

Formation and Semantic Behavior of Color Verbs in Algerian Arabic

BELDJENNA Amel^{1*} 

¹University of Oran2 Mohamed Ben Ahmed, Algeria
beldjenna.amel@univ-oran2.dz

BEKADDOUR Soumia² 

²University of Oran2 Mohamed Ben Ahmed, Algeria
bekaddour.soumia@univ-oran2.dz

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ABSTRACT: *In this paper, the formation of verbs of color in Algerian Arabic is analyzed morphologically, phonologically, syntactically, and semantically. Seven Algerian Arabic verbs of color were analyzed in terms of their verbal forms: ḥamira حمر 'to be red'; zariga زرق 'to be blue'; safira سفر 'to be yellow'; xaḍira خضر 'to be green'; kahila كحل 'to be black'; bayida بيض 'to be white'; sawida سود 'to be dark'. The verbs and the color idioms were collected by the authors themselves. The analysis shows that only three forms out of the ten verb forms in Arabic can be derived from this verb class; Forms II, IV, and IX. Each of these three forms has two patterns: one for the perfect tense and one for the imperfect. The study also shows that the root-based approach is most adequate in analysing such verb classification because Form I does not semantically exist in the language and so cannot be used as an input for the derivation of the other forms. The study also scrutinizes the use of this verb class in idiomatic expressions and the data shows that color verbs are incorporated in two metaphorical keys: feeling is color and abstract concept metaphors. These metaphorical keys are culture-bound.*

KEYWORDS: Algerian Arabic; Idiomatic Expressions; Morphology; Semantics; Syntax; Verbal Derivation, Verbs of Color

* Auteur correspondant : BELDJENNA Amel, beldjennaamel@gmail.com

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Introduction

With its 28 cardinal consonants and six cardinal vowels, Arabic presents a rich consonantal system contrasted by a limited vocalic inventory (Mahadin, 1982). This feature, a hallmark of Semitic languages, positions Arabic as an inflectional (also called non-concatenative) language (*lughat ishtiq'ia*). Consequently, words are formed not through simple concatenation, but rather through interdigitating morphological forms via template change, affixation, and gemination (Watson, 2006). For instance, the verb “*kataba*” (to write) can be modified to convey different tenses and aspects by manipulating its internal vowel structure and consonant clusters.

Derivationally, stems in Arabic are governed by canonical patterns (templates) that include vowels and consonants (Alshdaifat, 2021). Arabic verb stems are classified into thirteen forms (Form I - Form XIII), ten of which (Form I - Form IX) are commonly used in Modern Standard Arabic (MSA) (Alshdaifat 2015).

- Form I is the basic and most common verb form in Arabic, representing the root of the verb.
- Form II has a causative or intensive meaning added to the root. It often involves causing someone else to act.
- Form III often indicates an iterative or intensive aspect of the action.
- Form IV often involves the concept of intensification or repetition, similar to Form II.
- Form V usually conveys the idea of reciprocal or reflexive actions.
- Form VI often expresses a reciprocal or reflexive action with a passive voice.
- Form VII typically denotes a causative or intensive meaning with a passive voice.
- Form VIII often involves an action performed for the benefit of someone or something.
- Form IX often indicates the action of seeking or requesting.
- Forms X to XIII are less commonly used, and their meanings can be more specialized. They may involve concepts like reciprocity, causation, or abstraction.

It is worth noting that understanding and using these verb forms are essential for mastering Arabic grammar, and learners typically focus on the first nine forms in their initial studies.

These verb stems are governed by templates that include slots for consonants and vowels, conveying functional meanings as well as grammatical and syntactic information (Watson, 2006). Alshdaifat (2015) following Watson (2006) claims that Form I is the basic form out of which the other nine forms are derived. “Form I, II, IIV are derived from I by extension of the stem, Form V and VI are derived by prefixation of *ta-* to form II and III, respectively. Form VII, IX, and X involve various types of prefixation, and form VIII is derived from I by infixation of *t* after the left-most root consonant” (Watson, 2006, 432).

According to Alsahafi (2022), Arabic largely exists in *diaglossic* situations”. Algerian Arabic is a variety of Arabic spoken in the country of Algeria. It uses simplified morphological and syntactic rules of written Arabic. For instance, it does not apply noun and verb moods. Gender works the same way as in MSA, however; the dual and the feminine plural are no longer used; they are assimilated to the masculine in the plural form. For example, the word /*ʃakartun~a*/ ‘they (fem.pl.) thank’ is normalized in the Algerian Arabic in /*ʃkar-tu*/ ‘they thank’ (Saadani and Habash 2015).

Another difference that can be noticed is that whereas, in MSA the pattern for Form I of verbs is (CVCVC), in Algerian Arabic, it is phonologically morphed into (CCVC) pattern in the perfect and (yi-CCVC) in the imperfect. The verb forms in Algerian Arabic are altered phonologically due to language change. Since not all forms can be derived from a certain verb, this study will only analyze those forms that can be generated. Derivation varies from one root to another. This means how different verbal forms are created from root consonants are not always the same. For example, as illustrated in Table 1, Form IV and Form IX are not derived from the root k-t-b (to write) in Algerian Arabic.

