounts of derivation apply to different subsets. The \texttt{\textasciitilde fa\textasciitilde fa\textasciitilde a} verbs in Section 7.4.1 and 7.4.2 are undoubtedly basic, since there is no corresponding unmarked base. Alongside these clear-cut cases is a set of \texttt{\textasciitilde fa\textasciitilde fa\textasciitilde a} verbs that share a meaning with other verbs containing the same two consonants. Some of these word sets can be
explained by positing that the same consonants are used to coin multiple verbs because they mimic a feature present in a set of events, while in other instances it seems more likely that a faʃfaʕa verb is a base that has given rise to a phonestheme. Often it is simply unclear whether consonants recur because they are a mimophonic representation of a shared feature, because a phonestheme has emerged, or because there is a shared biradical base that is no longer attested. On the other side of this gray area is a set of verbs like faʃma ‘to sniff repeatedly’ and laʃfa ‘to wrap up’, which do seem derived from pattern I faʃma ‘to smell’ and laʃfa ‘to wrap’. To account for these, El Zarka (2005) hypothesizes that the shift in the function of pattern II faʃala away from marking verbal plurality, essentially repetition, in favor of a causative function leaves a door open for pattern faʃfaʕa, already associated with repetition, to fill the gap. Thus the latter pattern has strayed from its sound-symbolic origins, coming to mark repetition not only of certain sounds and motions, but of certain actions too. The direction of derivation is therefore from faʃala to faʃfaʕa in some instances, and possibly from faʃfaʕa to faʃala in others. Frequently however, sound-symbolic faʃfaʕa verbs are not derived at all.

7.5 Overlapping functions

This section on overlapping functions addresses the fact that both faʃala and ʔaʃala mark causation, while both faʃala and faʃfaʕa mark repetition, and it offers an explanation for how pattern II faʃala has become associated with each of these functions.

7.5.1 Causation and repetition

Chapter 6 examined derived pattern II verbs like hassana ‘to improve’ and gaddaa ‘to feed lunch to’ that are causative, while this chapter has focused on the pattern’s repetitive function. While the distinction between these two separate functions is valid, it is not absolute. Pattern II faʃala sometimes combines causation and repetition, producing a verb where the subject causes the object to undergo an incremental or otherwise multiplex change. In some instances this results in a contrast with a pattern IV causative where no such incrementality is discernable.

Both the faʃala and the ʔaʃala verbs in (31) are causative, but the change experienced by the object of the ʔaʃala verbs above has no internal complexity, consisting
of only a single event phase. The object of ʔa'allama ‘to inform’ goes from not knowing to knowing, while the objects of ʔanzala ‘to lower, land’ and ʔaxraʤa ‘to take out’ make one transition from higher to lower, or from in to out respectively. The pattern II verbs derived from the same base present change by degree. The object of ʔallama ‘to teach’ comes to know something through an incremental process, and this applies also to the subject of reflexive pattern V taʕallama ‘to learn’. The verb nazzala ‘to send down in stages’ is famously used in the Quran to rebuff suggestions from unbelievers that if the Quran were from God it would have been revealed all at once instead of being revealed sura by sura over a period of time. This is contrasted with a Quranic use of ʔanzala in (32), where the fact that the Quran was sent down over time is not emphasized.

(32)

ْذَٰلِكَۡ نَزَّلَنَا عَلَيْكَ الْقُرْآنَ أَنْتُمْ لَا تَعْلَمُونَ

ْذَٰلِكَۡ نَزَّلَنَا عَلَيْكَ الْقُرْآنَ أَنْتُمْ لَا تَعْلَمُونَ

8 Quran 76:23. 9 Quran 12:2.

Only nazzala in (32) presents an event of sending down as internally complex. Archaic pattern V tanazzala ‘to descend slowly’ captures a similar type of repetition, with a single element descending in consecutive phases.

The repetition in xarradʤa, most commonly used to mean ‘to graduate (someone)’ today, has been lost, but is clearer in the earlier use demonstrated by Ibn Manzuur (c.1300) in (33).

(33)

ْذِئِبَتْ أَبْقَتْ بَعْضَهَا وَأَكْلَتْ بَعْضَهَا

ْذِئِبَتْ أَبْقَتْ بَعْضَهَا وَأَكْلَتْ بَعْضَهَا

xarradʤa: 3SG the-camels: the-pasture: left-3SG some-ACC-it and ʔakala-t baʕid-a-hu

The camels pulled out the pasture: they ate some and they left some.”
The object of the verb in (33), the pasture, is torn out in pieces, and the verb is therefore one of repeated action. This repetition is maintained in a later incremental use listed by Lane (1863), where the meaning is ‘to train’ a student in a skill such as literature, moving him or her through a gradual process of attainment towards a final stage of completion. Intransitive pattern V taxarra ça ‘to train, become educated’ is also listed, but does not yet have the present-day meaning of ‘to graduate’. The ‘graduate’ meaning for both verbs appears to be a fairly recent development in which the final stage in an incremental process is focused (Zanned 2011: 184).

A contrast similar to that between single-phase pattern IV and plural-phase pattern II is also found between some reflexive pattern VIII and pattern V verbs. (34) madda ‘to extend’ trns imtadda ‘to extend’ int tamaddada ‘to spread out’ int faraqa ‘to separate’ trns iftaraqa ‘to leave, separate from’ int/obl tafarraqa ‘to disperse’ int waadih ‘clear’ ittadaha ‘to become clear’ int tawaddaha ‘to emerge gradually’ int

The pattern VIII verbs in (34) construe a single indivisible change, while geminate pattern V denotes extension in multiple directions, multiple separations, or change by degree in the case of tawaddaha, shown in context in (35), where it describes a city coming into being.

(35) xilaala ʔaqall-i min fahr-in kaana-t nawaat-u madiinat-in during less-GEN than month-GEN was-3SG core-NOM city-GEN kabirat-in wa munazzamat-in qad badaʔa-t ta-tawaddah-u big-GEN and organized-GEN had began-3SG 3SG-emerge-IND ‘In less than a month the core of a big organized city had begun to emerge.’

Whereas pattern VIII ittadaha ‘to become clear’ describes a single instant transition from not clear to clear, the change undergone by the subject of pattern V tawaddaha in (35) is a durative process. The city becomes clearer, and will continue to become clearer still, and so on. The change is therefore made up of multiple changes of state, each building on the last. Dowty (1979) discusses what he terms degree achievement verbs like cool, as in English the soup cooled, in which the subject changes state by degree. As the cooling process progresses, the soup moves along a scale of coolness, becoming cooler than it was, then cooler again. Building on Dowty’s analysis, Kearns (2007) identifies a certain type of English verb which may construe an instant change of state, while at the same time allowing a process interpretation. She concludes

that verbs like increase and decrease describe a single transition: the onset of a comparative endstate where the subject is more or less relative to its prior state. When these verbs appear to be atelic in a sentence like the price increased for a month, they represent a series of repeated changes of state, becoming more and more or less and less. What is construed as one coherent event is in fact multiple instances of change. The same applies to the process reading of change-of-state verbs like clear and cool. These verbs yield a durative reading due to the fact that the comparative endstate cooler or clearer represents a telos and is repeatable. The distinction between the ‘instant change’ reading and the ‘multiple change’ reading of these verbs is marked in Arabic, where ittadaha ‘to become clear’ describes one change, and tawaddaha ‘to emerge gradually’ is durative, consisting of repeated change, or change by degree.

Although faYala may mark causation, repetition, or both of these features, there has been a shift in the meaning of some specific pattern II verbs, away from marking plural event phases to simply marking causation, as in the three often-cited examples in (36).

