

## The Linguistic Characteristics and Functions of Hashtags: #Is it a New Language?

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### Abstract

Defined as a form of tagging that allows social media users to embed metadata in their posts, hashtags initially served to categorize topics and make them searchable online. Originating first on Twitter in 2007, hashtags have spread to other platforms, such as Instagram, Facebook, and Youtube. In addition to functioning as topic markers, hashtags have developed more complex linguistic functions. The ubiquity of this feature in the online medium, which now occupies a significant portion of our everyday communication is thus worthy of investigation. Although this topic has been researched in different disciplines, such as information diffusion, marketing, as well as sociology and public opinion, hashtags have not yet received enough attention from linguistic research. Using a sample of hashtags from a corpus of Instagram posts by Egyptian and Arab participants, this research thus aims to examine the characteristics of hashtags from a linguistic perspective, with particular focus on hashtags in the Arabic language. The study primarily seeks to determine the morpho-syntactic features of these recently emerging linguistic items according to the taxonomy proposed by Caleffi (2015). It also explores the pragmatic functions of hashtags based on Zappavigna's (2015) view of hashtags as technologically discursive tools. The analysis points out that most of the hashtags in the data serve the experiential function and come as suffixes. The findings reveal both similarities and differences between English and Arabic hashtags.

*Keywords:* Arabic language, Caleffi's taxonomy, computer-mediated communication (CMC), hashtags, Instagram, pragmatic functions, social media

**Cite as:** Mahfouz, I. M. (2020). The Linguistic Characteristics and Functions of Hashtags: #Is it a New Language? *Arab World English Journal (AWEJ) Special Issue on CALL (6)*. 84-101.  
DOI: <https://dx.doi.org/10.24093/awej/call6.6>

## Introduction

Social media users have been increasingly creating and using hashtags in their uploaded content on various social media platforms. Defined as “a string of characters preceded by the pound symbol #” (Caleffi, 2015, p. 46), the hashtag enables users to add metadata to their posts, thus increasing the probability that their posts will be found and followed (Caleffi, 2015). This process of tagging has been termed ‘ambient affiliation’ by Zappavigna (2011), indicating that users may not have interacted directly with each other. Yet, they are linked by their interest in the same topics. According to Zappavigna (2015), the use of hashtags has marked a turn from people’s need to search for content to searching for other communities with shared values.

Hashtags were originally devised to categorize messages posted on social media platforms, such as Twitter, Facebook, Youtube, and Instagram. The first hashtag ever used was ‘#barcamp’ which appeared on Twitter in 2007. In July 2009, Twitter made hashtags hyperlinks, whereby clicking on them redirected the user to posts with that same hashtag (Pasho, 2017). Since the hashtag function was officially incorporated into Twitter search platform in 2009, hashtags have evolved into a ‘folksonomy’ for people to make commentary, express their feelings, and interact with each other (Lin, 2017).

Though initially launched to classify the topic of a post, hashtags have now developed several functions, such as expressing emotions, supporting movements, promotion and publicity, in addition to functioning as disclaimers. Born in the online environment, hashtags have even spread to the offline world as they can now be frequently seen in TV commercials, newspaper headlines, and demonstration banners where they are used to emphasize messages (Caleffi, 2015). According to Scott (2018), in the case of spoken hashtags, participants share physical context and have access to non-verbal cues, which restrict the functions served by hashtags.

The spread of hashtags has caused a controversy among the linguistic community. Some regard them positively in the light of language change, suggesting that they have come to constitute a new paralinguage (Lin, 2017). Others, however, claim that they are ruining the language. Biddle (2011), for instance, states that “the colloquial hashtag has burst out of its use as a sorting tool and become a linguistic tumor” (para. 3).

Among the social platforms that make use of hashtags is Instagram. Launched in 2010, Instagram has become a very popular photo-sharing app and social media platform. This social network enables users to upload photos and videos which can be edited, tagged, and viewed by their followers who can browse their content and view trending posts. In May 2019, Instagram reached one billion registered users (Iqbal, 2020).

Linguistic research on hashtags has evolved only recently. The significance of the present study becomes apparent given the limited literature on the language of hashtags whose primary focus has been on Twitter in particular. Furthermore, despite the growing popularity of social media in the entire world and the impact it exerts on our linguistic practices among other countless influences, non-English hashtags have been somehow neglected by linguistic scholarship, let alone for Arabic hashtags.

The scope of the present research hence covers a corpus of Instagram posts published by Egyptian and Arab participants. In order to investigate this relatively recent linguistic phenomenon of hashtags, the study seeks to answer the following two main research questions:

1. What are the main morpho-syntactic characteristics of Arabic hashtags as recently emerging linguistic items?
2. What are the pragmatic functions of hashtags as technologically discursive tools?

### Review of the Literature

Several scholars have tackled the topic of hashtags in different disciplines, including information diffusing, marketing, sociology, and public opinion. Despite the abundance of research on social media language, hashtags, have not yet received ample attention from linguistic scholarship. Whereas Twitter hashtags have been the subject of much research (Evans, 2016; Page, 2012; Shapp, 2014; Tamara, 2011; Wikström, 2014; Zappavigna 2011; Zappavigna, 2015), Instagram hashtags are still a fertile field of study due to the recency of this platform. In accordance with the purpose of the present study, the literature review tackles two main perspectives for hashtag research, namely morpho-syntactic characteristics and pragmatic functions.

#### *Morpho-syntactic characteristics of hashtags*

A number of scholars have attempted to analyze the morphological and syntactic features of hashtags, including their structure as well as their position within posts.