Form	Pattern	Example	Gloss
Form I	C ₁ C ₂ aC ₃	ktab	‘to write’
Form II	C ₁ aC ₂ C ₂ aC ₃	kattab	‘to cause someone to write’
Form III	C ₁ āC ₂ aC ₃	kātab	‘to make someone write’
Form IV	ʔaC ₁ C ₂ aC ₃	---	---
Form V	taC ₁ aC ₂ C ₂ aC ₃	tkatab	‘to make a deal or agreement’
Form VI	taC ₁ āC ₂ aC ₃	tkātab	‘to make a deal’
Form VII	ʔinC ₁ aC ₂ aC ₃	nktab	‘to be written’
Form VIII	ʔiC ₁ taC ₂ aC ₃	ktatab	‘to write’
Form IX	ʔiC ₁ C ₂ aC ₃ C ₃	---	---
Form X	ʔistaC ₁ C ₂ aC ₃	staktab	‘to make someone write’

Table 1. Verbal Derivation from the Root k t b in AA

* C₁, C₂, and C₃ represent the first, second, and third radicals of the verb root.

The aim of this study is to analyze verbs of color which are derived from color nominals. The study employs a multi-levelled analysis of verbs of color. Therefore, seven color verbs from Algerian Arabic are analyzed morphologically, syntactically, semantically as well as phonologically (prosody and change). This limited number of verbs of color in Algerian Arabic allows a deeper and wider analysis. Moreover, no studies on Arabic color verbs in general or Algerian Arabic in specific have been conducted so far. The derived forms of each such verb have a specific functional meaning and grammatical features that interact with the basic meaning of the root. Accordingly, the semantic behavior of each form is analyzed as well as their semantic behavior in idiomatic expressions, in addition to their formation and their prosodic patterns.

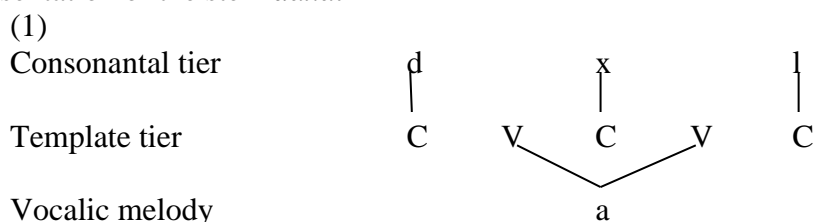
The study answers the following questions:

1. What are the characteristics of the formation of verbs of color semantically, morphologically, syntactically, and phonologically?
2. Which morphological approach best describes the formation of Algerian Arabic verbs?
3. What are the connotations of color verbs as used in idiomatic expressions in Algerian Arabic?

1. Literature Review

1.1. Theoretical Framework

Several theories were advanced in hopes of analysing nonconcatenative languages' morphology. For instance, the root-based approach was proposed by McCarthy (1979) and several others who argue that the consonantal root serves as an input (source), from which semantically related words are derived (output) by combining the root consonants (often three) with a canonical templatic pattern that includes consonant positions and vocalic affixes as shown in (1). McCarthy (1979) and (1981) proposes a templatic representation of a stem is composed of three separate levels called autosegmental tiers: the root tier (consonantal tier), the template tier (CV-skeleton), and the vocalization tier (vocalic melody). The prosodic representation of the stem *daxal* ‘to enter’ is shown below:



According to McCarthy (1979), the three autosegmental tiers (root, template, and vocalic melody)

are considered independent morphemes. From a root-based perspective, the majority of Arabic words (nouns and verbs) are derived from trilateral consonantal roots, uncommonly from two- or four-consonantal roots. The vocalic melody plays an important role in pronouncing Arabic words and indicating particular grammatical properties of a word.

On the opposing end of this approach, the stem-based approach assumes that word formation is based on a whole word or stem (input) rather than the consonantal root. Supporters of this approach emphasize that there is no need to refer to the consonantal root in word-formation processes. McOmber (1995) argues that full words in Arabic can be analyzed and represented through CV templatic representation without reference to the consonantal roots. Davis and Zawaydeh (2001) claim that “units smaller than the word cannot be the object of a morphological strategy. Clearly, the consonantal root is the object of a morphological strategy in Arabic hypocoristic formation”.

The study at hand will explore which of the two approaches is best for describing the morphology of Algerian Arabic verbs. Alshdaifat (2015) claims that the stem-based approach is most adequate and suggests that Form I of verbs serves as the input out of which the other forms are derived.

1.1.1. Verbs of color

Verbs of color can be defined as verbs whose meaning is related to colors; generally indicating that by a certain color or undergoes or undergoes a change of color. Altohami (2022) defines a ‘color’ as “a property of objects or light sources commonly described in terms of its hue (i.e. wave-lengths), luminosity/brightness, and saturation (i.e. the degree of freedom from light)”. A pioneering study on color categorization is Kay and Berlin’s *Basic Color Terms: Their Universality and Evolution* (1969) in which they categorize color into eleven basic color categories. By studying 100 languages, they argued that most languages share this universal system of basic color categorization. These basic colors are white, grey, black, red, orange, yellow, green, blue, and pink, purple, brown.