(36) maata ‘to die’ mawwata ‘to die en masse’ > ‘to kill’
bakaa ‘to cry’ bakkaa ‘to cry a lot’ > ‘to make cry’
baraka ‘to kneel’ barraka ‘to kneel en masse’ > ‘to make kneel’

The shift to causation exemplified in (36) has led to the common assumption that the causative function of faYala somehow grew out of its original intensive function (cf. Wright 1859). As Goetze (1942) notes though, there is no satisfactory explanation for how causation develops from intensification. In this regard it is important to note that the overwhelming majority of repetitive pattern II verbs are already causative, having a subject that causes the object to change state. Reduplication of the second radical to signify repeated action has created a set of faYala verbs that almost universally describe situations where one party affects another, and are typically caused change-of-state verbs like qattala ‘to chop up’ or qattala ‘to massacre’. Viewed in this light, the shift to causation is not so much a completely new function for the pattern, but rather a generalization of one aspect of its existing function at the expense of another in a process of standardization that brings the verbs in (36) in line with most other verbs formed in pattern II. My contention is that abstracting from this large set of verbs, speakers recognize a verb pattern. They would be correct to pair it with repeated action initiated by an agent, and equally correct to simply note that faYala typically marks an action where an agent or causer is present. This latter possibility gives rise to the non-repetitive causative use of faYala, when in deriving new verbs, speakers resort to an established pattern because they consider it to mark causation, and the fact that it also marks repetition is ignored. From the initial repetitive causative use therefore, one feature, causation, is selected, and the other is set aside. This extension, rather than emergence, of the
causative function of pattern II is accompanied by the disappearance of causative pattern IV in the spoken dialects where pattern II has taken over from pattern IV.

7.5.2 Expansion of faʕfaʕ

Just as the causative function of pattern II has expanded, taking over from pattern IV in many dialects, El Zarka (2009) observes that faʕfaʕ now competes with geminate faʕala to express plurality. This competition can be seen when a geminate verb is retained in Modern Standard Arabic, while a faʕfaʕ verb is used to express the same meaning in a dialect.

\[(\text{37})\]  
\[\begin{align*}  
\text{massa} & \quad \text{‘to suck’} \quad \text{MSA: tamassasa ‘suck on, chew’} \quad \text{Egyptian: masma ‘suck on, chew’} \\
\text{famma} & \quad \text{‘sniff, smell’} \quad \text{MSA: tafammama ‘sniff repeatedly’} \quad \text{Syrian: famfam ‘sniff repeatedly’} 
\end{align*}\]

(El Zarka 2005: 377)

Examples like those in (37) illustrate that faʕfaʕ is no longer restricted to onomatopoeia and other types of sound symbolism, but has become a productive verb pattern signifying repeated action. In other instances, a geminate and a faʕfaʕ verb exist side by side in a dialect with a difference in meaning. Holes (2004b: 99) gives the example in (38), found in some Gulf dialects.

\[(\text{38})\]  
\[\begin{align*}  
\text{gas} & \quad \text{‘to cut’} \quad \text{gasgas ‘to do a lot of cutting’} \\
\text{gasgas} & \quad \text{‘to chop up into small pieces’} 
\end{align*}\]

Having originated primarily as the expression of repetitive environmental sounds, the faʕfaʕ pattern is now available for speakers of Arabic to coin new verbs describing events where repetition is salient. El Zarka (2005) hypothesizes that modification of certain faʕala and faʕfaʕ verbs by replacing the second consonant with a sonorant or a semivowel, for example so that faqaʕ ‘to explode’ becomes farqaʕ, has created new quadriliteral verb patterns that are available for speakers to coin new verbs even when no preexisting base exists, as with Egyptian dardif ‘to chat’ and farfi ‘to have fun’. I will not pursue this further here, but El Zarka’s line of thought seems entirely reasonable, suggesting that both faʕala and faʕfaʕ have in fact expanded far beyond their earlier functions.

7.6 Summary and conclusion

The two types of reduplication examined in this chapter both mark repetition. Gemination of the second consonant creates a faʕala verb, which presents either concurrent or consecutive event phases. Reduplication of the first and second
consonants results in a faʕʕa verb, which is typically not derived, but rather encodes a sound or rhythm perceived in the environment. This nice tidy analysis is upset by the fact that patterns compete to express repetition and causation. Hence faʕʕa has encroached into the territory of faʕala, creating verbs of repeated action that are clearly derived and are not sound symbolic, while faʕala has become the pattern of choice for a derived causative in most spoken dialects. The changing function of faʕala is further evidence for a construction morphology in which verb patterns spell out semantic structures that deviate from prototypical transitivity. The pattern once signaled multiplication of the base action, accounting for verbs like mawwata ‘to die en masse’ and barraka ‘to kneel en masse’, from maata ‘to die’ and baraka ‘to kneel’ respectively. Many derived verbs, such as qaʕʕa ‘to chop up’ and qattala ‘to massacre’ are causative, and the pattern has come to be associated with causation as a result. Hence unmarked nazala ‘to descend’ does not yield the meaning ‘to descend in stages’ in pattern II nazzala, but ‘to send down in stages’. Similarly, pattern Iʕalima ‘to know, learn of’ also yields causativeʕ allama ‘to teach’. Rather than simply marking repetition here, pattern II faʕala denotes a causal agent acting more than once on an affected patient. Once the pattern becomes associated with this structure, it can no longer be considered to simply multiply the base, but rather to frame it as a particular type of caused repetitive event. This association with causation has, I suggest, paved the way for the pattern to become a marker of causation without the original accompanying repetition. Hence mawwata comes to mean ‘cause to die’ rather than ‘die en masse’, and the pattern is employed to construe causation generally.
The beginnings of a system

8.1 Introduction

The primary aim of this book has been to investigate how Arabic morphology works: how words frame meaning, and the function of the verb patterns. This concluding chapter moves past an explanation of Arabic derivational morphology to consider how and why such a system may have come into existence in the first place. I restate my argument that verb patterns are the product of grammaticalization, detailing a process in which full words reduce to affixes and attach to verbs, with the resulting verb pattern then becoming associated with an abstract relational structure, enabling it to be employed in describing a wider variety of events. I examine the role of analogical processes and categorization in creating the shape-invariant morphological system of Arabic, and I argue that derivation is ultimately the linguistic reflection of a mental operation termed conceptual blending by Fauconnier and Turner (2002), in which two mental spaces are merged to form a third. A source word is targeted for derivation because part of its semantic content is perceived as salient in some other event or situation, and word patterns develop because the semantic structure construed by one word is salient elsewhere too, leading to a standardization of word shapes.

Section 8.2 is a summary of the system of constructions denoted by the verb patterns. Section 8.3 presents my account of how this system has come to exist. I illustrate in Section 8.4 that derivation mirrors the blending of two concepts, resulting in repetition of linguistic form. I conclude the chapter in Section 8.5 with directions for further research.

8.2 A system of constructions

In the preceding chapters I have argued for a system of semantic structures and a set of patterns that spell them out. Every derived verb pattern is marked compared to the default pattern faʕala, which represents an agent or agent-type argument heading an asymmetric relation. To illustrate, the pattern I verb faada ‘to return’ is the base of

the derived verbs in (1), formed from it by affixation. Recall that a black circle represents the semantic role assigned to the subject of a given verb.

