

# Exploring Metaphorical Cancers in Arabic

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**Abstract**—In Arabic, the metaphoricity of cancer disease has received some research, particularly from the perspective of a target domain. However, cancer from the perspective of a source domain awaits systematic analysis. To fill this gap, this paper has the following aims: 1) To explore the types of phenomena that correspond to cancer as a metaphor in Arabic from the perspective a source domain; and 2) To discuss the factors that might influence and/or sustain the use of cancer as a metaphor from the perspective of a source domain and its implications in Arabic. The analysis and findings of two Arabic corpora (King Abdulaziz City for Science and Technology Arabic Corpus and the Arabic corpus of Brigham Young University) showed the emergence of ten topic areas and themes that correspond to cancer as a metaphor in Arabic from the perspective a source domain, ordered from the most to least frequent: ISRAEL, CORRUPTION, VIOLENCE/TERRORISM/CONFLICT, PEOPLE/GROUP(S) OF PEOPLE, IDEOLOGY/RELIGION/BELIEF, COGNITION/EMOTION/SENSATION, ARCHITECTURE/ENVIRONMENT, FINANCE/ECONOMY/POVERTY, UNCLASSIFIED, and PLACE/LOCATION/COUNTRY. The following factors might impact and/or perpetuate the use of this metaphor in the Arabic discourse: 1) the negative correspondences between cancer disease and the described phenomena as metaphorical cancers grounded in 2) the embodied and real-world experiences and shared knowledge and understandings of cancer disease, and 3) the socio-political unrest in the Middle East region and its consequences of financial pressures, health challenges, and humanitarian crises.

**Index Terms**—cancer, metaphor, Arabic, discourse, corpora

## I. INTRODUCTION

In Arabic, there is an increasing interest to study metaphors and point out their implications utilizing the recently developed theoretical frameworks and the most up-to-date methodologies (e.g., Almaghlouth & Alotaibi, 2024; Mobarki & Alzahrani, 2024). Health and illness metaphors have received some scholarly attention in Arabic (Mobarki & Alzahrani, 2024), and metaphors of cancer disease as well (Abaalalaa & Ibrahim, 2022; Almegewly & Alsoraihi, 2022). However, the focus was primarily on cancer metaphors from the perspective of a target domain (e.g., CANCER IS WAR/JOURNEY; Abaalalaa & Ibrahim, 2022). As such, investigating cancer as a metaphor in Arabic from the perspective of a source domain (i.e., SOMETHING IS CANCER) awaits systematic analysis using data that represent actual use of language. This paper is an attempt to address this gap guided by the following research aims:

- To explore the types of phenomena (i.e., topic areas and themes) that correspond to cancer as a metaphor in Arabic from the perspective a source domain (i.e., SOMETHING IS CANCER);
- To discuss the factors that might influence and/or sustain the use of cancer as a metaphor from the perspective of a source domain (i.e., SOMETHING IS CANCER) and its implications in Arabic.

The paper addresses the following research questions:

- What are the types of phenomena (i.e., topic areas and themes) that correspond to cancer as a metaphor in Arabic from the perspective of a source domain (i.e., SOMETHING IS CANCER)?
- What are the factors that might influence and/or sustain the use of cancer as a metaphor from the perspective of a source domain (i.e., SOMETHING IS CANCER) and its implications in Arabic?

The next section provides a background of research on metaphor in discourse and cognition. Section 3 illustrates the data and methods utilized in this research. The fourth section presents the analysis and findings. Section 5 is a discussion and section 6 concludes the paper.

## II. BACKGROUND

In the past three decades, research on metaphor has expanded to spark several theoretical and empirical developments. These theoretical and empirical developments have advanced our understanding of metaphors and their significance and functions in cognition, communication, and discourse.

