The Arabic Origins of "Air and Fire" Terms in English, German, and French: A Lexical Root Theory Approach

Zaidan Ali Jassem

Language in India www.languageinindia.com ISSN 1930-2940 Vol. 13:3 March 2013

Abstract

This paper investigates the Arabic origins of air and fire terms in English, (German, French, Latin, and Greek), using a lexical root theory approach. The data consists of about 140 common English words for air (80) and air (60) terms. The results show that all such words in Arabic and English, for example, are true cognates with the same or similar forms and meanings. However, their different forms are shown to be due to natural and plausible causes of phonetic, morphological and semantic change. For example, Latin and Greek aer, French air(e), English air, and Arabic air (iar, uiar) (also raiya in reverse) 'air' are identical cognates; Greek pyr, German Feuer, English fire (inferno) come from Arabic naar/noor 'fire, light' where /n/ became /f/ (p)/. This entails that Arabic and all these languages belong not only to the same family but also to the same language, contrary to traditional Comparative (Historical Linguistics) Method claims. This proves the adequacy of the lexical root theory for the present analysis according to which Arabic, English, German, French, Latin, and Greek are dialects of the same language with the first being the origin due to its lexical variety and multiplicity.

Keywords: air and fire words, Arabic, English, German, French, Greek, Latin, historical linguistics, lexical root theory

1. Introduction

The genetic relationship between Arabic, English, German, French, Latin, Greek and Sanskrit has been clearly and firmly established in several papers (Jassem 2012a-f, 2013a-d). In his seminal study of the numeral words from one to trillion in Arabic, English, German, French, Latin, Greek and Sanskrit, Jassem (2012a) showed that all exhibit the same or similar forms and meanings in general, forming true cognates with Arabic as their end origin. For example, three (third, thirty, trio, tri, tertiary, trinity, Trinitarian) derives from a 'reduced' Arabic thalaath (talaat in Damascus Arabic (Jassem 1993, 1994a-b)) 'three' through the change of /th & l/ to /t & r/ each. This led him to reject the claims of the Comparative 'Historical Linguistics' Method which classifies Arabic and English, German, French, and so on as members of different language families
(Bergs and Brinton 2012; Algeo 2010; Crystal 2010: 302; Campbell 2006: 190-191; Crowley 1997: 22-25, 110-111; Pyles and Algeo 1993: 61-94). Therefore, he proposed the lexical root theory to account for the genetic relationships between Arabic and English, in particular, and all (Indo-)European languages in general for three main reasons: namely, (a) geographical continuity and/or proximity between their homelands, (b) persistent cultural interaction and similarity between their peoples over the ages, and, above all, (c) linguistic similarity between Arabic and such languages (see Jassem 2013b for further detail).

His subsequent research gave a decisive and clear-cut linguistic evidence. Jassem (2012b) traced the Arabic origins of common contextualized biblical or religious terms such as Hallelujah, Anno Domini, Christianity, Judaism, worship, bead, welcome, and so on. For instance, hallelujah resulted from a reversal and reduction of the Arabic phrase la ilaha illa Allah '(There's) no god but Allah (God)' as follows:

\[
\begin{align*}
\text{Halle} & \quad + \quad \text{lu} & \quad + \quad \text{jah} \\
\text{Allah} & \quad + \quad \text{la} & \quad \text{ilaaha} & \quad \& \quad \text{illa} \\
\text{'God'} & \quad + \quad \text{'no'} & \quad \text{'god'} & \quad \& \quad \text{'except'}.
\end{align*}
\]