(1) ʕaada  'to return, revert to' obl/trns
     returner  place

ʔaʕaada  'to take or send back, return' trns
     causer  returner  place

istaʕaada  'to regain, reclaim, recall' trns
     causer  returner  place

ʕaawada  'to persevere in, persist at' trns
     returner  place

taʕaawada  'to come back in a group' int (archaic)
     returner  place  returner

Moutaouakil (1988) accounts for Arabic verb patterns with a set of predicate formation rules, wherein some patterns encode the addition of an argument to the input, while reflexive patterns decrease valency. The system of constructions I have proposed in this book captures this schematically. The base verb here denotes a relation between a participant that returns and a reference point, typically a place but sometimes a state, that it returns to. This meaning is incorporated into causative ʔaʕaada  'to take or send back', where the participant that returns is now acted upon by a causer subject. In istaʕaada  'to regain' the subject is both an agent that causes something to return, and the reference point to which the return is directed, hence the subject takes two semantic roles. In symmetric ʕaawada  'to persevere in', the relation of the base verb is preserved, but a counterforce is added. The subject now returns to something that proves elusive or difficult, offering an abstract resistance that leads to the 'persevere' interpretation. Reflexive symmetric taʕaawada  'to come back in a group' is a verb of co-action, where the subject fills both 'co-returner' roles. Every element of the subject, which must be semantically plural, is therefore a 'co-returner', returning with and being returned with by another.

The base verb ʕaada  'to return' also gives rise to the derived noun ʕaada  'custom', and this noun is itself a semantic base for a second set of verbs, shown in (2). Note that the underlying root √ʕwd contains a medial glide, seen in yaʕuud  'he returns' and alʕawda  'the return' (see Brame 1970 for phonological rules on glides). The fact that this is not present in the base noun ʕaada  'custom', but does surface in some of the verbs derived from it, suggests that derivation targets the underlying consonantal root, albeit through this base noun.
A custom is incorporated into an event of caused transfer in pattern II *ṣawwada* 'to accustom', where the subject causes a custom to go to a recipient. The same construction is reflexive in *taṣawwada* and *iṭaada*, both meaning ‘to become accustomed’, where the subject takes on a custom itself.

While the verbs in (1) and (2) are semantically related therefore, they are derived from two different source words. A second example cements the point.

(3) a. *ḏamaṣa* ‘to gather, bring together’ _trns_  

:idštamaṣa ‘to meet, come together’ _int/obl_  

:*istadḏmaṣa* ‘to gather (one’s strength etc.)’ _trns_  

:*ḏammaṣa* ‘to amass, accumulate’ _trns_  

:*tadḏammaṣa* ‘to congregate, amass’ _int_  

:*ḏaamas* ‘to make love to’ _trns_  

b. *ḏamii* ‘all, entire’  

:*ʔadḏmaṣa* ‘to agree unanimously on’ _obl_
The marked verbs in (3a) all incorporate the relation of transitive pattern I *джама да* ‘to gather’, which describes an externally caused change of state. That is, the object becomes combined under the control of the causer subject. In reflexive *иджама да* ‘to meet, come together’ the distinction between an external causer and an affected party on whom the state falls is eliminated, and the verb describes a spontaneous change of state. External causation is present again in *истаджма да* ‘to gather (one’s strength etc.)’, where the object becomes combined at the subject. The repeated action verbs *джамма да* ‘to amass’ and *таджамма да* ‘to congregate’, both of which involve multiple instances of coming together, also incorporate the action of the base verb *джама да* ‘to gather’, repeating it over and over. In the symmetric verb *джамма да* ‘to make love to’, the subject becomes part of a combination with the object, which entails that the reverse is also true. In contrast to all of these verbs, *ʔаджма да* ‘to agree unanimously on’ in (3b) is derived not from the unmarked pattern I verb, but from *джами и* ‘all, entire’, whose root is mapped to the verb pattern *ʔасила*. The word *джами и* presents an entity in a static view, with the relevant state here being one of totality, where all items in a given class are combined or co-located. This state is represented as a square in (3b), with the circle inside being the participant located in the state. Like *ʔahasana* ‘to do well’ (cf. *хасан* ‘good’) and *ʔaqдama* ‘to act boldly’ (cf. *қадуум* ‘bold’), the verb *ʔаджма да* ‘to act boldly’ is an ‘activated state’ verb, where an agent acts and the state applies to the quality of the action. The subject here acts in its entirety or with oneness, and the state of totality that is simply predicated in *джами и* now frames an action.

### 8.3 Accounting for the system

My primary concern until now has been to establish the semantic structures associated with each verb pattern, and I have been working under the hypothesis that the patterns have come about due to grammaticalization. It is now time to expand on this hypothesis, and to consider the evidence supporting it. When positing a theory of language evolution, Hurford (2014: 1–2) states that ultimately, ‘we can only speculate about how and why languages and the human capacity for language got to be the way they are. We can’t travel back in time to observe . . . This applies to all speculation about the past, from the geological formation of the earth to what happened after the Big Bang that made the universe. There are better and worse stories, in terms of internal coherence, economy, and consistency with available facts.’ In what follows I present what I consider to be the most likely explanation for the development of the Arabic verb patterns, keeping in mind consistency with the available facts about how language develops generally. My claim is that the derived word patterns result from the phonetic reduction of full words once expressed at the level of the clause. These reduced words became affixes, attaching to an originally unmarked verb, and their regular use created verb patterns. Once recognized as morphological units, the
patterns were reanalyzed, becoming associated with the semantic structures summarized in the previous section and argued for in the preceding chapters. The verb patterns then spread by analogy, as the same semantic structure was perceived in seemingly diverse events and situations.

8.3.1 Merging words

The first part of my claim is that full words have become affixes as a result of grammaticalization, losing their lexical meaning and coming to serve a grammatical function instead. The term grammaticalization as I use it here refers to a cognitive and linguistic operation ‘whereby lexical items in the course of time acquire a new status as grammatical, morpho-syntactic forms, and in the process come to code relations that either were not coded before or were coded differently’ (Traugott and König 1991: 189, after Givón 1979). The conversion of a lexical or content word into a grammatical marker is exemplified by French pas ‘step’, which, while retaining this meaning when used as a content word, is regularly used as a marker of negation, where the meaning ‘step’ is no longer applicable. After Hock (1991/1986) and Schwegler (1988), Hopper and Traugott (1993: 58) point out that grammaticalization of pas consists of a reanalysis, whereby the word becomes associated with negation in some contexts, and then generalization, where the new negative marker is used in an increasing number of contexts by analogy. Prior to reanalysis, pas ‘step’ could be used to reinforce negation only with verbs of motion, emphasizing that not a step was taken, as in Il ne va pas ‘He doesn’t go a step’. Based on its appearance in such structures, speakers of French ultimately reanalyzed pas as a marker of negation. Its use was then extended to negate verbs that do not construe motion at all, as with Il ne sait pas ‘He doesn’t know’. The word is therefore first assigned a grammatical function in a limited set of contexts, and then spread throughout the language as speakers apply it in all instances where that grammatical function is relevant.

A second example of reanalysis and subsequent generalization is presented by Bybee (2003: 146–7), who traces the grammaticalization of English going to.

(4) a. movement: We are going to Windsor to see the King.
   b. intention: We are going to get married in June.
   c. future: These trees are going to lose their leaves.