Caleffi (2015) examined hashtagging as a new morphological process for word formation by looking at a corpus of English and Italian hashtags both online and offline. She proposed a tentative taxonomy of eight types of English hashtags (see Table 1). In her study, she explored the nature of these new linguistic items and their composition. She describes hashtagging is a new productive word formation mechanism that can be utilized to generate innovative linguistic items by stringing several words together, in a sense that may even lead to the redefinition of traditional word and part of speech categories. In her model, Caleffi's (2015) takes into account the number of words in the hashtag and its position within the post, whether at the beginning, middle or end. The items that follow the “#” symbol are also analyzed, whether these include acronyms, combinations of digits and letters, symbols, or words and phrases.

Table 1. *Caleffi's (2015) taxonomy of English hashtags*

Type of hashtag	Example
# + acronym/abbreviation	#ootd
# + 1 word	#marathon
# + 2 words	#prettyplace
# + 3 words	#ThingsNobodySays
# + 4 words	#fromwhereistand
# + 5 or more words	#IAmElyarsBillionthGirl
# + letters and numbers	#b2bhour
# + ??	#duhDumduhDumDuhDumDuhDumDuhmdduhm

*Note. Reprinted from Caleffi (2015, p. 53)*

According to Caleffi (2015), based on Twitter conventions, hashtags usually follow certain constraints. First, no whitespace characters are allowed. Moreover, in a hashtag consisting of two or more words, the initial letter of each word may be capitalized (as in the title of the present research). A hashtag can contain numbers but cannot be made up entirely of numerical digits, neither can it start with a number. Special characters are not allowed except for the underscore symbol. Caleffi (2015) recommends that hashtags be used sparingly, since too many hashtags in one post or hashtags with numerous characters can be cumbersome and confusing.

Maity et al. (2015) described hashtags as “one of the most important linguistic units of ... social media” and pointed out that it is thus worthwhile to analyze them from a linguistic perspective (p. 1681). They performed a quantitative analysis of the evolution of the basic linguistic features of hashtags over a two-year period. The researchers found that several hashtags have ‘coalesced’ or combined to form new ones over a short period of time, which have come to be known as ‘Twitter idioms’. They also observed that the frequency of occurrence of this new merged hashtag is usually much higher than that of its individual components. According to Maity et al. (2015), “what started as a way for people to connect with others and to organize similar tweets together, propagate ideas, promote specific people or topics has now grown into a language of its own” (p. 1685). Their findings also revealed that people tend to repeat the same hashtag in their tweets to express strong opinions or overexcitement.

Lin (2017), on the other hand, maintains that “hashtags stimulate people to build their own language” (hashtag as a paralanguage). They are very easy to produce since anyone can create a new hashtag just by adding the pound symbol “#” before a word or phrase, which makes them “uncontrollable but creative”. The presence of hashtags thus encourages people to use slang expressions or even create their own merged forms that then circulate on a large scale and start infiltrating into everyday language. Although they may not be syntactically formal or lack grammaticality, “this Internet slang has evolved into mainstream language” (Lin, 2017, hashtag as a paralanguage). Lin (2017) also found that the coalescing phenomenon is more common in social media than in standard written language due to informality and space limitation.

### ***The Pragmatic functions of Hashtags***

Apart from their primary categorizing and searching functionalities, hashtags have developed to serve a range of linguistic and pragmatic functions that have constituted the focus of several studies.

In her pioneering article, Zappavigna (2011) tackled the role performed by hashtags as technologically discursive tools. She described hashtags as ‘searchable talk’ since they promote ‘searchability’ as a community-building linguistic activity. By using a hashtag, it is assumed that other users will adopt the same tag, hence creating what is known as a ‘folksonomy’ or a virtual community that engages in collaborative tagging. She defined the concept of ‘searchable talk’ as “online conversation where people actively render their talk more findable” (Zappavigna, 2011, p. 804).

Tamara (2011) classified hashtags into informing and commentary hashtag (opinions/judgments) and found that around 71% of tweets on Twitter were informing hashtags. Zimmer

(2011), on the other hand, devoted special attention to the use of hashtags for irony, particularly “as a vehicle for self-directed sarcasm” (par. 3). He states that “the convention of the ‘hashtag’ has been pressed into the service of self-mockery” (par. 1). Furthermore, Zimmer (2011) recommended that these sarcastic hashtags, especially those involving race- and class-based self-mocking, be examined more thoroughly “to make way for a deeper self-examination” (par. 7).

Page (2012) classified hashtags into three categories based on the clause/content type surrounding the hashtag in use: declarative, imperative, and question. She also found that celebrities use hashtags for self-branding. They do this through two main types of posts: those related to professional identity and those related to national events, such that “search terms related to professional expertise tend to emphasize the tweet author’s identity as a practitioner within a particular field” (Page, 2012, p. 10). She suggests that celebrities employ hashtags as a sort of marketing strategy through which they persuade their audience to watch a show or purchase a product to promote their status in the offline world.

Wikström (2014) employed Speech Act Theory to analyze the communicative functions of hashtags and distinguished eight functions, such as playing games, parenthetical explanations, in addition to emotive, emphatic, and humorous usages. Shapp (2014), on the other hand, studied Twitter hashtags from a discourse narrative perspective, focusing on ‘commentary’ hashtags. These are used to provide an additional meaning (usually evaluative) to the semantic content of a tweet. He also distinguished hashtags that are syntactically included within the structure of a post from extra-sentential ones.