With the publication of their seminal book *Metaphors We Live By*, Lakoff and Johnson (1980) established an important movement in the research tradition and scholarship of metaphor. Their publication initiated the so-called Conceptual Metaphor Theory (CMT). Within this paradigm, typical patterns of metaphorical linguistic items in language (e.g., the expression ‘go places’ in ‘she’ll go places in life’) are seen as reflections and therefore evidence of typical patterns of metaphorical thinking or conceptual metaphors (e.g., LIFE IS A JOURNEY). Conceptual metaphors are comprised of a set of conceptual correspondences or systematic mappings between a source domain (e.g., JOURNEY) and a target domain (e.g., LIFE). Source domains are more concrete and tangible whereas target domains

are more complex and abstract. CMT, however, received critique (e.g., Deignan et al., 2013). Therefore, some scholars (e.g., Kövecses, 2015, 2020) attempted to develop CMT while others (e.g., Cameron et al., 2009; Steen, 2017) proposed relevant theoretical frameworks. Investigations of metaphors under the lens of cognitive science and discourse analysis are currently remarkable.

From the side of cognitively-oriented research, several experimental studies (Hendricks et al., 2018; Thibodeau & Boroditsky, 2011; Thibodeau et al., 2017) highlighted the impact of metaphors on people's ideas, understanding, attitudes, reasoning, and evaluations. More precisely, such studies pointed out that metaphorical frames produce more effectiveness when they include the following characteristics: 1) source domains are more image-rich, easily described, and easy to understand (i.e., tangible and concrete), 2) target domains are more complex and abstract, and 3) systematic mappings between source domains and target domains are clearly delineated and relevant.

From the side of discourse analysis research, investigations are featured with particular attention to the usage and frequencies of metaphors and metaphorical frames in various types of discourse, using several frameworks and methods (see for example, Deignan, 2005; Cameron et al., 2009; Steen et al., 2010). Such investigations underscored the discursive significance and functions of metaphors related to ideas, attitudes, evaluations, persuasion, and ideologies. For instance, Potts and Semino (2019) investigated cancer as a metaphor in contemporary English utilizing methods of corpus linguistics and discourse analysis on both corpora: the Corpus of Contemporary English (COCA) and the Oxford English Corpus (OEC). Potts and Semino (2019) highlighted the following: 1) the persistence and wide applicability of using cancer as a metaphor, and 2) the use of this metaphor to motivate negative assessments of uncontrollability, danger, and damage. These assessments induce legitimizing and practicing severe actions as solutions. Such assessments and actions implicate negative emotional reactions of, for example, frustration and hopelessness. In the light of this, it is apparent that disease/illness metaphors, particularly those of cancer, have received considerable scholarly treatments.

### III. DATA AND METHODS

#### Data and Corpora

Two Arabic corpora offered the data for this study: 1) King Abdulaziz City for Science and Technology Arabic Corpus (KACSTAC), and 2) the Arabic corpus (or arabiCorpus) of Brigham Young University. KACSTAC is a promising project that aims to enhance Arabic content and knowledge by creating a rich Arabic corpus through strategic effort. KACSTAC has a word count of almost one billion. Numerous factors have been taken into account in its creation, including genre, text type, geography, and chronology/history. KACSTAC does not currently include spoken materials; it only includes written materials in their entirety. Numerous corpus analysis techniques are available through KACSTAC, such as frequency distribution, concordance, collocation, and general and specialized searches (e.g., by location/country, time period, topic, field, or text type/genre).

The College of Humanities at Brigham Young University initiated and is maintaining arabiCorpus. The total number of words in arabiCorpus is 173,600,000. Five main categories or genres constitute arabiCorpus: Newspapers, modern literature, nonfiction, Egyptian colloquial, and premodern. arabiCorpus provides several corpus analysis tools such as: general search, specialized search (e.g., by text type/genre and part of speech), collocates, concordance, and frequency distributions. The corpus analysis tools in arabiCorpus are limited; however, they served the research aims and questions with which this study was concerned.

#### Analytical methods and procedures

The analytical methods and procedures of this study were informed by the methodology of Potts and Semino (2019). Initially, the author collected and documented a number of forms of the Arabic word سرطان *saraṭan*, which were found frequently used in the corpora. Table 1 presents a set of the identified forms used in the corpora.