The original concrete meaning of going to in (4a) involves intentional movement towards a physical destination. The later use in (4b) retains the intent and orientation towards a goal expressed in the original use. Literal movement is no longer present, but there is still some sense in which the subject is progressing towards a goal located in the future. In (4c), although no movement or progress occurs, there is some future event, the losing of leaves, which the subject will experience. The expression going to has now become a grammatical marker of future time reference.
An important feature of the grammaticalization of *going to* is that the grammaticalized expression undergoes phonetic reduction. The phrase *going to* is frequently reduced to *gonna*, *gan*, or some variation of this, all of which require less effort to produce (Bybee 2003: 146). A related phenomenon is termed ‘fusion’ by Hopper and Traugott (1993), who define it as ‘the merger of two or more forms across word or morphological boundaries’ (Hopper and Traugott 1993: 40). The English derivational affixes *-hood*, *-dom*, and *-ly* have developed from full words meaning ‘condition’, ‘state, realm’, and ‘body, likeness’ respectively, and these once formed compounds with other nouns.

(5)  
cild-had ‘condition of a child’  >  childhood  
freo-dom ‘realm of freedom’  >  freedom  
man-lic ‘body/liceness of a man’  >  manly (Hopper and Traugott 1993: 41)

Through grammaticalization these words which could once stand alone have become affixes: bound morphemes that must attach to a stem. Grammatical morphemes, including affixes, can frequently be shown to have developed from full words crosslinguistically (Heine and Reh 1984; Heine et al. 1991; Heine 1993; Bybee et al. 1994; Bybee 2003). Particularly relevant for the argument I have put forward is the observation by Mithun (1991: 159) that ‘speakers tend to develop linguistic structures that mirror their cognitive structures in order to have efficient tools for the expression of thought. The ongoing activity of communication hones these structures: Patterns that are used frequently become routinized and automatic.’

With this in mind, it is not difficult to imagine how the repeated use of unmarked Arabic verbs with certain lexical words would eventually lead to their merger. Under this analysis, the reflexive affixes /t/ and /n/ were at one point full reflexive pronouns. Phonetic reduction of reflexive pronouns and their fusion with a verb is well documented. The Russian example in (6) is reproduced from Chapter 4.

(6)  
a. *On utomil sebja*  
he exhausted himself  
(His will drove his body to exhaustion)  
b. *On utomil +sja*  
he exhausted +REFL  
(He grew weary) (Haiman 1983: 796)

In (6a) the full reflexive pronoun stands alone, independent of the verb. In (6b) however, the reflexive marker is a reduced form of the full reflexive pronoun and is bound to the verb. Heine and Kuteva (2007: 110–12) point out that reflexive pronouns themselves are commonly derived from nouns meaning ‘body’ or ‘head’, and that in some languages it is possible to trace a grammaticalization path for these, wherein they begin as nouns, then they are employed as reflexive pronouns, and eventually as markers of passive voice. As noted in Chapter 4, many dialects of Arabic...
employ reflexive /t/ or /n/ to form passive verbs, strongly suggesting grammaticalization of a nominal source in line with these observed developments in language generally.

The same process of reduction and fusion with a verb almost certainly applies to the development of the causative or ‘agentive subject’ affixes /s/ and /ʔ/. Mithun (2002: 237–8) notes that causative derivational affixes are often so old that it is difficult to discern their source, but where possible it is frequently the case that they can be shown to have developed from full verbs meaning ‘make’ or ‘cause’. The English causative -(i)fy of verbs like pacify or horrify is borrowed from French -fier, and has ultimately been traced to the Latin verb facère ‘make’ (see Heine and Reh 1984 for a similar development in several African languages). Mithun also shows that in a number of North American languages causatives have evolved from a noun meaning ‘hand’. In both cases there is a lexical source for a causative morpheme.

I suggested in Chapter 5 that the long vowel /aa/ was once a full word meaning ‘with’ or ‘together’, that has been reduced and incorporated into various faʕala verbs to produce faaʕala. Incorporation of a morpheme denoting association is attested in the Nez Perce language spoken in the Pacific Northwest of the United States, where what Rude (1991) refers to as an associative case marker appears as both a nominal and verbal affix. When attached to nouns, an allomorph of the bound morpheme -tiwee appears to create a construction with the meaning ‘sharer of x’, where x is the entity named by the relevant noun.

(7) lāw ‘speaking’ lāwtiwa ‘friend’
    siiks ‘nest’ siikstiwa ‘intimate friend’
    hiik’ay ‘cup, dish’ hiik’aytiwa ‘brother-in-law’
    ’ilūut ‘belly’ ’ilūutwee ‘half brother’

As a verbal affix, the morpheme -tiween, realized as -twe in (8), signifies that the action of the verb is carried out with the participation of the grammatical object.

(8) lāwtiwa-na pēe-tuqi-twe-c-e
    friend-OBJ 3SUBJ.3OBJ-smoke-ASSOC-PROG-SG.NOM
    ‘He is smoking with a friend’

In both its nominal and verbal uses this affix contributes a meaning of mutuality or togetherness, bearing a striking similarity to the long vowel /aa/ in the Arabic verb patterns faʕala and tafaʕala, which I have argued marks a symmetric relation. The Nez Perce affix attaches to the nouns in (7) with the type of fusion seen with the affixes in English freedom and manly in (5), suggesting a lexical source. Thus the development of an ‘associative’ morpheme is attested in Nez Perce, and clearly the bound morpheme com- in English nouns and verbs of Latin origin is traceable to the preposition cum ‘with’.
Affix incorporation cannot of course account for the phonological shape of pattern II \textit{faʕala} and reflexive pattern V \textit{tafaʕala}, where the second consonant of the base \textit{faʕala} verb is reduplicated, but it is possible that this reduplication stems from an earlier full reduplication construction where the base is repeated in its entirety, with the two fully articulated forms merging over time. Under such a scenario, \textit{ya-qaʕa} 'he cuts' is first reduplicated as something like \textit{ya-qaʕ-ə-qaʕa} 'he cut cuts', where epenthetic \textit{ə} is inserted to aid pronunciation, with \textit{yu-qaʕa} 'he chops' being a later reduced form. As noted in Chapter 7, Miller (2003: 290–1) provides examples like \textit{gáta-gáta} 'cut-cut' in Juba Arabic of Southern Sudan, where full reduplication is used to construe a repetitive action, and it may well be the case that these forms reduce to become geminate verbs over time.

The development of the verb patterns of Arabic that I have proposed here is of course open to the criticism that supporting evidence from within Arabic is scarce. It is certainly true that many studies of grammaticalization are able to point to a specific source word for a grammatical marker, and that I am not able to point with certainty to a word in Arabic, or in the different ancestors that fed into it, as the source of a given Arabic affix. However, Heine et al. (1991: 243–4) assert that data illustrating grammaticalization crosslinguistically allow generalizations or probability statements on linguistic development, and predictions about language use: if certain developments are found with some regularity in languages of the world, then they are likely to recur in the future. Evidence from other languages therefore helps to establish trends and processes for language in general, and it would be unusual if these were not found in Arabic as well. Indeed, in tracing the origins of language itself, Hurford (2014: 145–6) notes a two-stage grammaticalization process, whereby content words first become grammatical function words, and from there develop further into affixes. Having observed this process over and over again in language after language, he concludes that ‘it is very plausible that the earliest languages had no function words and no inflections’ (Hurford 2014: 146). This conclusion echoes that of Bybee (2003), who states that ‘all grammatical morphemes have developed out of lexical morphemes, principally nouns and verbs, and all grammatical structures have developed out of more loosely organized constituents’ (Bybee 2003: 161). This in turn is an elaboration of Givón’s (1971: 413) often-cited assertion that ‘today’s morphology is yesterday’s syntax’. Given the large body of research that points to affixes developing from full words, it would in fact be difficult to argue that the verb patterns of Arabic are anything other than the product of grammaticalization. Such an argument would fly in the face of what is known about how language develops.