That is, Halle is Allah in reverse, lu and la (pronounced lo also) are the same, jah is a shortening of both ilaaha 'god' and illa 'except' which sound almost the same. Jassem (2012c) found that personal pronouns in Arabic, English, German, French, Latin and Greek form true cognates, which descend from Arabic directly. For example, you (ge in Old English; Sie in German) all come from Arabic iaka 'you' where /k/ changed to /g (& s)/ and then to /y/; Old English thine derives from Arabic anta 'you' via reversal and the change of /t/ to /th/ whereas thou and thee, French tu, and German du come from the affixed form of the same Arabic pronoun -ta 'you'. Jassem (2012d) examined determiners such as the, this, an, both, all in English, German, French, and Latin which were all found to have identical Arabic cognates. For instance, the/this derive from Arabic tha/thih 'this' where /h/ became /sl/. Jassem (2012e) established the Arabic origins of verb to be forms in all such languages. For example, is/was (Old English wesan 'be'; German sein; French etre, es, suis) descend from Arabic kawana (kaana) 'be' where /k/ became /sl/. Jassem (2012f) showed that inflectional 'plural and gender' markers as in oxen, girls, Paula, Charlotte formed true cognates in all. Similarly, Jassem (2013a) demonstrated the Arabic origins of English, German, and French derivational morphemes as in activity, activate, determine, whiten, whose identical Arabic cognates are ta (e.g., salaamatti) 'safety', takallam 'talk') and an (e.g., wardan 'bloom'). Jassem (2013b) dealt with the Arabic origins of negative particles and words like in-/no, -less, and -mal in English, French and so on. Jassem (2013c) outlined the English, German, and French cognates of Arabic back consonants such as /k/ in

**Language in India**  www.languageinindia.com  ISSN 1930-2940

13:3 March 2013

Zaidan Ali Jassem

The Arabic Origins of "Air and Fire" Terms in English, German, and French: A Lexical Root Theory Approach
church, kirk, ecclesiastical, which all come from Arabic kanees(at) where /k & n/ became /ch & r (l/) each. Finally, Jassem (2013d) described the Arabic cognates and origins of English, German, and French water and sea terms like water, hydro, aqua, sea, ocean, ship, navy, all of which derive from Arabic sources.

In all the above studies, the lexical root theory was used as a theoretical framework, which is so called because of employing the lexical (consonantal) root in examining genetic relationships between words like the derivation of overwritten from write (or simply wrt). The main reason for that is because the consonantal root carries and determines the basic meaning of the word regardless of its affixation such as overwrite, writing. Historically speaking, classical Arabic dictionaries (e.g., Ibn Manzoor 1974, 2013) used consonantal roots in listing lexical entries, a practice first founded by Alkhaleel bin Ahmad Alfarahedei (Jassem 2012e).

Simple in structure, the lexical root theory comprises a theoretical construct, hypothesis or principle and five practical procedures of analysis. The principle states that Arabic and English as well as the so-called Indo-European languages are not only genetically related but also are directly descended from one language, which may be Arabic in the end. In fact, it claims in its strongest version that they are all dialects of the same language. The applied procedures of analysis are (i) methodological, (ii) lexicological, (iii) linguistic, (iv) relational, and (v) comparative/historical. As all have been reasonably described in the above studies (Jassem 2012a-f, 2013a-d), a brief summary will suffice here.

First, the methodological procedure concerns data collection, selection, and statistical analysis. Apart from loan words, all language words, affixes, and phonemes are investigable, and not only the core vocabulary as is the common practice in the field (Crystal 2010; Pyles and Algeo 1993: 76-77; Crowley 1997: 88-90, 175-178). However, data selection is practically inevitable for which the most appropriate way would be to use semantic fields such as the present and the above topics. The ever-increasing accumulation of evidence from such findings will aid in formulating rules and laws of language change at a later stage (cf. Jassem 2012f, 2013a-d). The statistical analysis employs the percentage formula (see 2.2 below).

Secondly, the lexicological procedure is the initial step in the analysis. Words are analyzed by (i) deleting affixes (e.g., overwritten → write), (ii) using primarily consonantal roots (e.g., write → wrt), and (iii) search for correspondence in meaning on the basis of word etymologies and origins as a guide (e.g., Harper 2012), to be used with discretion, though.