TABLE 1  
CANCER DISEASE/ILLNESS EXPRESSIONS FOUND IN THE CORPORA

Arabic form/word	Transliteration	Meaning/Translation
سرطان/السرطان	<i>saraṭan/?assaraṭan</i>	Cancer disease/illness expressions
مسرطن/مسرطن	<i>musarṭan/musarṭin</i>	
مسرطنة/مسرطنة	<i>musarṭanah/musarṭinah</i>	
سرطن/يترسطن	<i>sarṭan/yatasarṭan</i>	
سرطين/سرطانات	<i>saraṭiin/saraṭanat</i>	
سرطانة	<i>saraṭanah</i>	
سرطانية/السرطانية	<i>saraṭaniyah/?lsaraṭaniyah</i>	

A total number of 46228 instances was the overall outcome of the initial and basic search for the forms of the Arabic word سرطان *saraṭan* in both corpora. Then, the author searched all the instances discovered for each form of the Arabic word سرطان *saraṭan* in both corpora in order to determine the range of metaphoricity in all of the occurrences. The search constraints and parameters of both corpora (e.g., location/country, times period, topic, field, or text type/genre) were disregarded as the main aim of this study is to explore the topic areas and themes that can be metaphorically associated with forms of the Arabic word سرطان *saraṭan*. In this stage, the process benefited from the Pragglejaz Group's metaphor identification procedure (MIP: Pragglejaz Group, 2007) and Steen et al.'s (2010) method for identifying linguistic metaphors which was developed at Vrije University (MIPVU).

The methods and procedures continued with investigating all the collected and documented form of the Arabic word سرطان *saraṭan* in the corpora. Only two forms appeared the most productive for metaphorical instances: سرطان *saraṭan* and السرطان *ṣassarāṭan*. The other forms have not produced any metaphorical tokens. Note that by searching the forms سرطان *saraṭan* and السرطان *ṣassarāṭan* in the corpora (i.e., KACSTAC and arabiCorpus) and in معجم المعاني *Muḥjam Ṣalmaṣaanii* 'the Dictionary of Meanings,' both forms showed the following meanings in Arabic: 1) Cancer disease/illness, 2) crab/marine creature, 3) astrological sign, and 4) tropic of cancer. As the main aim of this study was to investigate the types of phenomena that can metaphorically be associated with cancer disease/illness in Arabic, metaphoric expressions of cancer disease/illness were identified and considered for analysis; other forms and meanings were ignored in this process of analysis.

During the data analysis, a group of topic areas and themes were developed using a bottom-up approach while noticing and observing the systematic patterns of the metaphoric expressions. The metaphoric expressions of cancer disease/illness were classified semantically by putting them under one of the topic areas and themes which evolved from the data and the process of data analysis. Duplicate metaphoric usage was identified and counted so as to determine the final frequency of metaphoric expressions informing the analysis and findings. The researcher had many consultation sessions with native speakers of Arabic holding PhDs in discourse analysis, rhetoric, and critical studies in order to gain inter-raters' perspectives, which would assure consistency upon the identification, coding, and classification of metaphoric expressions, topic areas, and themes.

#### IV. ANALYSIS AND FINDINGS

The analytical methods and procedures led to the emergence and evolvement of ten topic areas and themes which can be associated with the identified metaphorical instances of the Arabic سرطان *saraṭan* and السرطان *ṣassarāṭan* 'cancer disease' (see Table 2). Table 2 presents the total frequency and percentage of the Arabic سرطان *saraṭan* and السرطان *ṣassarāṭan* 'cancer disease' metaphoric expressions (Total). The table also shows the frequency and percentage of duplicate tokens (Duplicates) and the final frequency and percentage for metaphoric expressions included in the findings and analysis after removing the duplicates (De-duped). The topic areas and themes are ordered according to the usage from the most to least frequent.