According to Goodwin (2015), the “hashtag quickly evolved from its primary function to being a way for people to provide social commentary, impart sarcasm, and other narratives on their social media posts” (par. 8). She suggests that hashtags represent a fast means of communication that facilitates rapid connections and caters for the needs of young generations who usually have a short attention span and seek instant gratification. “Using hashtags not only streamlines that process but further streamlines online communications and replaces more individualistic and well-thought out answers and narratives” (Goodwin, 2015, par. 16).

Baghirov et al. (2016), on the other hand, investigated gender differences in Instagram hashtags and found that females use more emotional and positive hashtags, as opposed to males who tend to use more informative and negative hashtags. Based on relevance theory, Scott (2018) also studied the use of spoken hashtags as a new way of communication in which a feature of written language, namely punctuation marks, has infiltrated into the spoken medium. She suggests that by labeling the topic, not only do experiential hashtags serve the searching function, but also perform a contextualization function by supplying the semantic field that should be used to interpret a given message.

Whereas the bulk of scholarship on hashtags has been dominated by Twitter, among the very few studies that tackled Instagram hashtags is Pasho (2017) who employed Actor-Network Theory to describe the performances and impacts of dietary hashtags. Through experimenting with the walkthrough method and an Instagram narrative model, the study examined discursive

associations in dietary-related Instagram content. The study concluded that food images along with dietary hashtags affect users' consumption food patterns and dietary performances.

### ***The metafunctions of Language***

According to Systemic Functional Linguistics (SFL), language is a system that involves communication through choices (Halliday, 1978). The structure and organization of language is affected on all levels by the various functions it is utilized to achieve. These functions, referred to as metafunctions, are enacted simultaneously and manifested as different layers in the structure of a given clause (Halliday, 1994). The main aim of this model is "to construct a grammar for purposes of text analysis: one that would make it possible to say sensible and useful things about any text, spoken or written, in modern English" (Halliday, 1994, p. 41). SFL has thus been employed as a theoretical framework for analyzing numerous text types ranging from literary work to advertisements and business letters.

The key concept in SFL is that language enacts three simultaneous metafunctions: an ideational function of enacting experience, an interpersonal function of negotiating relationships, and a textual function of organizing information (Halliday & Matthiessen, 2004). The ideational metafunction is concerned with the content or proposition of a message. The interpersonal metafunction, on the other hand, involves the interaction between participants who express their own attitudes and opinions and attempt to influence others' attitudes and opinions. Finally, the textual metafunction is concerned with the creation of a coherent text. These metafunctions should not be regarded as functions in the sense of language uses but rather viewed as modes of meaning which are present in every use of language as a semiotic system (Halliday, 1994).

Based on this model of SFL, Zappavigna (2015) attempted to investigate the pragmatic functions of hashtags. She thus posits that hashtags function as metadata in three ways: *experiential* (topic related), *interpersonal* (evaluative), and *textual* (typographic). Zappavigna (2015) suggested that "hashtags are able to construe a range of complex meanings in social media texts" (p. 274). Accordingly, she distinguished three main communicative functions of hashtags: "an experiential function of enacting experience, an interpersonal function of negotiating relationships, and a textual function of organizing information" (p. 5).

From the above discussion, it becomes apparent that most hashtag research has until the present time concentrated on Twitter as a social media network, leaving other social media networks such as Instagram under-researched in this respect. Very little research has also been conducted on hashtags in the Arab world to the researcher's knowledge, let alone for hashtags written in the Arabic language.

### **Methodology**

To investigate the use of hashtags on Instagram with particular focus on Arabic language hashtags, data was manually collected from posts on Arab and Egyptian celebrities' accounts in August and September 2019. The first data set was collected from sportsmen's accounts, especially football players (75 posts), whereas the second comprised other celebrities, mainly actors, singers and presenters (75 posts), amounting to a total of 150 posts. The accounts were checked and the first (latest) post was selected from each account. Only posts written in Arabic language were

selected. When a post was not found to include hashtags, it was skipped and the next post on the same account was examined, and so on. It is to be noted that the sample is not intended to provide a quantitatively representative picture of hashtag usage on Instagram as a whole, but rather to identify and exemplify a wide variety of functions and forms related to the use of Arabic language hashtags.

To analyze the selected hashtags on the morpho-syntactic level, Caleffi's (2015) taxonomy is adopted. Her model is based on what follows the “#” symbol, whether abbreviations, combinations of numerical characters or letters, and the symbols used to separate the words if any. The number of words in the hashtag, as well as its position in relation to the post are also considered.

To analyze the pragmatic functions of hashtags, the study draws upon Zappavigna (2015). Her classification for the functions of hashtags is based on the model of SFL, a social semiotic theory that investigates discourse in context with the aim of answering questions about how meanings function within the particular contexts in which they are made. The selected hashtags will be examined and classified according to Zappavigna's (2015) classification outlined above in order to determine whether they indicate the topic of the post or add an evaluative comment. The textual function is simultaneously enacted by almost all hashtags as will become apparent in the course of the study.

### Data Analysis

The sample Instagram posts were examined, and the hashtags included were extracted and analyzed. The total number of hashtags in the sample was found to be 625. The first section of the analysis is devoted to the morpho-syntactic characteristics of the hashtags, whereas the second discusses their pragmatic functions.

### Morpho-syntactic Characteristics

This section tackles the morphological structure and syntactic features of the selected hashtags. The analysis encompasses the number of words in a hashtag, the types of characters used, in addition to the position of the hashtag within the post based on Caleffi's (2015) model.