8.3.2 Abstraction of relational structures

The second part of my claim is that the verb patterns of Arabic have become morphemes associated with a given semantic structure, and have spread by analogy,
as the same semantic structure is perceived in a variety of events. Bybee (2003) notes that crosslinguistically, ‘with repetition, sequences of units that were previously independent come to be processed as a single unit or chunk. This repackaging has two consequences: the identity of the component units is gradually lost, and the whole chunk begins to reduce in form’ (Bybee 2003: 153). The meaning attributed to a grammaticalized construction therefore becomes more abstract, and is applicable in a greater number of contexts. After Haiman (1994, 1998), Bybee refers to the process by which a grammaticalized expression loses its strict literal meaning as one of emancipation, hence the emancipation of English going to from the notion of intentional movement through space observed in (4). My contention is that Arabic verb patterns have undergone emancipation, becoming associated with the abstract semantic structures detailed in the course of this book.

A body of work on how humans create and generalize abstractions (see Gentner 1983, 2010; Falkenhainer et al. 1989; Markman and Gentner 1993; Gentner and Markman 1997; Gentner and Christie 2010) suggests that this is on the right track. Specifically, Gentner (1983) argues that humans compare situations, establishing commonalities and differences by abstracting some type of shared relational structure, a process Gentner refers to as schema abstraction. For example, Gentner and Christie (2010: 265) presented students with the pair of sentences in (9).

(9) Wallcorp divested itself of Best Tires. Likewise, Martha divorced George.

They observed that on encountering these sentences, students formed a common abstraction through comparison, arriving at the relation got rid of something they no longer wanted. Gentner and Christie (2010: 265) refer to this process as ‘minimal ascension to a common relational superordinate’. Importantly, once a shared relational structure is determined by this type of analogical abstraction, Gentner (2010: 754) notes that it becomes more salient and is then more readily perceived in other situations. This is exactly what I argue for the verb patterns of Arabic. A pattern becomes associated with a certain relational structure, and is then used to describe all events in which that structure is perceived. One type of event is viewed as analogous to another, and the verb pattern used to construe this first event is extended to construe the second. A similar process, in which a concrete meaning becomes more abstract as a linguistic item is used in additional contexts, is also observed by Lakoff and Johnson (1980), who argue that a variety of complex events are understood or processed via metaphorical extension, where patterns of understanding from one concrete domain of experience are employed to structure more abstract concepts.

Hence, the phonological form of pattern VIII iftašala is created when a full reflexive pronoun is reduced and incorporated into specific transitive verbs, creating alternating pairs like ġasala/iğtasala ‘to wash trns/to wash intr’ and rafaša/irtafaša ‘to raise/to rise’. The pattern then becomes associated with a semantic structure where
there is no distinction between an initiating participant and an affected endpoint, marking this structure consistently, so that pattern VIII verbs have replaced earlier unmarked pattern I versions. Chapter 4 demonstrated that the reflexive nature of archaic ḫaadāḏa ‘to need’, where the object is a necessity for the subject, nazara ‘to await’, where the subject is also a type of recipient who seeks a sign, and ūbabara ‘to consider’, where the subject mentally takes in the object, is now consistently marked overtly in modern-day ihtaadāḏa ‘to need’, intazará ‘to await’, and ihtabará ‘to consider’. Similarly, a reduced reflexive pronoun combines with a verb like lafta ‘to turn something’ or shaqqa ‘to split something’ to produce intransitive iltafa ‘to turn’ and transitive iftaaqa ‘to derive’. In the first case, the reflexive marker assigns the object role of the base to the subject, and in the second it represents a beneficiary role, also assigned to the subject. Other situations are then viewed as sharing the semantic structure of these events, and verbs describing them are marked with the same pattern. For example, basama ‘to smile’ is like iltafa ‘to turn’ because in both cases the subject changes some aspect of its bodily configuration. By analogy, basama is then marked, taking on the pattern of iltafa to become ibtasama, also ‘to smile’. In the same way, gaala ‘to jump out and take; to assassinate’ is similar to iftaaqa ‘to derive’ because both situations involve an agent who comes to possess something as a result of its action. By analogy with iftaaqa, gaala is then marked, becoming ighaala, with no change in meaning.

A second example is pattern III faaṭala, and its reflexive counterpart tafaatela. The incorporation of /aa/ into the base verbs qatala ‘to kill’ or daraba ‘to hit’ creates the transitive reciprocals qaatala ‘to fight’ and daaraiba ‘to fight, to vie with’, and the reflexive intransitive reciprocals taqaatala ‘to fight’ and tadaaraohaba ‘to hit each other; to be contradictory’. These long-vowel patterns then become paired with a symmetric semantic structure, carrying this meaning independently of any specific verb, and just as with iftaala they no longer rely on a transitive base. They can now be fleshed out with roots extracted from a variety of base words, such as the nouns saafid ‘hand, forearm’, leading to saafada ‘to help’, where the subject and the object put their hands together to complete a task, or sufi ‘flat surface, palm of the hand’, the source of saafa ‘to shake the hand of’. Once emancipated, reflexive tafaatala denotes a structure in which two symmetrically organized forces both originate with the same participant. Before the system of verbal marking that exists today, the three elements that compose the pattern would be combined in a clause. For example, an ancestor of ya-qutul-un ‘they kill’ would appear with a noun meaning ‘selves’ and another meaning ‘with’ to produce a clause paraphrasable as ‘they kill with(in) themselves’, used to describe a situation of mutual fighting, where killing is the goal. Eventually, both nouns are reduced, becoming /t/ and /aa/, and are incorporated into the verb, producing taqaatala ‘to fight each other’. Since this process happens with more than one base verb, a verb pattern can then be discerned, characteristic of a set of true reciprocals describing back-and-forth actions with a symmetric semantic structure.
These individual verbs all describe two parties acting on each other, but other situations are deemed to share the underlying symmetry as well. Examples are provided by tazaayada 'to progressively increase' and tamaarada 'to feign sickness'. In the first example, the subject increases relative to itself, and then does this again, while in the second example the subject contradicts itself: it acts sick, but is not. It is unlikely that either of these concepts was ever expressed at the level of the clause. A clause-level combination of unmarked zaada 'to exceed' with words meaning 'self' and 'with' would produce something meaning 'it exceeds with itself', and a combination of mariid 'sick' with the same words to produce something meaning 'he is sick with himself' does not work.

Diachronically, these verbs are more likely to have developed after the pattern already existed as a morpheme that was no longer equivalent to the sum of its component parts. Upon conceiving an event in which something increases by degree, a speaker searches for existing linguistic resources that can be employed to construe the event to others. The verb zaada 'to increase' is obviously similar, and so becomes a source for derivation. Another feature of the event is that something exceeds an earlier version of itself, and then does so again. A verb pattern already exists for describing back-and-forth actions between elements of the subject, and so it is used again here, resulting in tazaayada 'to progressively increase'. In the same way, when an event is conceived in which someone feigns sickness, salient elements appear to be the state sick and a type of contradiction in which the action of the feigner is counter to his or her real state. To describe the event, a linguistic innovation occurs that targets mariid 'sick', extracting its root and combining it with the existing verb pattern that is already used for situations involving two opposing forces that originate within the subject. The result is tamaarada 'to feign sickness'. The spread of a verb pattern like this can therefore be accounted for by grammaticalization and analogy. Grammaticalization produces a pattern paired with a semantic structure, and analogy, whereby one situation is perceived as sharing the structure of another, spreads the pattern as new verbs are coined.