TABLE 2  
FREQUENCY AND PERCENTAGE OF TOPIC AREAS/THEMES OF METAPHORICAL CANCERS IN ARABIC

Topic area/theme	Total	Duplicates	De-duped
ISRAEL	274 (25.84%)	54 (33.12%)	220 (24.52%)
CORRUPTION	174 (16.41%)	19 (11.65%)	155 (17.27%)
VIOLENCE/TERRORISM/CONFLICT	152 (14.33%)	20 (12.26%)	132 (14.71%)
PEOPLE/GROUP(S) OF PEOPLE	138 (13%)	15 (9.20%)	123 (13.71%)
IDEOLOGY/RELIGION/BELIEF	113 (10.66%)	32 (19.63%)	81 (9%)
COGNITION/EMOTION/SENSATION	77 (7.26%)	9 (5.52%)	68 (7.58%)
ARCHITECTURE/ENVIRONMENT	53 (5%)	11 (6.74%)	42 (4.68%)
FINANCE/ECONOMY/POVERTY	33 (3.11%)	3 (1.84%)	30 (3.34%)
UNCLASSIFIED	27 (2.54%)	0	27 (3%)
PLACE/COUNTRY/LOCATION	19 (1.78%)	0	19 (2.11%)
Total	1060 (100%)	163 (100%)	897 (100%)

The following subsections provide a detailed demonstration of the topic areas and themes that correspond to metaphorical cancers in Arabic. Examples are organized as the following: The original Arabic text is presented in the

first line; a transliteration of the original Arabic text is shown in the second line; glossings of the transliteration are reflected in the third line; a translation is presented in the fourth line.

## ISRAEL

ISRAEL came on the top as the most frequent topic area and theme which corresponds to cancer metaphors in Arabic. The process of analysis and classification showed that a variety of Israel-relevant linguistic expressions revolved around several words or phrase forms of the following primary key words: اسرائيل 'Israel', الاحتلال 'occupation', الاستيطان 'settlement(s)', الصهيونية/الصهيوني 'zionism/zionist(ic)', and اليهودية/اليهود 'judaism/jewish/jews'. These keywords carried the following references: 1) the reference to Israel as a country or political entity (e.g., Israel), 2) the reference to Israeli activities and actions (e.g., occupation and settlement(s)), and 3) the reference to descriptions of relevance to Israel or Israeli people (e.g., zionism/zionist(ic), judaism/jewish/jews). Examples (1) and (2) are illustrative:

## Example (1)

إسرائيل السرطان الخبيث في المنطقة

*Israel ṭassarātūn ṭalxabith fi ṭalmantiqah*

*Israel the.cancer the.malignant in the.region*

*Israel* is malignant *cancer* in the region.

## Example (2)

سرطان الاستيطان الصهيوني يلتهم مدينة القدس

*saraṭan ṭalṭisṭiṭān ṭaṣṣuhyuni yaltahim madinat ṭalquds*

*cancer the.settlement the.zionist eat up city Jerusalem*

The *cancer* of *zionist settlement* is eating up Jerusalem city.

## CORRUPTION

CORRUPTION is the second frequently used topic area and theme which is associated with metaphorical cancer. The analytical procedures revealed the recurrent use of the Arabic word الفساد 'the corruption' in various contexts and texts containing metaphorical cancer. In a number of cases, some specifying terms accompany the word الفساد 'the corruption' to indicate the type of corruption such as: اجتماعي 'social,' إداري 'administrative,' حكومي 'governmental,' أخلاقي 'moral,' and سياسي 'political.' Metaphorical cancer is also used in the contexts of expressions referring to the activities and actions related to corruption; such expressions are employed in many occasions and they include, but not limited to, the following: الرشوة 'bribery,' الغش 'cheating,' التزوير 'forgery,' and الواسطة 'nepotism.' Examples (3) and (4) are representative:

## Example (3)

سرطان الفساد ينهش مؤسساتنا التعليمية

*saraṭan ṭalfasad yanhaṣ muṭassasatina ṭattaṣlimiyah*

*cancer the.corruption tearing institutions.our educational*

The *cancer* of *corruption* is tearing our educational institutions.