Thirdly, the linguistic procedure handles the analysis of the phonetic, morphological, grammatical and semantic structure and differences between
The phonetic analysis examines sound changes within and across categories. In particular, consonants may change their place and manner of articulation as well as voicing. That is, changing place involves bilabial consonants ↔ labio-dental ↔ dental ↔ alveolar ↔ palatal ↔ velar ↔ uvular ↔ pharyngeal ↔ glottal (where ↔ signals change in both directions); manner relates to stops ↔ fricatives ↔ affricates ↔ nasals ↔ laterals ↔ approximants; and voice concerns voiced consonants ↔ voiceless. Similarly, vowels may change according to (i) place or tongue part (e.g., front ↔ centre ↔ back), (ii) tongue height (e.g., high ↔ mid ↔ low), (iii) length (e.g., long ↔ short), and (iv) lip shape (e.g., round ↔ unround). These have additional allophones or variants which do not change meaning (see Jassem 2003: 98-113). Although English has a larger number of about 20 vowels, which vary from accent to accent (Roach 2009; Celce-Murcia et al 2010), they can still be treated within this framework. Furthermore, vowels are marginal in significance which may be totally ignored because the limited nature of the changes do not affect the final semantic result at all. In fact, the functions of vowels are phonetic like linking consonants to each other in speech and grammatical such as indicating tense, word class, and number (e.g., sing, sang, sung, song; man/men).

Sound changes result in processes like assimilation, dissimilation, deletion, merger, insertion, split, syllable loss, resyllabification, consonant cluster reduction or creation and so on. In addition, sound change may operate in a multi-directional, cyclic, and lexically-diffuse or irregular manner (see 4. below). The criterion in all the changes is naturalness and plausibility; for example, the change from /k/ (e.g., kirk, ecclesiastic), a voiceless velar stop, to /ch/ (e.g., church), a voiceless palatal affricate, is more natural than that to /s/, a voiceless alveolar fricative, as the first two are closer by place and manner (Jassem 2012b); the last is plausible, though (Jassem 2013c).

Some overlap exists between the morphological and grammatical analyses. The former examines the inflectional and derivational aspects of words in general (Jassem 2012f, 2013a-b); the latter handles grammatical classes, categories, and functions like pronouns, nouns, verbs, and case (Jassem 2012c-d). Since their influence on the basic meaning of the lexical root is marginal, they may be ignored altogether.

As for the semantic analysis, it looks at meaning relationships between words, including lexical stability, multiplicity, convergence, divergence, shift, split, change, and variability. Stability means that word meanings have remained constant. Multiplicity denotes that words might have two or more meanings. Convergence means two or more formally and semantically similar
Arabic words might have yielded the same cognate in English. Divergence signals that words became opposites or antonyms of one another. Shift indicates that words switched their sense within the same field. Lexical split means a word led to two different cognates. Change means a new meaning developed. Variability signals the presence of two or more variants for the same word.

Fourthly, the relational procedure accounts for the relationship between form and meaning from three perspectives: formal and semantic similarity (e.g., *three, third, tertiary* and Arabic *thalath* 'three' (Damascus Arabic *talaat* (see Jassem 2012a)), formal similarity and semantic difference (e.g., *ship* and *sheep* (see Jassem 2012b), and formal difference and semantic similarity (e.g., *quarter, quadrant, cadre* and Arabic *qeeraaT* '1/4' (Jassem 2012a)).

Finally, the comparative historical analysis compares every word in English in particular and German, French, Greek, and Latin in general with its Arabic counterpart phonetically, morphologically, and semantically on the basis of its history and development in English (e.g., Harper 2012; Pyles and Algeo 1993) and Arabic (e.g., Ibn Manzour 2013; Altha3aalibi 2011; Ibn Seedah 1996) besides the author's knowledge of both Arabic as a first language and English as a second language.

In this paper, the lexical root theory will be used in the investigation of the Arabic genetic origins and descent of *air* words in English besides German, French, Latin, and Greek. It has five sections: an introduction, research methods, results, a discussion, and a conclusion.

2. Research Methods

2.1 The Data

The data consists of about 80 *air* and 60 *fire* words. The terms have been selected on the basis of English thesauri and the author's knowledge of their frequency and use. They have been arranged alphabetically for quick reference together with brief linguistic notes in (3.) below. All etymological references in the text below are to Harper (2012).

The data is transcribed by using normal spelling. For exotic Arabic sounds, however, certain symbols were used, including /2 & 3/ for the voiceless and voiced pharyngeal fricatives respectively, capital letters for the emphatic counterparts of plain consonants /t, d, th, & s/, /kh & gh/ for the voiceless and voiced velar fricatives each, and /',/ the glottal stop (Jassem 2013c).