Regier *et al.* (2005) argue that Berlin and Kay’s categorization is supported primarily by data from languages of industrialized societies, therefore; by examining languages from 110 non-industrialized societies they illustrate that best-example choices for color terms cluster near the prototypes white, black, red, green, yellow, and blue.

Although Algerian Color categories align with the findings of Berlin and Kay (1969), the verbs of color only include verbs linked to basic-color terms of the categories listed by Regier *et al.* (2005) and therefore, they are the focus of this study. Colors are among the words to which attention needs to be drawn. Conceptual knowledge of this sort is less easy to pin down than one might like to think. What’s more, the use of an appropriate color may not necessarily result in the use of an appropriate or acceptable expression. To account for the probable misunderstanding and to see how different or similar colors are in different cultures, this study tries to present a vivid picture of the conceptual metaphors of colors in the case of idioms.

1.2. Previous studies

Alshdaifat (2015) investigated the characteristics of the formation of Arabic verbal forms within the semantic field of emotions. Utilizing an analytical statistical method, the research focused on three aspects: word-formation, syntactic behavior in terms of transitivity, and the presence of underived verbal forms in Jordanian Arabic. The analysis involves 100 roots and examines the derivation of ten verbal forms (Form I – Form X) within the semantic field of emotions. The results reveal patterns in the formation of these verbal forms, with Form I verbs predominantly following the pattern C1aC2iC3. Additionally, Forms II – X exhibit specific canonical patterns, resulting in augmented verbs. The study concludes that Form IV is the highest derivable form, while Form IX is not derived within this semantic field. The research also explores the syntactic behavior of the verbal forms, noting a distinct shift between forms. Moreover, the study investigates underived verbal forms (Form II – Form X) not listed in Arabic dictionaries, providing insights

for future research in other semantic fields and potential applications in natural language processing (NLP) tools such as Arabic e-dictionaries and word net.

Laks *et al.* (2019) scrutinized how verbal patterns are distributed and the semantic-syntactic functions they serve in the spoken narrative text production of adult native speakers of Palestinian Arabic. The study included 30 adult native speakers from Kufur Qaref, a village in Central Israel. Participants were presented with a video illustrating conflicts and were tasked with generating an oral narrative based on it. The analysis focused on the verbs used in these narratives, considering their root, pattern, transitivity, and semantic class. The findings of the study revealed distinct patterns in the distribution of the utilized verb patterns. Particularly, the CaCaC pattern emerged as the most prolific both in terms of type and token counts. This contradicts the results related to verb innovation, where the CaCCaC and tCaCCaC patterns were almost exclusively chosen. This discrepancy underscores the disparity between productivity based on new formations and productivity rooted in the use of fundamental forms.

Alshdeifat (2020) examines the semantic behavior of verbs of emotion in Arabic through a comprehensive analysis of their morphological, semantic, and syntactic behavior. The study showed that verbs of emotions derived from various morphological forms exhibit compatibility with specific default meanings, coexisting with other interpretations. For example, Form II predominantly aligns with a causative meaning, whereas Form X emotion-related verbs often convey the fundamental emotions found in Form I verbs. Thematic roles assigned to syntactic arguments of emotion verbs primarily involve experiencers and stimuli. Additionally, numerous instances of semantic change were identified, wherein derived verbal forms associated with emotion roots shift from the semantic domain of emotions to other semantic fields

3. Methodology

A corpus of seven triconsonantal roots which refer to color was adapted from Alshdaifat's (2015) semantic classification. The corpus of the study consisted of color verbs found in metaphors in idioms where the color contributes to the meaning. 11 Idiomatic expressions were collected by the researchers for the purpose of this study. Idioms from a cognitive perspective are the product of a conceptual system and they are motivated by cognitive mechanisms such as metaphor and metonymy, for which cultural models play a major role (Kövecses and Szabó 1996). However, the corpus for the color verbs consisted only of verbs. Therefore, the study analyzes two sets of corpora; the first is a corpus of seven color verbs found in Algerian Arabic. Only these seven colors have a corresponding verb form. The second corpus is a corpus of 11 idioms containing color metaphors also found in Algerian Arabic using the seven color verbs.

Alshdaifat (2015) provided a semantic classification of verbs, which have been classified into 44 semantic classes. Only verbs of color that denote color and found in Algerian Arabic are selected for analysis. The color verbs of Algerian Arabic differ from those found in dictionaries of MSA. These verbs forms are analyzed in terms of their morphological patterns, their syntactic behavior in terms of transitivity/intransitivity, their semantic behavior and their prosodic patterns.