## Example (4)

الواسطة سرطان يهدد المجتمع

*ṭalwasṭah saraṭan yuhaddid ṭalmujtamaṣ*

*the.nepotism cancer threatening the.society*

*Nepotism* is *cancer* threatening society.

## VIOLENCE/TERRORISM/CONFLICT

VIOLENCE/TERRORISM/CONFLICT is another topic area and theme which contained linguistic expressions; these expressions were closely linked to cancer metaphor(s) in the data. Nearly, all instances are related to the actions and activities of violence, terrorism, conflicts, military, revolution(s), and regional security in the Middle East (see also Potts & Semino, 2019, p. 91). Examples (5) and (6) are elucidative.

## Example (5)

الإرهاب تحول إلى سرطان عالمي

*ṭalṭirhab taḥawwal ṭila saraṭan ṣalami*

*the.terrorism turned into cancer international*

*Terrorism* turned into international *cancer*.

## Example (6)

الحرب سرطان الحضارة الغربية

*ṭalḥarb saraṭan ṭalḥazarah ṭalḡarbiyyah*

*the.war cancer the.civilization the.Western*

*War* is the *cancer* of Western civilization.

## PEOPLE/GROUP(S) OF PEOPLE

This category involves individuals or group(s) of individuals with specific negative traits, behaviors, and/or influence. Concerning individuals, both *Saddam Hussein and his system* and *Muammar al-Gaddafi* sit on the top of the frequently used expressions in the contexts of metaphorical cancers. Other individuals appear, however, with very low frequencies such as: *Osama Bin Laden*, *Barazani*, and *al-Zawahiri*.

Concerning group(s) of individuals or people, *al-Qaeda*, *Ba'ath Party*, and *Hezbollah* showed prominent patterns in the data. Other references were identified with varied frequencies such as: *Houthis*, *Kharijites*, *secularists*, *Kurds*, *Shishanis*, *betrayers*, *socialists*, and *looters*. The instances in (7) and (8) are exemplary.

Example (7)

من يخلص ليبيا من سرطان القذافي؟  
man yuxallis Libya min *saraṭan al-Gaddafi*  
who free Libya from *cancer al-Gaddafi*  
Who frees Libya from *al-Gaddafi cancer*?

Example (8)

مقاتي يصف حزب الله بالسرطان  
Mikati yaṣif *Hezbollah biṣsaratan*  
Mikati describe *Hezbollah as.cancer*  
Mikati describes *Hezbollah as cancer*.  
IDEOLOGY/RELIGION/BELIEF

Metaphorical cancer is also linked with linguistic expressions that capture human thought and the general systems of beliefs. Such human thought and systems of beliefs are seen in terms of ideologies, religions, and other types of beliefs which are shared and practiced by considerable groups of people found in the world. الطائفية 'sectarianism' is the most frequently used in the data. The appearance of other items is patterned and noticeable, however, with relative frequencies: الشيوعية 'secularism', العلمانية 'nazism', النازية 'marxism', الماركسية 'freemasonry', الماسونية 'sufism', الصوفية 'communism', البيروقراطية 'democracy', الديمقراطية 'socialism', الاشتراكية 'capitalism', الرأسمالية 'liberalism', الليبرالية 'bureaucracy', الديكتاتورية 'dictatorship', العنصرية 'racism', التمييز 'discrimination', and الحداثة 'modernism.' The following cases (9) and (10) are typical.

Example (9)

الطائفية تنتشر في البلاد مثل مرض السرطان  
*ṭaṭṭaṭiyyah* tantaṣir fi ṭalbilad *mithl* maraḏ *ṣssraṭan*  
*the.sectarianism* spreading in the.country *like* disease *cancer*  
*Sectarianism* is spreading in the country *like cancer* disease.

Example (10)

حذار من سرطان الديمقراطية  
ḥaḏar min *saraṭan ṭddimuqraṭiyyah*  
beware from *cancer the.democracy*  
Beware the *democracy cancer*.