2.2 Data Analysis

The data will be analyzed theoretically and statistically. The above-surveyed lexical root theory is used as the theoretical framework. The statistical analysis employs the percentage formula, obtained by dividing the number of
cognates over the total number of investigated words multiplied by 100. For example, suppose the total number of investigated words is 100, of which 95 are true cognates. Calculating the percentage of cognates is obtained thus: 95/100 = 0.95 × 100 = 95%. Finally, the results are checked against Cowley’s (1997: 173, 182) formula to determine whether such words belong to the same language or to languages of the same family (for a survey, see Jassem 2012a-b).

3. Results
3.1 Air and Air-Related Terms
Air (airy, aerobic, aeronaut) via Latin and Greek aer and French air(e) from Arabic air, iar, or uiar 'air' (cf. a reversed Arabic raiya 'good wind', haweer 'sound of air' in which /h, w, & a/ merged, 2arr 'of air, heat, warmth', or a reversed ree2 'wind, air' where /2/ was deleted).

Arid from Arabic 'loan' 3anbar 'good smell' via /3/-deletion and the change of /n/ to /m/.

Aroma (aromatic) 'sweet odour, spice, sweet herb' from Arabic rai2aan 'sweet scent, aromatic plant' where /2/ was deleted and /n/ turned into /m/, rummaaan 'pomegranate' via lexical shift and /m & n/-merger, or a reversed 3abeer 'good smell' in which /3/ was deleted while /b/ passed into /m/.

Ash from Arabic 3aj, 3ajaaj 'dust' where /3/ was deleted and /j/ passed into /sh/.

Atmosphere (Greek atmos 'vapour, steam' and spharia 'ball, globe') from a reordered Arabic sadeem 'steam' where /d/ became /t/ and from Sabboor (ball-shaped) heap' where /b/ became /fl/, kubba(t) 'ball' where /k & t/ changed to /s & r/ each, or safar, asfaar (pl.) 'places'.

Avian (aviation, avionics, aviary) from Arabic 3aSfoor 'bird' in which /3, S, & /f/ merged into /v/ while /t/ turned into /n/ or from hawaa 'air' where /h & w/ merged into /v/ with /n/ being an insertion.

Bask 'bathe' from a reordered Arabic saba2 'bathe' where /2/ became /k/

Blast (blaze, blizzard) 'blow' from a reordered Arabic lahah where /h/ became /s/, shalhoob 'blaze' where /h & sh/ merged into /s/, or balaj 'light up, sound-break' where /j/ split into /s & t/.

Blaze (blast) from a reordered Arabic lahah 'blaze' where /h/ became /z/ or shalhoob 'blaze' where /h & sh/ merged into /s/.

Blizzard (blaze) from Arabic bar(a)d 'hail, cold' where /l/ split from /t/ while /z/ from /d/, baleel 'rain wind' where /l/ became /z/, or a reordered hulaab 'rain with strong wind' where /h/ changed to /z/ and /t/ split from /l/ (cf. breeze below and blaze above.)
Blow (Old English blowan 'breathe, inflate, kindle') from a reordered Arabic lahah 'flame, burn' where /h/ changed to /w/, habba 'to blow, to burn' via /l/-insertion, or lab, lablab 'of air, move'.

Breath(e) from Arabic barad(at), baraad(at) 'cool, cold air' where /d/ became /th/, baari2 'hot air' where /2/ changed to /th/, a reversed tharb 'bad stomach or mouth (air), good/bad speech', or a reordered bakhar 'mouth air' where /kh/ became /th/.

Breeze 'north-eastern good wind, fresh sea wind' from Arabic baari2 'hot air' where /2/ became /zl/, a reordered ba2ree 'sea (wind)' where /2/ changed to /zl/, bard, baraad 'cool, cold air' in which /d/ changed to /zl/, a reversed jarbiaa 'wind type' where /j/ became /zl/ (cf. blizzard above), or a reversed Saba 'eastern wind' via /l/-insertion.