The derivation of these verb stems is governed by canonical patterns; however, not all of the nine verb stems (Form I - Form X) are derived from a given verb, i.e. some of the nine derived forms from a given root do not exist in Algerian Arabic dictionaries. These verbs were analyzed in terms of their morphological patterns and their transitivity/intransitivity as well as semantic connotations of each form. The study employs a multi-level approach involving morphological, semantic, syntactic and prosodic phonological level.

3.1. Data analysis

After the collection of the verbs of color and the idiomatic expressions, the researchers analyzed the data in three phases. In the first phase, both the morphological and phonological analysis are conducted. The seven triconsonantal color verb roots are identified and classified. The morphological patterns of the verb forms which in turn are derived from the roots (Forms I-X) are analyzed. In addition, the study looks into

the phonological patterns of the color verbs and their derived forms. In phase two, the verb forms in terms of transitivity/intransitivity are analyzed. The syntactic construction of the idioms within which the color verbs appear. In the third phase, the semantic meanings of the color verbs, focusing on their metaphorical use in idioms are analyzed while exploring the cultural models associated with each color and its metaphorical implications. In addition, the semantic nuances of derived verb forms are compared to the base form

4. Results and Discussion

The following section presents the word formation of verbs of color and their phonological (prosodic) representation in Algerian Arabic.

4.1. Morphological and Phonological Analysis of Verb of Color Derivations

In MSA, Form I includes six different patterns, three perfect tense patterns and three imperfect tense patterns. Alasmari *et al.* (2018, 1606) argue that ‘the inflectional verbal morphology of Arabic distinguishes between a suffix conjugation and a prefix conjugation, generally referred to by linguists as the perfect and the imperfect. The suffix conjugation typically refers to the past tense, while the prefix conjugation typically refers to the present tense’. Alshdaifat (2021) claims that Form I of verb derivation is the input out of which other forms are derived and that Form I relays the basic meaning of the verb. Form I is considered the basic or simple form of the verb, and it is often associated with the root meaning of the verb. Form I provides a general sense of the action or state described by the root letters. Generally, verbs in Form I in MSA have six different patterns. These patterns have three slots for three root consonants and two intervening slots for vowels (Alshdeifat, 2021, 106).

By contrast to other types of verbs, verbs of colors only have two patterns, one for each tense. While in MSA, the patterns for verbs of color in Form I are (CVCVC), in Algerian Arabic it is phonologically realized as CCaC [CCVC] as in *ktab* ‘to write’. Table 2 shows examples of Form I of the seven verbs of color in Algerian Arabic.

		Form I	
verb		Perfect	Imperfect
1	ḥ m r حمر ‘red’	ḥmār	yi- ḥmār
2	z r g زرق ‘blue’	zrāg	yi-zrāg
3	s f r سفر ‘yellow’	sfār	yi-sfār
4	x ḍ r خضر ‘green’	xḍār	yi-xḍār
5	k h l كحل ‘black’	khāl	yi-khāl
6	b y ḍ بيض ‘white’	byāḍ	yi-byāḍ
7	s w d سود ‘dark’	---	---

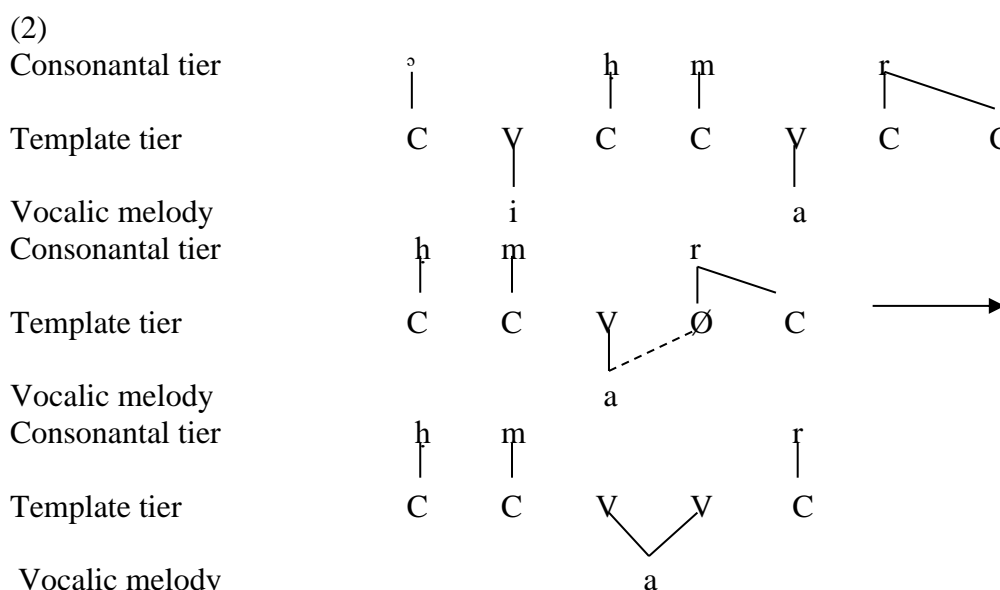
Table 2. Representation of Form I Patterns

This form of verbs of color in Algerian Arabic conveys the basic meaning of the verb. It denotes the basic meaning of having something turn into the designated color. For example, when we say *X zrāg* شيء زرق, it means X has become blue or when we say *wejhek khāl* وجهك كحل, it means your face has become black. It holds the basic meaning of the verb.