The number of words in the sample hashtags varies significantly, ranging from one to eleven words (see Table 2). The majority of hashtags consist of one, two, or three words. Very few hashtags exceed this number. This is in line with Caleffi's (2015) recommendation that shorter hashtags are more favorable.

Table 2. Number of words in hashtags

Number of words	Example hashtag
# + 1 word	#الزمالك - #برامج - #موضة
# + 2 words	#مذيع الشارع
# + 3 words	#هبة رجل الغراب
# + 4 words	#فرعون راجع يحكم تاني
# + 5 words	#طب والله زمان زمان والله
# + 6 words	#جاي من الاكسيلور فولو يا غالي
# + 7 words	#يا رب يا عالي انصر الأهلي الغالي

# + 11 words	#كومنتاتكم تسعدني اسعدوني لايكات على الصور اللي قبل أسعدوني الله يسعدكم
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Regarding the type of characters used in the hashtags, both alphabetical and numerical characters were found in the sample. Some hashtags only included letters, others were formed only of numbers, while a third group combined both letters and numbers as Table 3 shows. This is against the constraints mentioned by Caleffi’s (2015) above which state that hashtags cannot start with digits or be formed entirely of digits. This observation may suggest that Twitter hashtag conventions are different from those for Instagram, which was also reported by Pasho (2017).

Table 3. *Types of characters used in hashtags*

Type of characters (alpha/numeric)	Examples
Only letters	Most hashtags
Only numerical digits	445# - 122# - 2019#
Letters + numerical digits	#رمضان_2019_#اكسبلور_2020_#100_مليون_صحة

A few posts were found in the sample that were entirely formed only of hashtags; that is, the post did not include any further content. Figure 1 and 2 are examples of these posts.



Figure 1. Post including only hashtags (one)



Figure 2. Post including only hashtags (two)

Unlike English hashtags which abound with abbreviations (Caleffi, 2015), no abbreviations were found in Arabic hashtags (Arabic does not generally favor abbreviations). In all hashtags, words were almost invariably separated by the underscore symbol, unlike English where the underscore is optional (Caleffi, 2015). This is due to the cursive nature of Arabic script that necessitates the

underscore in order to separate letters, which would otherwise render the words in the hashtags unintelligible. This is especially true of letters that can be connected to the following ones (connectors), which constitute the majority of the Arabic alphabet. A few exceptions were found, however, in which two words occurred successively without being separated by the underscore symbol, e.g., #معك\_يامؤمن - #ماشاءالله - #الحمدلله. The reason is probably that these words are usually treated as a single lexical unit.

Hashtags are syntactically flexible. They can occur either as adjuncts to the main content of the post, or be seamlessly embedded in posts. Three main positions of hashtags are distinguished by Zappavigna's (2015):

1. Prefixes: Preceding a post
2. Infixes: Integrated within a post
3. Suffix: Following a post

Very few hashtags in the sample appeared as prefixes. In the few instances that were found, they functioned as disclaimers designating the type of post as indicated by Caleffi (2015), whether as an opinion (Figure 3) or an important announcement (Figure 4).



Figure 3. Prefix hashtag for opinion



Figure 4. Prefix hashtag for important announcement

Similarly, also few hashtags were found in the infix category. These integrate seamlessly into the clausal structure of the post and function as part and parcel of its syntactic structure and semantic content (see Figures 5 and 6). This ability of hashtags to work seamlessly inside social media texts is a novel property for metadata, subverting its traditional role in separating meta-information from primary content. According to Shapp (2014), these are included within the syntactic structure of the post, as opposed to extra-sentential hashtags that are usually attached to the end of a post.

بعد فوز فيلم @AIdaifMovie بجائزة الجمهور في مهرجان تالين، ومشاركاته في مهرجان الفيلم العربي بروتدرا، و #مهرجان\_لطوان لسينما البحر الأبيض المتوسط في #المغرب، ومهرجان منارات للسينما المتوسطية في #تونس يشارك الفيلم في المسابقة الرسمية بمهرجان #مالمو للسينما العربية في #السويد

الآن وحصرياً علي فودافون اطلب #445\* عشان amrdiab تكون أول واحد يسمع أغنية #عمرو دياب الجديدة "تحريك" فقط علي @nayformedia من اليومه الجديد #انا\_غير\_انتاج @vodafoneegypt

Figure 5 Infix hashtags one

Figure 6. Infix hashtags two

Suffix hashtags or extra-sentential ones constitute the majority of the sample. These come after a post and are usually used to define the ‘topic’. Some occurred in the sample as long strings of words that may or may not be directly related to the topic of the post (Figures 7 and 8). These hashtag sequences do not conform to the recommendations of Twitter experts that the preferred number of hashtags in a post should not exceed three, since the excessive use of hashtags may cause confusion (Caleffi, 2015).