A further example comes from pattern IV ṭafšala. I again assume that this pattern results from the merger of two full words, one meaning something like 'make', and the other a pattern I base verb. This certainly accounts for many instantiations of the pattern, such as ṭaddḫaka 'to make laugh', from dahika 'to laugh', and ṭaxradaṯa 'to take or bring out', from xaradaṯa 'to come out, exit'. However, the subject of a pattern IV verb does not only make another party act. In the 'caused transfer' construction exemplified by ṭahdaṯa 'to gift', an agent causes a theme, the source word haddiya 'gift', to move into the possession of a recipient. In the 'go to' construction, an agent moves to a place or time, as with ṭahbara 'to go to sea', where the base is baḥr 'sea'. In the 'active state' construction, an agent acts and the base is a state that describes the quality of the action. My claim is that these denominal and deadjectival verbs are derived by analogy with
causative pattern IV verbs derived from pattern I, where the presence of an external agent is the meaning that becomes attached to the pattern.

Pattern X istaʕala is the reflexive counterpart to ʔafʕala. It denotes an agent, almost always external to the base, that is also a recipient or beneficiary. Hence pattern I ʕaada 'to return' and baqiya 'to remain' become causatives in transitive ʔaʕaad 'to return' and ʔabqaa 'to leave (in a place)' and reflexive causatives in istaʕaad 'to regain' and istabqaa 'to keep back', where the subject causes the object to return to it, or to remain with it. With other istaʕala verbs the base is stative, such as istagraba 'to consider strange', which incorporates the root of gariib 'strange', or a nominal like qaadii 'judge', the source for istaqdaa 'to appoint as one's judge'. It is important to note that the semantic structure is consistently still spelled out by the pattern, even when there is some overlap with the meaning of the base verb. Pattern I ʔaʕaad 'to return' and daʕaa 'to call for, invite' are both agentive, as are pattern X istadʕaad 'to gather (one's strength, etc.)' and istadʕaa 'to summon'. The difference in meaning is that the subject of the istaʕala verbs is both an agent and a type of goal to where the object is gathered or called. Since an agent is present already in the supposed base verbs, affixation of an /s/ morpheme seems unnecessary. Unlike with istaad 'to reclaim' and istabqaa 'to keep back', it does not add an agent. Instead, it simply codes the fact that an agent is present in the concept described. If the /s/ on istadʕaad and istadʕee is an affix attaching to a base, it serves no apparent function. If, on the other hand, the pattern has become associated with an agentive reflexive semantic structure, its presence is to be expected. The structure is spelled out by the pattern, and is flavored by the meaning of the base, which overlaps in part with that of the pattern.

Reduplication of the second radical of a faʕala verb results in pattern II faʕala and reflexive pattern V tafaiʕala, which as discussed in Chapter 7 are patterns that mark repeated action. These patterns also form denominal and deadjectival verbs, where repetition does not apply. I noted in Chapter 7 that faʕala has replaced ʔafʕala as a causative pattern in the spoken dialects, and this is accompanied by a change of meaning for verbs such as mawwata, which once meant 'to die en masse', from maata 'to die', but is now causative, meaning 'to kill'. Reduplication of the second radical to signify repeated action creates a set of faʕala verbs that almost universally describe situations where one party affects another, and my view is that this enables an association between the pattern and causation or agency, giving rise to the non-repetitive causative use of faʕala.

8.3.3 Analogy, categorization, and shape-invariant morphology

Analogical processes also account for the existence of patterns or standard forms that are not necessarily the result of grammaticalization. Wanner (2006: 127) states that ‘linguistic change is understood as driven by the cognitive process of assimilating one element to another. As a general cognitive force, analogy operates in the linguistic
subjects’ practice inevitably and continually throughout their lifetimes. The product of making one expression more similar to another, against the practiced norm of some concomitant group, will eventually yield a recognition of change if viewed post factum and thus from the outside. Individuals recognizing similar semantic or grammatical categories begin to signify this similarity through the standardization of linguistic form. Crowley (1997: 235–6) gives several examples in which similarity in meaning results in a change in the phonological shape of a word or words. Among them is the standardization of the initial consonant cluster in the Latin numbers kwattwor ‘four’ and kwinkwe ‘five’, from the respective reconstructed precursors kwetwo:res and penkwe. Crowley points out that the regular rules of Latin predict that */penkwe/ should change to become /pinkwe/ rather than /kwinkwe/, and that the irregular change is the result of the similarity in meaning. Both words refer to numbers sequenced one after the other, and speakers of Latin reflected this similarity through a partial standardization of form, extending the initial consonant cluster of one word to the other. Further examples come from Arlotto (1972: 130–47), who defines analogy as ‘a process whereby one form of a language becomes more like another with which it is somehow associated’ (Arlotto 1972: 130). He notes that in Old English, plural noun formation differed depending on the noun class.

(10) Singular  Plural
hand  handa  ‘hand’
gear  gear  ‘year’
ĕage  ĕagan  ‘eye’
stăn  stănas  ‘stone’  (Arlotto 1972: 132)

In modern English the -s suffix is almost exclusively the affix used to mark plurality, having spread throughout the language to replace the other potentially competing methods of plural noun formation, with some remaining exceptions like mice, sheep, children, and so on. Arlotto (1972: 133–4) notes that by analogy with the set of plurals originally marked with -s (-as), other nouns have come to be marked with -s as well, with the expression of plurality becoming concentrated on that morpheme, rather than distributed across a set of forms. With regard to the speed of this process, he concludes that ‘it is probably best to regard analogy as operating slowly throughout the lexicon of a language, absorbing one word at a time, perhaps originally operating only in substandard speech. Gradually, the new analogical formations may become accepted and used by the whole speech community’ (Arlotto 1972: 134).

An example of the spread of an Arabic word form by analogy comes from Moroccan Arabic. As noted in Chapter 2, a common adjective pattern in Modern Standard Arabic, also common in the dialects, is faʕil (fiil). This is perhaps the dominant pattern, yet it does not extend to all adjectives. Notable examples with other forms in Standard Arabic are hasan ‘good’, sahl ‘easy’, and saʕb ‘difficult’.
In Moroccan Arabic however, the adjective meaning ‘difficult’ is šiib, which by analogy with kbiir 'big', twiil 'tall', and a host of other adjectives has taken on this more widespread form. Ratcliffe (2001, 2006, 2013) argues that analogy also accounts for the emergence of new roots and patterns. For example, Ratcliffe (2013: 84) observes that Classical Arabic fifa ‘lip’ (pl. fifaah, fifawaat) is biconsonantal, but becomes fifa (pl. fifaaf, fifaayif) in Iraqi Arabic, where the /f/ is duplicated to create a more typical triconsonantal word. Speakers notice that other words have three consonants, and by analogy they add a third consonant here too. Similarly, Ratcliffe (2013: 84) shows that the shape of the Moroccan diminutive noun kliyəb ‘little dog’ is adopted for ktiyəb ‘pamphlet, little book’, in place of the pattern kutaayib used in Classical Arabic. The spread of the former pattern suggests that speakers associate it with a ‘diminutive’ meaning, and begin to use it at the expense of any possible alternant. In this sense analogy may be seen as a type of pressure for linguistic uniformity, whereby biradical words are extended to become triradicals, and word patterns are discerned and spread.