At first, it appeared that this form is Form I of Algerian Arabic verbs of color which is phonologically realized as [CCāC] instead of /CVCVC/. It is formed by omitting the first vowel after the initial radical and lengthening the second vowel after the second radical. For the deletion of the first vowel, it would be attributed to the fact that dialectal Arabic in general and Algerian Arabic in particular permits complex sets

of consonant combinations such as /kt/ in *ktab* ‘write’, *hmār* ‘to become red’ as opposed to MSA. Gafos *et al* (2010) attest that “all combinations of labial, coronal and dorsal places of articulations are attested, e.g., [gd], [dg], [kb], [bk], [tb], [bt]”. However, the vowel lengthening of the second vowel poses issues in assuming that this form is Form I. It is more plausible to assume that this form of verbs of color is in fact Form IX which is typical of verbs of color in MSA. It is used to emphasize which require the act of ‘becoming’ in this case colored and so it holds the basic meaning of the verb.

The pattern of this Form in Algerian Arabic does not have the third radical geminated. Instead, it has the second vowel lengthened. Due to the deletion of the geminated consonant, the vowel is compensatorily lengthened to fill the empty slot. The prosodic formation of Form IX of verbs of color is shown in diagram (2).



Compensatory Lengthening (CL) is defined as a process whereby a vowel lengthens in compensation for the loss of a tauto-syllabic consonant. It is considered a repair and a structure preservation phonological process (Kavitskaya 2017). Therefore, it is only plausible to refine the table and assume that Form I cannot be derived from verbs of color in Algerian Arabic.

		Form IX	
verb		Perfect	Imperfect
1	ḥ m r حمر ‘red’	ḥmār	yi- ḥmār
2	z r g زرق ‘blue’	zrāg	yi-zrāg
3	s f r سفر ‘yellow’	sfār	yi-sfār
4	x ḍ r خضر ‘green’	xḍār	yi-xḍār
5	k h l كحل ‘black’	khāl	yi-khāl
6	b y ḍ بيض ‘white’	byāḍ	yi-byāḍ
7	s w d سود ‘dark’	---	---

Table 3. Representation of Form IX Patterns

Verbs derived from color nominals cannot all be formed in the canonical Form I to X patterns. Hence, only forms that are generated from such verbs are discussed in this study. Forms II, V, and XI are generated whereas Forms I, III, IV, VI, VII, VIII and X are not semantically valid to be derived because they do not exist in the language as can be seen in the following table.

Form	Pattern	Example	Glossary
Form I	C ₁ C ₂ āC ₃	--	---
Form II	C ₁ aC ₂ C ₂ aC ₃	ḥammar	'to redden'
Form III	C ₁ āC ₂ aC ₃	---	---
Form IV	ʔaC ₁ C ₂ aC ₃	---	---
Form V	taC ₁ aC ₂ C ₂ aC ₃	ṭhammar	'to gaze angrily'
Form VI	taC ₁ āC ₂ aC ₃	---	---
Form VII	ʔinC ₁ aC ₂ aC ₃	---	---
Form VIII	ʔiC ₁ taC ₂ aC ₃	---	---
Form IX	ʔiC ₁ C ₂ aC ₃ C ₃	ḥmār	'to become red'
Form X	ʔistaC ₁ C ₂ aC ₃	---	---

Table 4. Verbal Derivation from the Root ḥ.m.r (to redden)

Form II pattern is realized by duplicating C₂ radical yielding the perfect tense pattern C₁aC₂C₂aC₃ and yC₁aC₂C₂aC₃ for the imperfect tense. Form II of verbs of color in Algerian Arabic is listed in the following table. Only six out of seven verbs are generated in this form.

Verb	Form II	
	Perfect	Imperfect
h m r حمر 'red'	ḥammar	y-ḥammar
z r g زرق 'blue'	zarrag	y-zarrag
s f r سفر 'yellow'	saffar	y-saffar
x ḍ r خضر 'green'	---	---
k h l كحل 'black'	kaḥḥal	y-kaḥḥal
b y ḍ بيض 'white'	bayyaḍ	y-bayyaḍ
s w d سود 'dark'	səwwad	y-səwwad

Table 5. Representation of Form II Patterns

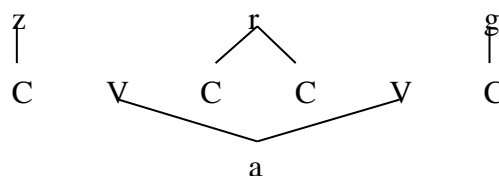
We cannot assume that Form II of verbs of color is derived from Form I in this case because the first vowel remained undeleted in this form, in addition to the fact that the second vowel is not lengthened. Diagram (3) below shows the prosodic representation of Form II in the Perfect tense