الف مبروك يا حلويين yassergalalofficialfans #ابله\_فاهيتا #فاشون\_بلوجر #فاشون\_موضة #فاشون\_سهى\_مو سى #حالات\_وانساب #هي\_وبس #كوميكس #كوميك #جمهورية\_الاهلي #ندا\_زهره #سهر\_الضايغ #البرنيسيه #سعاده #باشا\_م صر #هند\_البوشي #هند\_الخضري #مسرح\_مصر #الصحاب #جم\_جب\_عوض #بوستات #دينا\_حسين #باصي\_لعفيفي #الكومنت\_اا غشيش #الكومنت\_الفصيل #مي\_حلمي #عالم #عالم\_أزياء\_مي\_ع زالدين 🍷🍷🍷 #اكسيلور\_2020 #اكسيلور\_قولوي\_حلو

\_\_\_\_ #الاهلي\_فوق\_الجميع #محمد\_صلاح #زيدان #تريكة\_اسطورة\_عربيه #منتخب\_مصر #ريال\_مدريد #رونالدو #مانشيستر\_يوناييتد #الاهلي\_يمن\_حضر #تابهتي #هلا\_مدريد #جاي\_من\_الاكسيلور\_قولو\_يداعت\_الغالي #الاهلي\_فوق\_الجميع #alahlycity #alahly #الخطيب #نادي\_الاهلي #نادي\_القرن #الاهلي #يلا\_اهلي #الاهلي\_فوق\_الجميع #الاهلي #الاهلي\_legends #alahlyegypt #الاهلي\_المصري #الزعيم #كاس\_العالم #دوري\_ابطال\_اوروپا #ahly #diary\_of\_alahly #zoko74

Figure 7. Multiple suffix hashtag strings (one) (two)

Figure 8. Multiple suffix hashtag strings

To conclude this section, Figure 9 displays the distribution of hashtag positions in the sample. The vast majority of the hashtags (89%) occurred as suffixes following the post, some of which included long strings of multiple hashtags, whether directly related or not related to the topic of the post. Few hashtags in the sample (10%) were infixes occurring within the posts and functioning as part and parcel of its syntactic and semantic content, whereas only 1 % appeared as prefixes which preceded the posts.

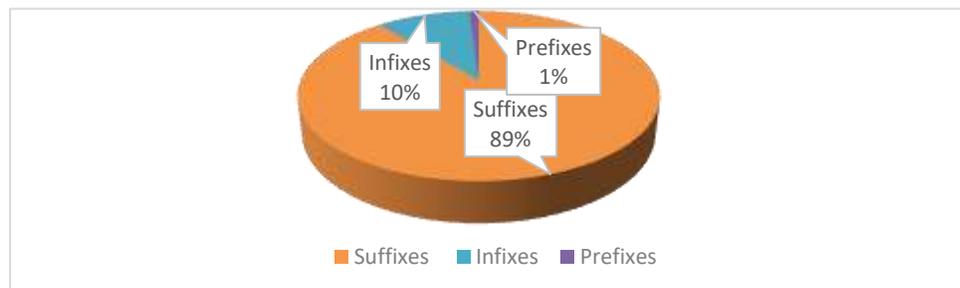


Figure 9. Distribution of hashtag position in the sample

**Pragmatic Functions**

In this section of the analysis, the pragmatic functions of the sample hashtags will be examined. According to Zappavigna's (2015), hashtags can be classified into three main types based on their function:

1. Experiential hashtags: These indicate the topic of a post.
2. Interpersonal hashtags: These facilitate an evaluative comment or stance.
3. Textual hashtags: These play a typographical function for organizing a post.

Even though both Page (2012) and Zappavigna (2015) found that the experiential function was much more frequent than the interpersonal function, it should be noted that these functions are not mutually exclusive. In particular, the textual function is achieved by almost all hashtags in addition to their primary function, whether they are classified as experiential or interpersonal. At a typographic level, the pound symbol acts as a kind of linguistic marker, indicating the beginning of a tag and its special status as metadiscourse. By using the '#' symbol as a discourse marker indicating text division, a textual function is achieved. However, the same hashtag usually fulfils an experiential or interpersonal function simultaneously. That is why it is said that these functions can be enacted simultaneously.

Hence, the hashtags in the sample were classified either as experiential or interpersonal. Hashtags were classified as experiential if they merely indicated the topic of the posts, and as interpersonal if they were found to contribute an additional meaning to the post. To clarify this distinction, the same word, the name of a football club, for instance, can occur in an experiential hashtag that specifies the topic of the post, or in an interpersonal hashtag that makes an evaluative comment as Table 4 shows.

Table 4. *Experiential vs. interpersonal hashtags*

Example experiential hashtag	Example interpersonal hashtag with the same lexical item
#الأهلي	#الأهلي_فوق_الجميع #معاك_يا_أهلي
#الزمالك	#بحبك_يا_زمالك #زمالك_يا_عمري
#مصر	#ابن_مصر

**Experiential Function**

This is the most straightforward use of hashtags to integrate a post into a conversation on a given topic (Wikström, 2014). Several common topic classifications were found in the sample, including general topics, events, places, etc. (see Table 5). According to Zappavigna (2015), the 'aboutness' of hashtags is very sensitive to time. Therefore, it goes without saying that the topics appearing in the experiential hashtags revolved not only around topics related to celebrities' accounts from which the data was collected, but more specifically around current events that were relevant or trending at the time of data collection.

Table 5. Common Classifications for experiential hashtags

Category	Examples
General Topics	#فيلم - #مسلسل - #موضة - #ممثلة - #برامج - #عرب - #أدعية - #إعلانات #مشاهير - #أهداف
Events / Occasions	#مهرجان الفضائيات العربية - #ذكرى وفاة ممدوح عبد العليم - #مهرجان دبي للتسوق #عيد ميلاد مستر بين - #أكتوبر - #رمضان 2019
Places	#المسرح القومي - #الساحل الشمالي - #نايل سيتي - #مصر - #العراق - #بنها #اليكس وست
People	#ليلي_علوي - #أحمد_عز - #سعد_سمير - #وزيرة_الصحة - #مصطفى_حسني #نجيب_محمود - #حسام_البدري
Shows/Channels	#قسمتي_ونصيبك - #صاحبة_السعادة - #شريط_كوكتيل - #ولاد_الغلاية #المحور - #تايم_سيورس - #النهار - #نجوم اف ام

Zappavigna (2015) points out the semantic domain of experiential hashtags may range along a spectrum from broad to specific. Topic tags may be relevant to the public audience in general or only to individual participants and their particular followers (Shapp, 2014). Therefore, the experiential hashtags in the sample ranged from indicating that the topic of the post is about 'media' in general, 'TV', 'programs/shows', to designating a topic as specific as the name of a particular show (Figure 10).