COGNITION/EMOTION/SENSATION

A group of expressions are referenced with metaphorical cancer under this category. Emotions, specifically negative ones, presented a significant pattern and frequency in the data. This pattern of emotions involved typical affective states such as: الكراهية 'hate' and الغرور 'vanity.' Other expressions pertain to the type of affective dispositions: اليأس 'hopelessness', الإحباط 'frustration', تأنيب الضمير/الندم 'remorse/regret', الشك 'doubt/distrust', الكبت 'repression', القهر 'oppression', and تضخم الذات 'self-inflation.' Additionally, the data contained expressions related to cognitive states and processes: الغفلة 'heedlessness', التخلف 'retardation', الجهل 'ignorance', الأمية 'illiteracy', and النسيان 'forgetting.' Examples (11) and (12) show metaphorical cancer expressions associated with COGNITION/EMOTION/SENSATION.

Example (11)

سرطان الإحباط يشكل مقارباً خطيراً  
*saraṭan ṭalṭiḥbaṭ* yuṣakkil muqaraban xaṭiran  
*cancer frustration* forms approach dangerous  
*Frustration cancer* forms a dangerous approach.

Example (12)

الشك هو السرطان القاتل لكل علاقة  
*ṭaṣṣhak* huwa *ṭsssraṭan ṭalqatil* likul ṣalaqah  
*distrust* is *cancer* killing for every relationship  
*Distrust* is the killing *cancer* for every relationship.

ARCHITECTURE/ENVIRONMENT

The interrelationships between the aspects of architecture and environment prompted classifying those under one category here. For example, metaphorical uses of cancer are employed to describe the environmental issue of التلوث 'pollution.' Such an environmental issue might be an outcome of architecture issues such as انتشار المعامل المهنية 'the spread of professional laboratories (or industrial facilities/factories) and/or التمدد العمراني/الصناعي 'urban/industrial expansion.' Even both the later instances of architecture issues are described in terms of metaphorical cancer. التآكل 'corrosion' is another example of an environmental issue which could be related the architecture issue of انتشار مخالفات البناء 'the spread of architecture violations.' Of course, architecture violations should include actions and activities to manipulate architecture requirements which lead to the consequence of corrosion. Expressions indicating architecture

outweigh the ones referring to environmental issues. (13) and (14) are examples of metaphorical cancer expressions that correspond with ARCHITECTURE/ENVIRONMENT.

Example (13)

سرطان التلوث يمكن أن يهدد الجميع  
*saraṭan ṭattalawuth yumkin ṭan yuhaddid ṭaljamiṣ*  
*cancer pollution* could to threaten everyone  
 The *cancer* of *pollution* could threaten everyone.

Example (14)

الانتشار السرطاني لمخالفات البناء في معظم المدن والبلدان  
*ṭalṭintišar ṭassarṭani limuxalafat ṭalbinaṭ fi muṣzam ṭalmudun wa ṭalbuldan*  
 the.spread *the.cancerous for.violations the.architecture* in most the.cities and the.countries  
 The *cancerous* spread of *architecture violations* in most cities and countries.

FINANCE/ECONOMY/POVERTY

Cases involving references to الفقر 'poverty,' البطالة 'unemployment,' and الدين 'debt' as metaphorical cancers are the least frequent. Meanwhile, linguistic items referring to the problems related to financial processes and economic systems are the most frequent: الأزمة/الخسارة/الانهيار/الإفلاس الاقتصادية 'financial crisis/loss/collapse/bankruptcy' and التضخم 'inflation.' In addition, the corpora involved linguistic items describing الكثافة/النمو/التزايد السكاني 'population density/growth/increase.' The following instances (15) and (16) are demonstrative.

Example (15)

فسيستحيل الفقر بمتتالياته إلى سرطان مجتمعي  
*fasayastahil ṭalfaqr bimumtaliyatih ṭila saraṭan mujtamaṣi*  
 so.FUT.turn *the.poverty* with.its.consequences into *cancer* social  
 so *poverty* with its consequences will turn into social *cancer*.