(3)

Consonantal tier

Template tier

Vocalic melody



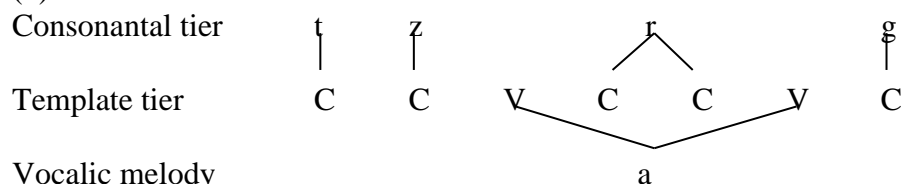
The templatic pattern of this form includes four consonants and two vocalic slots. All Algerian verbs of color morph into this form by duplicating the second radical. In the imperfect, the affix's vowel is deleted for ease of pronunciation. All seven Algerian verbs of color in Form II exist in Algerian Arabic.

Form III and IV do not exist in Algerian Arabic. This can be attributed to the fact that such forms do not semantically exist in the language, i.e. they have no meaning.

Form V verb stem has the morphological patterns tC₁aC₂C₂aC₃ in the perfect tense and yitC₁aC₂C₂aC₃ in the imperfect tense. It is generated by prefixing t- to Form II stem and geminating the second radical yielding two heavy syllables. It has the following prosodic representation. Another reason why we shouldn't

assume that Forms II to X are derived from Form I is because this particular Form in itself is derived from Form II by simply adding an affix to the form. In addition, the prefix's vowel is deleted for ease of articulation as can be seen in the following diagram.

(4)



Verb	Form V	
	Perfect	Imperfect
h m r حمر 'red'	ṭhammar	yithammar
z r g زرق 'blue'	tzarrag	yitzarrag
s f r سفر 'yellow'	tsaffar	yitsaffar
x ḍ r خضر 'green'	txaḍḍr	yitxaḍḍar
k h l كحل 'black'	tkahḥal	yitkahḥal
b y ḍ بيض 'white'	tbayyaḍ	yitbayyaḍ
s w ḍ سود 'dark'	tsəwwaḍ	yitsəwwaḍ

Table 5. Representation of Form V Patterns

Form V, VI, VIII and X do not exist in Algerian Arabic. This can be attributed to the fact that such forms do not semantically exist in the language, i.e. they have no meaning.

In an answer to the second question of the study of what the input is. Watson [3] also claims that some verbal diminutives must be formed from the root as the basic morphological unit. Verbs of color, in this case, can serve as a piece of evidence in support of the root-based approach. Since, form I does not exist in the language, it cannot serve as an input to the other forms. Hence, the root of the verb is the input out of which the forms are derived.

The following section presents the syntactic behavior of verbs of color and their associated meanings in Algerian Arabic.

4.2. Syntactic Analysis of Algerian Arabic Verb of Color

A verb is one of the pillars and main components of a clause or a sentence. Verbs are classified into transitive and intransitive verbs. Intransitive verbs are those verbs which do not require an object, they can stand by themselves. Intransitive verbs include verbs such as think in a sentence like "I am thinking". On the other hand, transitive verbs are those verbs that require an object to make the meaning complete. For example, I bought a car. A car here; being the direct object.

All seven verbs of color in Form IX are intransitive as can be seen from the following examples;

1. *wejheh ḥmār* in MSA would be *ḥamira wajhuh* 'his face has become red'
2. *yedi zrāget* in MSA would be *zariqat yadi* 'his hand became blue'
3. *wejheh byāḍ* in MSA would be *bayida wajhuh* 'his face became white'
4. *lḥši:ṣ xḍār* in MSA would be *xadira lḥaši:ṣ* 'the grass has become greener'

In these examples, the verb is describing a state. It has the following pattern: NP+ V. This form of verbs of color denotes their basic meaning which is the literal meaning of the verb i.e., something becomes that color. Therefore, we can assume that Form IX of verbs of color in this language conveys the basic meaning of the verb.

As for Form II of verbs of color, their transitivity depends on the verb in question. The verb *ḥ m r* does not take an object but it optionally takes a prepositional phrase.

1. *rah yḥammar* ‘he is looking at me angrily’
2. *ḥammret fia* ‘she warned (in) me’

In the first example, the adverb is embedded in the meaning of Form II. The verb *ḥ m r*’s figurative meaning in this form is associated with a certain look, to have someone look at you with red eyes basically means that they are angry with you.

By contrast to the verb *ḥ m r*, the verb *z r g* in Form II is used transitively. It obligatorily takes a direct object because the meaning of the verb is figurative. The verb *zarrag* means to give someone a blue eye (black eye), i.e. to hit someone. We say *zarragleh ‘ayn* ‘he gave him a blue eye’. If we crack the phrase down *zarrag* means to make something blue, *leh* which is attached to the verb is a prepositional phrase and *‘ayn* is the direct object.

The verbs *səwwad* ‘blacken’, *kahhal*, *saffar*, and *bayyad* are also intransitive as can be seen in the following examples. They all take a direct object.