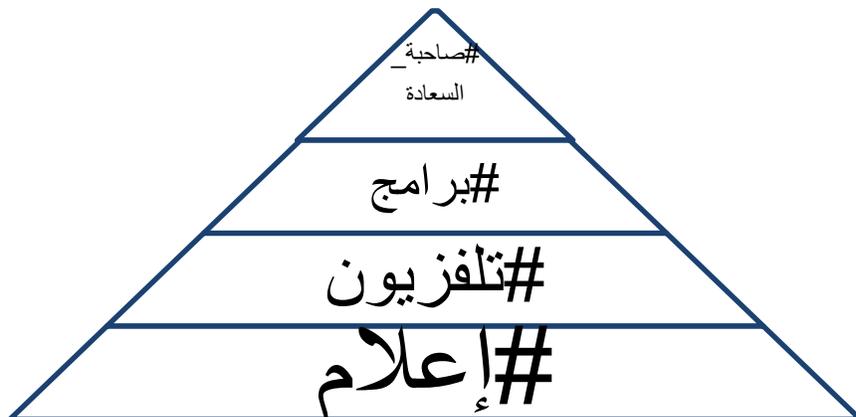


Figure 10. Semantic specificity of experiential hashtags

In terms of experiential meaning, hashtags can take different experiential roles in clauses specified by Halliday and Matthiessen (2004), including participant (noun phrases), process (verb phrases) and circumstances (prepositional and adverbial phrases). Table 6 provides examples from the sample for each role. It was noticed, however, that the participant role was the most frequent.

Table 6. *Experiential roles of hashtags in clauses*

Experiential Role	Examples
Participant (noun phrase)	#براد_الشاي - #أقوال_مأثورة - #الأديب_العالمي
Process (verb phrase)	#تفاعل - #باصي_لعفيفي - #اكسبلور_فولو_يا_حلو
Circumstances (prepositional/ adverbial phrase)	#تقريبا - #في_الجنة_يا_أدهم - #بمنتهى_البساطة_جدا

*Interpersonal Function*

The second main function of hashtags is the interpersonal function. Interpersonal hashtags can often serve the phatic function by including commands inviting the audience to like, share or follow posts (Zappavigna, 2015). Several of these hashtags were found in the sample which abounded with transliterated social media terms. Some of these include interesting ways to persuade followers such as example 8:

1. #اكسبلور - #فولو - #لايك
2. #فولومي
3. #جاي\_من\_الاكسبلور\_فولو
4. #فولو\_يا\_حلو
5. لايك\_جعلك\_الجنة
6. #شوف\_الستوري\_بشدة
7. #لايك\_تعليقاتكم\_تسعدنا\_كثرو\_منها
8. #كومناتكم\_تسعدني\_اسعدوني\_لايكات\_على\_الصور\_اللي\_قبل\_أسعدوني\_الله\_يسعدكم

Some of these hashtags are so specific or so long that they are unlikely to be replicated by other participants (e.g., examples 7 and 8). These idiosyncratic hashtags are usually used for humorous effect. Users create these tags that are unlikely to be used as search terms and which instead seem to function to intensify the command made in the post (Zappavigna, 2015).

Most of the categories of interpersonal hashtags reported by Zappavigna (2015) were found in the sample, with the exception of *questions* and *offers*. It is noted that two further categories were quite abundant in the sample which are *prayers* and *greetings*, suggesting that Egyptian and Arab users of Instagram tend to employ hashtags frequently to achieve these functions, unlike English-speaking users (Table 7).

Table 7. *Functions of interpersonal hashtags*

Function	Examples
<i>Statements</i>	#الصحاب_رزق #الكرة_للجماهير
<i>Commands</i>	#افتحولنا_النتش #شوفلي_شقة_جميلك_يا_سعيد
<i>Questions</i>	-
<i>Offers</i>	-

Prayers	#يا رب يا عالي_انصر_الأهلي_الغالي - #اللهم بارك #الله يرحمك
Greetings	#صباح_الخير_عليكم #مساء_الياسمين #جمعة_مباركة #أحلى_صباح_على_أحلى_أصدقاء #كل_سنة_وانت_طيب #مبروك_جمهور_الزمالك_العظيم

In fact, hashtags including religious references were also quite frequent in the sample, a category not previously mentioned in the literature. The cultural element was also apparent in hashtags that were composed of famous sayings or proverbs as displayed in Table 8. Another category of interpersonal hashtags that was obvious in the data is that of campaigns or slogans. These mainly occurred in the first data set and were mostly used to urge for the support of a certain player or advocate a given stance, e.g., reopening a team's football field. The only slogan hashtag appearing in the second data sets was #تحيا\_مصر "long live Egypt".