Example (16)

أدت إلى انتشار سرطان التضخم حتى في السلع  
*ṭaddat ṭila ntiṣar saraṭan ṭatttaṣaxxum ḥatta fi ssilaṣ*  
 it.led to spread *cancer inflation* even in the.commodities  
 It led to the spread of *inflation cancer* even in commodities.

UNCLASSIFIED

This category includes instances of metaphorical cancer expressions which could not be associated and classified with any of the topic areas and themes. The absence of their references in the texts, concordance lines, and contexts is the primary reason for classifying them here. Such an absence of references in the data is caused by corpora limitations as the corpora include incomplete and truncated texts. The following examples (17) and (18) are illustrative.

Example (17)

...سرطان يخر في اقتصاد الوطن...  
*saraṭan yanxar fi ṭiqtiṣad ṭalwaṭan*  
*cancer* rotting in economy the.country  
 ...*cancer* rotting the country's economy...

Example (18)

...ذلك الكائن النجس داخلها وكأنه سرطان...  
*ḍalik ṭalkaṭin ṭannajis daxilaha wa kaṭannahu saraṭan*  
 that object dirty inside.it and *like.it cancer*  
 ...that dirty object inside it and it is *like cancer*...

PLACE/LOCATION/COUNTRY

Instances of metaphorical cancer connected to a place, location, or country provide the least frequent patterns in the data. References to أمريكا 'America/USA' and إيران/طهران 'Iran/Tehran' are regularly found in the data with only one instance referring to الفلوجة 'al-Fallujah.' The following examples (19) and (20) are demonstrative.

Example (19)

وصف النيجيري أمريكا بأنها سرطان  
*waṣafa ṭannijiri America biṭannaha saraṭan*  
 describe the.Nigiri *America* that.it.is *cancer*  
 The Nigiri described *America* that it is a *cancer*.

Example (20)

ووصف الجنرال توماس ميتز الفلوجة بأنها سرطان  
*wa waṣafa ṭaljiniral Thomas Mitz al-Fallujah biṭannaha saraṭan*  
 and describe the.general Thomas Mitz *al-Fallujah* that.it.is *cancer*  
 The general Thomas Mitz described *al-Fallujah* that it is a *cancer*.

## V. DISCUSSION

The analysis and findings have shown so far the regular use of metaphorical سرطان *saratan* ‘cancer’ and السرطان *ʔassaratan* ‘the cancer’ in Arabic. This metaphoricity is systematically linked with the following most to least frequent topic areas and themes as evoked and evolved throughout the bottom-up process of analysis:

- ISRAEL;
- CORRUPTION;
- VIOLENCE/TERRORISM/CONFLICT;
- PEOPLE/GROUP(S) OF PEOPLE;
- IDEOLOGY/RELIGION/BELIEF;
- COGNITION/EMOTION/SENSATION;
- ARCHITECTURE/ENVIRONMENT;
- FINANCE/ECONOMY/POVERTY;
- UNCLASSIFIED;
- PLACE/LOCATION/COUNTRY.

The findings concerning the topic areas and themes in this study significantly align with the ones reported in the available literature (cf. Potts & Semino, 2019). Metaphors of disease/illness, in general, and metaphors of cancer, in particular, are typically used to depict “intrinsically negative” (Potts & Semino, 2019, p. 93) phenomena. Such intrinsically negative phenomena include themes and topics which can be classified under the following: negative emotions (Kövecses, 2000), technical problems (Isaeva & Burdina, 2019), financial dilemmas and economic crisis (Brugman et al., 2022; Charteris-Black, 2004; Negro, 2016), health challenges (Balteiro, 2017; Cotter et al., 2021; Olza et al., 2021), sociopolitical issues (O’Brien, 2003; Zibin, 2020), societal problems (Pelosi et al., 2014; Woodhams, 2012), and political disorder and unrest (Charteris-Black, 2011; Musolff, 2016; Wehling, 2016).