1. *səwwad sa‘dek* ‘may your fate be dark’
2. *kahḥal galbek* ‘may your heart be blacken’
3. *saffar wejhek* ‘may your face be pale (yellow)’
4. *bayyad galbek* ‘may your heart remain pure’

This form of verbs of color often relays a figurative meaning associated with the verb. As can be seen from the examples listed above, all of them are figurative idiomatic expressions. The verbs *s w d* and *k ḥ l* are both associated with darkness. To wish darkness upon someone’s face or fate for example is to wish them bad luck. The verb *s f r* is associated with paleness, yellow is pale and so if you wish someone’s face to be pale, you’re wishing them illness. All of these verbs are culturally negative. The only verb that is associated with light and purity is the color white *b y d*.

Form V and Form II meaning are the same because Form V is Form II in addition to a prefix.

4.3. Semantic Analysis of Algerian Arabic Verb of Color in Idioms

Color metaphors are a specific subset within the broader scope of conceptual metaphor theory proposed by George Lakoff and Mark Johnson in the 1980s. Just as conceptual metaphor theory suggests that metaphor is a fundamental part of human thought and understanding, color metaphors explore how colors are used metaphorically to convey abstract concepts and experiences. Therefore, in this study 11 idioms containing color metaphorical expressions, revealed two types of conceptual metaphors: feeling is color and abstract concept metaphors as categorised by He (2001). These conceptual metaphors were described according to their metaphorical salience.

4.3.1. FEELING IS COLOR Metaphor

This metaphor was the most prominent out of the three conceptual metaphors. Therefore, the source domain is color and the target domain that was most frequently used is emotions. Emotion is one of the most central and pervasive aspects of human experience. In our daily speech, we frequently make use of colors in order to increase our expressiveness by invoking different emotions. For instance, the colour verb *ḥ m r* ‘to be red’ is used positively with the two idiomatic expressions ‘*ḥmretli wejhi*’ *hamretli wejhi* or ‘*الله يحمر*’ *allah yḥamarlek wejhek*, red is used to describe pride. When the face turns red, it means the person has received good prayers. However, the color red is used positively and negatively in the Algerian culture. For example, the idiom *t ḥmret fia* *t-ḥammar fia* ‘staring at me’, this idiom means looking at someone angrily. On another note, negative emotions described through colors also include the color yellow, such as ‘*yṣaffar wejhek*’ *ysaffar wejhek* ‘to yellow someone’s face’. In Algerian Arabic, metaphoric expressions that are associated with *yellow* have associative meanings to illness. White, on the other can symbolize shock and

fear; as in ‘بياضت ماخلعة’ *byadet mel xalʕa* ‘she went white from the shock’.

Moreover, the color black as in ‘يسود حلايسك’ *ysewed hlaysek* means to turn black from sadness. Algerian speakers also use the color blue metaphorically, but they do not regard it as a symbol of positivity. For example, the saying ‘نزرقلك عينيك’ *nzaraglek ʕaynek* means to beat someone until his eyes blacken. In addition, ‘زراقيت مالبرد’ *zragiit mel berd*, the color blue refers to the color the body reaches from cold.

There are two mappings characterizing the FEELING IS COLOR metaphor:
 FEELING IS THE COLOR OF THE COMPLEXION

الله يحمر وجهك

THE COLOR OF A BODY PART IS THE PERSON

يسود حلايسك

4.3.2. ABSTRACT CONCEPTS Metaphor

Abstract objects are also target domains for colors in Algerian Arabic. For instance, the color black in ‘يكحل ياماتك’ *ykahal yamatek* may your days be black, ‘جا يكحلها عماها’ *ʒa ykaħalha ʕmaha* (he came to fix it, he ruined it instead), ‘كحلي عيشتي’ (he ruined my life), is also used to describe abstract notions. As these examples show, black symbolizes negativity and bad luck in the Algerian culture.

There is only one mapping characterizing this metaphor:

LIFE IS COLOR

يكحل ياماتك

Color	Metaphorical conceptualization	Positive/negative
White	WHITE FACE STANDS FOR INNOCENCE AND PURITY	N
	WHITE STANDS FOR GOOD INTENTIONS	P
Black	BLACK IS BAD OMEN	N
	BLACK STANDS FOR BAD DEEDS	N
Blue	BLUE STANDS FOR BRUISED BODY	N
Green	GREEN STANDS FOR GOOD LUCK	P
	GREEN STANDS FOR PERMISSION	P
	GREEN STANDS FOR DECEPTION	N
Red	RED FACE STANDS FOR GOOD PERSON	P
	RED STANDS FOR BAD BEHAVIOR	N
yellow	YELLOW FACE STANDS FOR EMBARRASSEMENT	N