Standardization by analogy may also provide an account of how the different theme vowels in ground form verbs have come to mark different semantic structures. In such an account, vowels were once random in all verbs, but speakers then began to pair them with meaning. Some stative verbs happened to contain /u/, while some verbs with an affected subject happened to contain /a/ in the imperfective and /i/ in the perfective. Once an association was made between these vowels and the relevant semantic structure, the vowels became meaning-bearing. They then appeared in all verbs of the same semantic class in a process of standardization, as existing verbs underwent a change in voweling and as new verbs developed.

Again, this type of verbal marking has come about because the form of one word or one group of words has been copied and generalized to others. The same process would also result in noun and adjective patterns.

The resulting derivational system is a linguistic reflection of a cognitive operation that is central to human activity: categorization. Taylor (2003: xi) asserts that humans categorize in order to reduce the complexity that surrounds us, and that ‘our ability to function in the complex physical and social world in which we find ourselves depends on elaborate categorizations of things, processes, persons, institutions, and social relations’. Arabic words share a given word pattern because a category has been formed around a certain semantic structure, and things, states, or relations that have that structure are all category members. Similarly, word families whose members share consonants illustrate a category based on certain semantic content.

While Arabic perhaps represents an extreme example of a language in which category information is encoded in the very form that a word takes, it is not unique. English frequently marks a distinction between an action and a thing using syllable stress, exemplified in pairs like to permit/a permit and to insult/an insult where final stress marks an action and initial stress marks a thing. Further, Sereno (1994) argues
for a type of sound symbolism in English whereby a greater number of high-
frequency nouns contain back vowels in comparison with high-frequency verbs,
which tend towards front vowels. Examples of back-vowel nouns are school, house, 
group, and church, and front-vowel verbs are leave, feel, keep, and let. Sereno shows 
that this difference in vowel distribution was a factor in influencing participants' 
judgments in an English noun/verb classification task. This suggests that just as 
Arabic marks actions and things with a fully recognizable word pattern, English also 
goes some way towards marking the same distinction with vowel quality, albeit in 
high-frequency words only.

There is a clear evolutionary reason that motivates the standardization of linguistic 
form found in Arabic and other languages. Hinton et al. (1994: 6) point out that the 
association of particular sounds or sound sequences with syntactic categories, case, or 
tense helps to expedite accurate communication. In noisy conditions or when 
distance between interlocutors makes hearing difficult, sound patterns that signal 
noun or verb aid the hearer in reconstructing the message of the speaker. Calvin and 
Bickerton (2000) make a similar point, speculating that as language developed our 
ancestors competed to make syntax easier to process, developing linguistic markers 
that facilitated more rapid processing and reduced ambiguity. Consonants and the 
patterns in which they are arranged in Arabic supply both semantic content and 
category information, supplying the hearer with two different audio clues to aid in 
the reconstruction of what has been heard. Thus the repetition of form that charac-
terizes Arabic and other Semitic languages both reflects categorization as a central 
process of human cognition, and serves to aid efficient communication.

The generalization of certain linguistic forms in Arabic has created a system of 
shape-invariant morphology in which word patterns are paired with certain semantic 
categories. Patterns result from changes to base words, becoming established as 
morphological objects, and many of these fixed patterns provide only three slots 
for phonological material extracted from a source word. The data in (11) illustrate 
that roots are extracted from a variety of base words and fed into a standard comparative/superlative adjective pattern.

(11) kabirr 'big' ʔakbar 'bigger/biggest'
saqiir 'small' ʔasgar 'small/smallest'
safir 'difficult' ʔasfi 'more/most difficult'
sah 'easy' ʔasحل 'easy/easier'
ysa-drei 'he knows' ʔadraa 'more knowing'
munaasib 'suitable' ʔansab 'more suitable'
mufiid 'beneficial' ʔayad 'more beneficial'

The source words in (11) have different phonological forms, but the mapping of their 
root consonants to the pattern ʔafial results in a uniform output. In some cases this 
makes it impossible to say with certainty what the source word is. For example, while
I have listed the participles *munaasib* ‘suitable’ and *mu*fiid ‘useful’ in (11), there is no morphological or phonological clue in the derived comparative that points to them, rather than to the imperfective verb stem in *yu-naasib* ‘to suit’ and *yu-fiid* ‘to benefit’. Regardless of which source is chosen however, the underlying root is extracted, and non-root material is discarded. A further example is given in (12).

(12) *rasila* ‘to be long and flowing’  
*ʔarsala* ‘to let flow; to send’ trns  
*risaala* ‘letter, message’  
*rasiil* ‘messenger, envoy’  
*rusuul* ‘messenger, prophet’

While they are distinguished by further idiosyncratic meaning, all of the nouns in (12) name things that are sent by one party to another. As such, they profile the theme argument of a sender–theme–recipient semantic structure. Pattern I *rasila* ‘to be long and flowing’ encodes neither a sender nor a recipient, and cannot therefore be the source for these nouns. Resorting to the notion of the root as a semantic base cannot work here, since if we argue that the root *ʕrsl* means SEND, or has a sender and recipient argument as part of whatever abstraction it represents, we then need to explain why they are missing in some instantiations of that root, and why the verb that supposedly construes the basic root meaning of SEND is morphologically marked with a glottal stop. The conclusion is that the nouns are derived from *ʔarsala* ‘to send’, and that the glottal stop of the verb is not present in the derived words because its root consonants are extracted and plugged into the respective noun patterns. In these nouns the root represents the notion of SEND construed by the derived verb *ʔarsala*, and not some more abstract idea of MOTION present in all words in which the root appears. A similar phenomenon is found with the noun *ʕat̄aa* ‘gift, present’, derived by root extraction from pattern IV *ʔət̄aa* ‘to give’. Since the archaic unmarked verb *ʕat̄aa* ‘to get’ does not construe a giver, it cannot be the source word for this noun, which has a giver as part of its semantics. Instead, the arguments of the unmarked verb are variations of a possessor and a possessed, and these are incorporated into a structure of caused possession in derived *ʔət̄aa* ‘to give’. There is now a giver, and the root of *ʕat̄aa*? ‘gift, present’ comes from this verb. Derivation therefore removes parts of the base word because the fixed word pattern to which the base is mapped provides no place for them, with the result that only the root consonants are extracted.

8.4 Derivation and conceptual blending

Word families sharing a root or a pattern ultimately come about because of similarities that humans notice, or construct, as we experience the world around us. When a speaker conceives of a novel concept and requires a word to describe it, a certain
source word is chosen because the new concept and the source are deemed to share some semantic characteristic. Word families consisting of words that share consonants come about because a number of concepts are categorized as similar, analogous to each other based on a thread of meaning. For example, of all the possible salient features of the concepts foot and chest, the fact that they are front-facing parts of the body appears to be the key element that has led to a derivational relationship between qadam 'foot' and qadama 'to be in front', and between sadr 'chest' and sadara 'to come out, emerge'. Likewise, a salient element of the notion womb appears to have been some caring or tender state, and hence the word to describe it, rahim, is related to rahima 'to be merciful'. Viewed in this light, derivation reflects a mental process in which new concept $x$ is likened to existing concept $y$ along some dimension, and the word coined to describe concept $x$ therefore draws on the existing word for concept $y$. The derived word frames the meaning component of the source in a different semantic structure.