Before moving further in the discussion, of course, we need to unpack several (some focal) aspects of the real and literal سرطان *saratan* ‘cancer’ and السرطان *ʔassaratan* ‘the cancer’ so as to understand the use and persistence of metaphorical cancers in the Arabic discourse. Cancer is reported as the second major cause of death around the world (WHO). As a disease, cancer is usually described with the following characterizations: 1) It grows uncontrollably and vastly spreads from one part into other parts of the body; 2) it is mysterious in terms of causes, symptoms and medical evaluations, treatments, and interventions; 3) treatments of cancer are either chemically and/or surgically conducted and often accompanied with risks and negative side effects. Some medical treatments are rarely effective and successful with specific types or intensity of cancers; 4) it costs a lot of financial burdens on the world’s economies; 5) descriptions of cancer come with packages and patterns of negative emotions and evaluations such as: danger, fatality, destruction, suffering, struggle, hopelessness, and frustration. It is also expressed as lethal, malignant, cursed, incurable, and drug resistant. Overall, cancer as a disease is significantly packaged with negativity.

In addition to the negatively-valenced topic areas and themes mentioned above, the negativity of cancer in and of itself encourages the initiation and persistence of negative evaluations which could be connected with negative emotional reactions even with phenomena which is not related with positive or negative polarity (e.g., America/USA). Closer looks into the data and findings show that the negativity of cancer encodes negative connotations for phenomena which could be seen through a wide range of perspectives (e.g., democracy, bureaucracy, and modernism). Therefore, such negativity associated with the instances of metaphorical cancer seems overarching as well as imported from the characterizations and connotations of the real cancer disease. This later point triggers the potential relationship between the emergence and persistence of metaphorical cancer and human shared embodied or cultural experiences.

Metaphorical cancer can also be related to embodied understanding and real world knowledge and shared experiences of cancer disease. Cancer is among the most commonly known and the most widely reported diseases. The world’s populations are now familiar with the descriptions, characteristics, and consequences of cancer. Such popularity and familiarity establish “shared embodied or cultural experiences” which “are more likely to be able to establish common ground and resonate” (Thibodeau et al., 2017, p. 859). The reflection of embodied understanding and real world knowledge and shared experiences of cancer disease can be evidenced by the descriptions, characteristics, or consequences of the real world cancer disease which were discovered with the metaphorical cancer frames and expressions, for instance: *malignant* in example (1), *uncontrollably spreading* in examples (2, 14, 16), *dangerous* and *life-threatening* in examples (4, 11, 13), *rotting* in example (17), and *killing* in example (12).

The influence of the surrounding contextual forces, factors, or pressures on the emergence and persistence of metaphorical cancer in the Arabic discourse should receive some commentary here. Arabic is the first and the mother language for nearly all countries in the Middle East. Throughout the decades up till now, this region has been characterized by political unrest, uprisings, and revolutions accompanied by societal changes, financial challenges, health problems, and humanitarian crises. These contextual forces found in the region motivate the development of negative emotional reactions. Therefore, metaphorical cancer found in the investigated Arabic corpora seems to satisfy the production and consumption of discourse texts that reflect the events and aspects mentioned earlier. The frequencies (Table 2) and references grounded in the analysis and findings are indicative: *Israel*, *sectarianism*, *terrorism*, *war*, *Saddam Hussein and his system* and *Muammar al-Gaddafi*, *Osama Bin Laden*, *Barazani*, *al-Zawahiri*, *al-Qaeda*, *Ba’ath Party*, *Hezbollah*, *America/USA*, *al-Fallujah*, and *Iran/Tehran*.

## VI. CONCLUSION

This paper showed that the metaphorical frames of cancer from the perspective of a source domain are widely used across different types of Arabic discourse and texts. The phenomena that correspond to metaphorical cancers are mostly characterized by negative valence and negative implications (e.g., CORRUPTION and TERRORISM). Other two factors might seem to influence the use and persistence of this metaphor: 1) The embodied and real-world experiences and shared knowledge and understandings of cancer disease, and 2) the socio-political disorder in the Middle East region and its related consequences of economic burdens, health problems, and humanitarian crises.

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