Table 6. The conceptual keys for colors in AA idioms

5. Conclusion and Recommendations

This study has provided a comprehensive analysis of the formation of Algerian Arabic verbs within the semantic field of color. The study showed that verbs of color in Algerian Arabic have only three forms generated from the root. It also shows that form I, although it exists in MSA verbs of color, it does not in Algerian Arabic. The verbs were analyzed syntactically as well. Some are transitive and some are intransitive. The study also shows that Form IX mainly conveys the literal meaning of the verb whereas Forms II and V convey figurative meanings. It is worth mentioning that the most important meanings that the basic colors expressed in Algerian Arabic, Black for race, darkness and negativity. By contrast white is associated with purity, brightness, and positivity. Red on the other hand indicates danger, blood and

prohibition on the one hand, and love on the other. Blue has both negative and positive connotations; it was related to nature too. Green is the color of nature and environment. As for yellow, it has more negative than positive meanings; it is related to diseases, jealousy and race. Much research is needed to examine verbs of color in MSA and colloquial Arabic. This study may also inspire further interesting linguistic and sociolinguistic analyzes.

References

- Alasmari, J., Watson, J.C.E., & Atwell, E. (2018). A Contrastive Study of the Arabic and English Verb Tense and Aspect A Corpus-Based Approach. *PEOPLE: International Journal of Social Sciences*, 3(3), 1604-1615.
- Alsahafi, M. (2022). Diglossia: an overview of the Arabic situation. *International Journal of English Language and Linguistics Research*, 4(4).
- Alshdaifat, A. (2015). *The formation of Nominal Derivatives in the Arabic Language with a View to Computational Linguistics*. PhD diss., University of Salford.
- Alshdaifat, A. (2020). The formation of verbs of emotion in Arabic. *Jordan Journal of Modern Languages and Literatures*, Georgetown University Press, 13(1), 105-120.
- Altohamin, W. (2022). A pragma-semantic analysis of color terms in the Quran and their translations: The case of white and black. *Journal of Language and Linguistic Studies*, 18 (1), 577-597.
- Berlin, B. & Kay, P. (1969). Basic color terms: Their universality and evolution". Berkeley: University of California Press.
- Davis, S. & Zawaydeh B. A. (2001). Arabic hypocoristics and the status of the consonantal root. *Linguistic Inquiry*, 32(3), 512-520.
- Gafos, A.; Hoole, P.; Roon, D. K. & Zeroual, C. (2010). Variation in overlap and phonological grammar in Moroccan Arabic clusters, *Laboratory Phonology*, 10, 657-698.
- Giaber, J. M. (2017). Differences in word formation between Arabic and English: implications for concision in terminology translation, *Al-'Arabiyya: Journal of the American Association of Teachers of Arabic*, 50, 53-79.
- He, G. (2011). A Comparative Study of Color Metaphors in English and Chinese. *Theory and Practice in Language Studies*, 1(12), 1804-1808.
- Kavitskaya, D. (2017). Compensatory lengthening and structure preservation revisited yet again. In Claire Bower, Laurence Horn & Raffaella Zanuttini (Eds.), *On Looking Into Words (and Beyond)* (pp. 41–58). Berlin: Language Science Press.
- Kövecses, Z. & Szabó, P. (1996). Idioms: A View from Cognitive Semantics. *Applied Linguistics*, 17(3).
- Lakoff, G. & Johnson, M. (1980). *Metaphor We Live by*. Chicago: University of Chicago Press.
- Laks, L, Hamad, I., & Saiegh-Haddad, E. (2019). Verbal patterns in Palestinian Arabic. *The Mental Lexicon*, 14(2): 209-236. DOI: [10.1075/ml.00005.lak](https://doi.org/10.1075/ml.00005.lak)
- Mahadin, S. R. (1982). *The morphophonemics of the standard Arabic tri-consonantal verbs*, [PhD diss., University of Pennsylvania] University of Pennsylvania.
- McCarthy, J. J. (1979). Formal problems in Semitic phonology and morphology, [PhD diss., MIT]. MIT
- McCarthy, J. J. (1981). A prosodic theory of nonconcatenative morphology. *Linguistic Inquiry*, 12, 373-418.
- McOmber, L. M. (1995). *Morpheme edges and Arabic infixation*. In Perspectives on Arabic Linguistics VII, ed. Eid, M. Amsterdam/Philadelphia: John Benjamins.

- Regier, T.; Kay, P. & Cook, S. R. (2005). Focal colors are universal after all. *Proceeding of the National Academy of Sciences*, 102 (3), 8386-8391.
- Saadane, H. & Habash, N. (2015). A Conventional Orthography for Algerian Arabic. *Proceedings of the Second Workshop on Arabic Natural Language Processing*, 69–79.
- Watson, J. (2006). Arabic as an introflexing language. (ed). Keith Brown. In *The Encyclopaedia of Language and Linguistics* (pp. 431-434). Amsterdam: Elsevier, 2nd edition.

Authors' biographies

BELDJENNA Amel, Associate professor at the University of Oran2 Mohamed Ben Ahmed, vise head of the department of English.

BEKADDOUR Soumia, Associate professor at the University of Oran2 Mohamed Ben Ahmed, responsible of distant learning in the department of English.