To this extent, derivation may be considered the linguistic reflection of conceptual blending, a cognitive operation proposed by Fauconnier and Turner (1994, 1996, 1998, 2002) in which elements of two inputs or 'mental spaces' are combined to produce a third mental space that is a partial match to both sources (cf. Mandelblit 1997, 2000, who applies this theory of blending to the verb patterns of Hebrew). Blending is not itself a linguistic theory, but a theory of cognitive innovation. Fauconnier and Turner (2002: 21) give the example of a ski instructor who advises a student to adopt the posture of a waiter carrying a tray of champagne. The two input spaces here are the action of carrying a tray, and the activity of moving downhill on skis. The blended space is not simply the sum of these two inputs, that is, not the real activity of carrying a tray while skiing, but a new mental space in which certain elements of carrying a tray are present, such as the posture and the forward gaze, but not all of them, since there is no tray and no force exerted to absorb its weight and balance it. The blend is therefore a combination of these two inputs, but it has its own specific characteristics. A further example (Fauconnier and Turner 2002: 81) builds on Sweetser’s (2000) analysis of a ritual in which a newborn baby is carried up the stairs of the new parents’ house in a symbolic gesture supposed to mirror the child’s rise to success in life. The simple action of carrying a child upstairs is not itself a ritual, but here this action functions as one input into a new mental space. The second input is the metaphor of life as a path, in which rising is positive and going downhill is negative. These two inputs are blended in the ritual, so that the stairs are matched with the path of life, the baby is the person treading this path, and so on. Thus elements from two conceptual domains are merged to create a third concept, which is not simply climbing stairs, or the path of life, but which is a new concept containing elements of each.

When one word is derived from another, the two inputs are a specific relation, state, or entity experienced in the world, and an alternative semantic structure.
The blend is a new concept that combines these two inputs but frequently has further idiosyncratic meaning. For example, pattern VI tamaarada ‘to feign sickness’ represents the merger of the state sick with a reflexive symmetric semantic structure where the subject exerts two contradictory forces: acting sick, but being well. Linguistically, the verb marida ‘become sick’ or the adjective marid ‘sick’ provides a consonantal root for derivation, and the verb pattern tafaala is already associated with a symmetric semantic structure due to the existence of a set of reciprocal verbs formed in that pattern. To coin the new verb, the speaker therefore employs existing linguistic resources: a word describing the relevant state, and a pattern that already denotes the relevant semantic structure. A second example is the derived noun qadam ‘foot’. The first input to the blend is the relation IN FRONT OF, construed by the base verb qadama ‘to precede, be in front’, and the second is the semantic category ‘thing’, associated with the noun pattern faal. The blend of these two mental spaces is a thing that is in front, but which is a new concept, FOOT, the part of the body that leads the rest, that is more than the sum of these two components. Figure 8.1 illustrates the blend.

It should be noted here that the direction of derivation could equally be from noun to verb. Heine and Kuteva (2007: 323) note that expressions of spatial orientation are frequently derived from nouns naming body parts crosslinguistically, and the derivation of qadama ‘to precede’ from qadam ‘foot’, sadara ‘to come out, emerge’ from sadr ‘chest’, and so on fits with this observed trend. Regardless of which word is the derivative, however, the important point is that derivation involves changing the linguistic form of one word to make it like that of another. Thus either qadama ‘to precede’ is altered to become qadam ‘foot’, which shares a shape with other nouns like jamal ‘camel’, xabar ‘news’, and šamal ‘work’; or qadam ‘foot’ is changed to

![Diagram](image_url)

**Figure 8.1** The conceptual blend represented by *qadam* ‘foot’
become qadama ‘to precede’, making it like other verbs that construe spatial relations such as xarada ‘to exit’ and daxala ‘to enter’. These changes take place with regularity, resulting eventually in the recognition of word patterns and the consonantal strings that they host. Thus analogy is at work on at least two levels here: the consonants √qdm recur because foot is analogous to in front of, and the pattern faʕal recurs because foot, being a thing, is analogous to other things described by words with a faʕal shape.

8.5 Looking forward

I have focused almost exclusively in this work on data from Modern Standard Arabic. While this focus has allowed for the formulation of a set of generalizations that I believe are largely true for the spoken dialects as well, it has overlooked developments in the dialects that now require attention. Most notably, the expansion of patterns II and V in some dialects has been accompanied by a reduction in the use of pattern I, or the ground form. In Syrian Arabic, for example, geminate bii-ʔaddii ‘he spends (time)’ is often used in place of Standard Arabic ya-qdii, which is a pattern I or ground form verb. There is no difference in meaning, and it is difficult to explain why gemination occurs in the dialect variant. Ouhalla (2016) notes that in Moroccan Arabic it is very common to find such ‘semantically vacuous’ geminate verbs, and that in many varieties pattern II verbs have become a default, while pattern I is disappearing. Laks and Saiegh-Haddad (2016) observe a similar phenomenon in Palestinian Arabic, providing examples of written Arabic produced by speakers of that dialect in which, for example, pattern I warima and pattern V tawarrama are used interchangeably to mean ‘swell up’, with no apparent meaning contrast. Both Ouhalla and Laks and Saiegh-Haddad suggest that speakers generalize geminate patterns because instances of geminate verbs are so frequent. The use of the pattern therefore expands, taking over from pattern I, simply because this is the pattern that speakers of Arabic are used to. I think this argument is exactly right, and it is my hope that the analysis offered in this book can be expanded to the dialects to contribute to our understanding of word formation processes in Semitic, shedding further light on the development and spread of linguistic form through innovation, analogy, and grammaticalization. As noted in Chapter 7, El Zarka (2005) argues that modification of certain faʕʕala and faʕʕa verbs by replacing the second consonant with a sonorant or a semivowel has created new quadriliteral verb patterns that are then available for speakers to coin new verbs, as with Egyptian dardif ‘to chat’ and farfif ‘to have fun’. Work on verb patterns in the dialects should investigate this further through a comprehensive historical survey of quadriliteral patterns that traces their development by metathesis, insertion of an extra consonant, combination of existing words, and reduplication, while also investigating the relationship of verbs that instantiate these patterns to potential base words.
A second area of investigation concerns the ongoing debate surrounding the mental organization of the lexicon. If speakers of Arabic store consonantal roots, with what meanings are they associated? Are they stored as representatives of full word meanings, or as something more abstract? While there is a plethora of psycholinguistic work claiming that speakers access underlying roots as morphological objects, I am not aware of any work that investigates the meanings that are supposedly paired with these roots, or that allows for the possibility that a root is anything other than a consonantal string paired with a semantic abstraction or lexical core. It would be useful to know whether speakers are able to pair roots with more than one meaning, say write and book in the case of √ktb, depending on the word they encounter. If they can, this would suggest that, if the root is stored at all, it is not stored as a semantic abstraction, but as some type of abbreviated word form.

A final important issue is the extent to which the analysis of Arabic presented in this book applies to language as a whole. The derived verb patterns are comprised of morphemes that almost certainly began as full words that became grammaticalized, attaching directly to other words, and this is also the case with morphemes of Latin origin, such as re-, con-, de-, pre-, and others. There is some overlap in the functions of these Latin morphemes with those of Arabic verb patterns, but it appears only partial. The combining morpheme con- in consort, confuse, and connect, for example, appears very similar in function to the long vowel /aa/ in patterns III and VI, marking a symmetrical structure where entities interact or are brought together. These same verb patterns also mark counterforce in Arabic however, which is marked with re- in English resist and restrain, where the subject acts to counter the force exerted by the object. The exact notions lexicalized by these respective morphemes are clearly language specific, but the overlap suggests some common ground as well. A study of Latin undertaken from a lexical semantic perspective similar to the study of Arabic undertaken here, or at least an analysis of English words containing these Latinate morphemes, will further our knowledge of how meaning is constructed in the mind and conveyed to others using language, and will, I suspect, provide further evidence that Arabic, and by extension the Semitic language family as a whole, is not as unique as is often portrayed.
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