Table 8. Culture-specific hashtags

Category	Examples
Religious hashtags	#ما شاء الله - #الحمد لله - #الشكر لله #اللهم بارك - #اللهم فرحة #يا رب - #توكلنا على الله #جمعة مباركة
Sayings / Proverbs	#ع الحلوة والمرة #الصحاب رزق #أستاذ ورئيس قسم #ضل راجل #من جاور السعيد يسعد
Campaigns / Slogans	#افتحولنا التنش #ادعم مؤمن زكريا #الشيخ مش للإعارة ولا للبيع #الشيخ لازم يكون أساسي #معاك يا مؤمن #تريكة خط أحمر #عبدالله ما ينفعش دكة #تحيا مصر

To conclude this section, Figure 11 shows a comparison between the number of hashtags and their functions in the two data sets. The first data set (sportsmen's posts) was found to include more hashtags (332) compared to the second data set (posts by other celebrities) (293), with an average number of hashtags per post 4.9 and 3.9 respectively. Moreover, the first dataset also displayed a much larger percentage of interpersonal hashtags (approximately 28%) compared to the second dataset (only 6%).

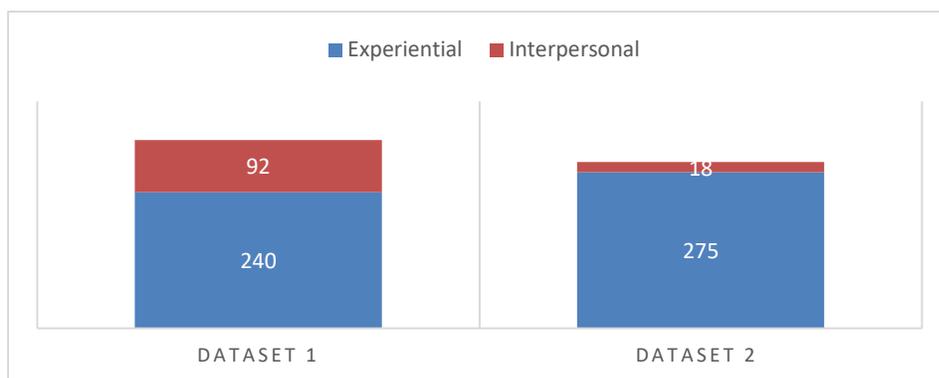


Figure 11. Comparing hashtag functions in the two datasets

### Findings and Discussion

The above analysis has shed light on the characteristics of hashtags as newly emerging linguistic items, both at the morpho-syntactic and pragmatic levels. The Arabic hashtags examined display both differences and similarities from English hashtags explicated in the literature.

First, the morpho-syntactic analysis has revealed that in line with previous findings, most hashtags were composed of three words maximum, apart from a few exceptions where they reached up till 11 words in some rare cases. However, several posts included long strings of numerous hashtags in a row, which is against conventional practices for the maximum number of hashtags per post, especially that some were not topically related.

Both letters and numerical characters appeared in hashtags, whereas no abbreviations were found in Arabic hashtags, as opposed to English ones. Furthermore, whereas the underscore symbol is usually optional for the separation of words in English hashtags, almost all Arabic words in hashtags were separated by an underscore due to the cursive nature of Arabic script. A few posts were entirely composed of hashtags without further content. Most of the hashtags in the sample occurred as suffixes following the posts, fewer as infixes integrated within the posts, whereas prefixes were quite rare.

The hashtags examined were found to display all three metafunctions discussed by Zappavigna (2015). Whereas the textual function is simultaneously enacted by almost all hashtags, most of the hashtags in the sample displayed an experiential function. These experiential hashtags displayed much variation in their semantic specificity ranging from broad to specific at both ends of the spectrum. They also played different roles in clauses, including participant, process and circumstances, but with the majority occurring as participants.

By including the names of programs, songs, movies, events, etc. they are engaged in, celebrities use experiential hashtags as a sort of marketing strategy, which confirms the findings of Page (2012). It may thus be posited that celebrities make use of hashtags to persuade their audience to watch a show or purchase a product in order to promote their status in the offline world.

The percentage of experiential hashtags in the first data set was 72%, compared to an overwhelming majority of 94% in the second sample. Whereas the former figure is comparable to Tamara's (2011) and Shapp's (2014) findings that topic tags usually account for 71% and 75% of hashtags respectively, the results for the second data set reveal that it lags behind where the interpersonal function is concerned.

Interpersonal hashtags, on the other hand, were found to serve two main sub-functions, namely statements and commands. Although no questions or offers were found in the sample, this does not eliminate the possibility of these two functions occurring in other Arabic hashtags. Interestingly, however, two new functions were quite frequent in the sample that were not previously discussed in the literature, namely prayers and greetings. The cultural element was also very evident in religious hashtags in general, as well as in famous sayings and proverbs. It may thus be suggested that, Egyptian and Arab Instagram users tend to use hashtags for religious purposes as well as for socializing, which may not be displayed by English-speaking users. Sportsmen also made use of several hashtags to advocate campaigns and promote slogans, whereas this was quite a rare practice in celebrities' posts.

The distribution of hashtags in the two datasets suggests that sportsmen not only tend to use more hashtags in their posts, but that they also use more interpersonal hashtags compared to other celebrities, including actors, singers and presenters. With the textual function enacted simultaneously by all hashtags through discourse marking, it should, however, be noted that it is not always a straightforward task to distinguish experiential hashtags from interpersonal ones. Sometimes functions overlap, and there may be no clear-cut distinction in some cases.

## 7. Conclusion

Though initially devised to classify messages and facilitate their searchability, hashtags have developed a range of linguistic functions, offering new ways of meaning-making. Due to their wide proliferation on different social media networks, the present study has attempted to investigate the morpho-syntactic characteristics as well as the pragmatic functions of Arabic hashtags using a sample of Instagram posts.

The findings highlight the fact that hashtags can serve a variety of experiential and interpersonal functions. Mostly serving the experiential function and occurring as suffixes, Arabic hashtags may not yet display the full range of functions achieved by English hashtags. This may be suggested by the absence of abbreviations, offers and questions, as well as the lack of interpersonal hashtags in some contexts. This may be either owing to the recency of their emergence or to intrinsic characteristics of the Arabic language. It may also be relevant to mention in this respect that whereas hashtags have infiltrated into everyday spoken English language, it is not yet a common practice to use spoken hashtags in Arabic.

It is thus suggested that future studies delve deeper into the unexplored aspects of these newly emerging linguistic items. More research would be needed to determine why someone would choose to add a comment using a hashtag rather than spell it out as a normal sentence, perhaps using interviews to explore user motivations. Further research is also recommended on

hashtags on other social media platforms, using larger samples in order to give a more comprehensive image of this phenomenon. It would also be useful to investigate hashtags on specific topics with the aim of revealing user attitudes and conducting more extensive examination of hashtags as technologically discursive tools.

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#### References

- Baghirov, F., Zhang, Y., Hashim, N., & Murphy, J. (2016). Gender and Instagram hashtags: A study of #Malaysianfood. Retrieved from [http://agrilife.org/ertr/files/2016/01/ENTER2016\\_submission\\_118\\_.pdf](http://agrilife.org/ertr/files/2016/01/ENTER2016_submission_118_.pdf)
- Biddle, S. (2011). How the hashtag is ruining the English language. *Gizmodo*. Retrieved from <https://gizmodo.com/how-the-hashtag-is-ruining-the-english-language-update-5869538>
- Caleffi, P. (2015). The 'hashtag': A new word or a new rule? *Skase Journal of Theoretical Linguistics*. 12(2). 46-69. Retrieved from [http://www.skase.sk/Volumes/JTL28/pdf\\_doc/05.pdf](http://www.skase.sk/Volumes/JTL28/pdf_doc/05.pdf)
- Evans, A. (2016). Stance and identity in Twitter hashtags. *Language @ Internet*, 13(1). Retrieved from <https://bit.ly/2MA3d8N>
- Goodwin, E. (2015, February 26). *How hashtags evolved and changed the way we communicate*. Uloop College. Retrieved from [shorturl.at/xFHV7](http://shorturl.at/xFHV7)
- Halliday, M. A. K. (1978). *Language as social semiotic: The social interpretation of language and meaning*. London: Edward Arnold.
- Halliday, M. A. K. (1994). *An introduction to functional grammar* (2<sup>nd</sup> ed.). London: Edward Arnold.
- Halliday, M. A. K., & Matthiessen, C. M. I. M. (2004). *An introduction to functional grammar* (3<sup>rd</sup> ed.). London: Edward Arnold.
- Iqbal, M. (2020). *Instagram Revenue and Usage Statistics (2020)*. Retrieved from [shorturl.at/eDMTU](http://shorturl.at/eDMTU)
- Lin, H. (2017). Hashtag on social platforms: how do hashtag change the way we talk? *Hsiu-Man Lin*. Retrieved from [shorturl.at/CKXY5](http://shorturl.at/CKXY5)
- Maity, S. K., Ghuku, B., Upmanyu, A. & Mukherjee, A. (2015). "Out of vocabulary words decrease, running texts prevail and hashtags coalesce: Twitter as an evolving sociolinguistic system," *49th Hawaii International Conference on System Sciences (HICSS)*, Koloa, HI, pp. 1681-1690, doi: 10.1109/HICSS.2016.212.
- Page, R. (2012). The linguistics of self-branding and micro-celebrity in Twitter: The role of hashtags. *Discourse & Communication* 6(2). 181 –201. DOI: 10.1177/1750481312437441
- Pasho, J. (2017). *#INSERTDIETHERE: Tracing the techno-linguistic associations of dietary hashtags on Instagram*. (Unpublished Master's Thesis). Ottawa: Carlton University. Retrieved from [shorturl.at/rEKV0](http://shorturl.at/rEKV0)

- Scott, K. (2018). "Hashtags work everywhere": The pragmatic functions of spoken hashtags. *Discourse, Context and Media*, 22, 57-64. <http://dx.doi.org/10.1016/j.dcm.2017.07.002>
- Shapp, A. (2014). Variation in the use of Twitter hashtags. Retrieved from [https://www.nyu.edu/projects/shapp/Shapp\\_QP2\\_Hashtags\\_Final.pdf](https://www.nyu.edu/projects/shapp/Shapp_QP2_Hashtags_Final.pdf)
- Tamara A. S. (2011). What the hashtag? *Information, Communication & Society*, 14(6), 872-895. DOI: 10.1080/1369118X.2011.554572
- Wikström, P. (2014). #srynotfunny: Communicative functions of hashtags on Twitter. *SKY Journal of Linguistics*, 27, 127–152. <http://www.linguistics.fi/julkaisut/SKY2014/Wikstrom.pdf>
- Zappavigna, M. (2011). Ambient affiliation: A linguistic perspective on Twitter. *New Media & Society* 13(5). 788–806. DOI: 10.1177/1461444810385097
- Zappavigna, M., (2015). Searchable talk: the linguistic function of hashtags. *Social Semiotics*, 25(3), 274-291. DOI: 10.1080/10350330.2014.996948
- Zimmer, B. (2011, September 23). *The art of the self-mocking hashtag*. Word routes: Exploring the pathways of our lexicon. Retrieved from [shorturl.at/kuDV9](http://shorturl.at/kuDV9)