Climate (clime, acclimatize) via Greek and Latin klima/clima 'region, slope' of klinein 'to slope' from a reordered Arabic makaan 'place' where /n/ split into /l & m/, igleem 'area' in which /q/ turned into /k/, or 2ana 'bend' where /2/ changed to /k/ while /l/ split from /n/, samaa, samawaat (pl.) 'sky, go up' via lexical shift and the change of /s/ to /k/ and /l/-insertion.

Cyclone (cycle) from a reordered Arabic takka(t), Malkook (adj.) 'cycle, rounded object' where /k/ became /s/, 2alaq(at) 'cycle, circle' in which /2 & q/ changed to /s & k/ each, sakan 'dust (wind)' where /l/ split from /n/, or 3ajal 'cycle' where /3 & j/ became /s & k/ each.

Dew from Arabic Tal 'dew' in which /T & l/ turned into /d & w/ each or Dabaab 'fog' where /b & b/ merged into /w/ (cf. dye from Arabic Tala 'dye' and die, death from Arabic Twaa 'fold, die' or Tu3aas 'quick death' in which /T/ turned into /d/ while /3 & s/ merged into /th/.)

Dirt(y) from a reordered Arabic qadhar 'dirt' where /q & dh/ passed into /d & t/ each.

Dry (drought) from Arabic Tari 'soft, wet' via lexical divergence and the change of /T/ to /d/, taariz 'dry' where /zl/ became /g/ (cf. arid above), a reversed jurd, jarda 'plantless' where /j/ changed to /g/, or a reordered qafr, qaafirat 'plantless, dry' where /q & f/ changed to /g & t/ each.

Dust from Arabic Tais 'dust' in which /l/ split into /d/ and /l/.

Ecology from Arabic jaw 'sky, air' in which /j/ became /kl/.

Excrete (excretion, secrete) from Arabic khara, kharia(t) (n) 'excrete, stool' wherein /kh/ became /kl/.

Faecees from Arabic fasa, fusaa (n) or faSS, fuSooS (pl.) 'body wind'.

Fan (Old English fannian 'winnow grain') from Arabic fanna 'of air, to move or turn', a reversed naf(naf), or dharra 'to winnow grain' where /dh & r/ changed to /f & n/ each.

Fart from Arabic DaraT, faraT 'fart' in which /D/ passed into /f/.
Fly (flight) from Arabic farra 'fly' in which /r/ became /l/ or falakh 'split, leave' where /kh/ changed to /g/ (cf. flee and leave from a 'reversed' Arabic falla 'leave').

Fragrance (fragrant; flair) 'an odour' via Latin fragrare 'emit a sweet smell' from a reordered Arabic qirfa(t) 'cinnamon, sweet smell' and related derivatives qarfaan, qaraf 'disgusted, disgust, animal-emitted mating scent', zahran 'to flower' where /z & h/ became /f & g/ each, farfa2(an) 'flourish' where /2/ changed to /g/, far3an 'of plants, to bud' or farna2 'of plants, to bloom' via the change of /2 & 3/ to /g/ and /l/-insertion.

Foul from Arabic bawl 'urine' (or a reversed rauth 'fowl') where /b & (th)/ turned into /l/ (cf. fowl from Arabic 3aSfoor 'bird' in which /3, S & f/ merged into /l/ while /r/ became /l/ and fool from Arabic habeel, habool or bahlool 'fool, mad' where /h & b/ merged into /l/).

Gale 'storm at sea' from Arabic qaaali3 'of wind, uprooting' in which /q/ became /g/, Sirr/SarSar 'very strong wind' where /S & r/ changed to /g & l/ each, or i3Saaar 'storm' where /3 & S/ merged into /l/ while /r/ change to /l/.

Garbage from a reordered Arabic ghubaar, ghbrat 'dust' via /gh/-split into /g & j/.

Gas from Arabic ghazz 'gas' in which /gh/ turned into /g/.

Gust from Arabic qaaSif 'breaking, striking' where /q & f/ passed into /g & t/ each, or 3aaSif(at) 'storm' where /3 & f/ became /g & t/ each.

Haze (hazy) '(nautical) mist, fog, cloud' from Arabic haij, hawjaa 'strong wind' where /j/ became /z/.

Heave from Arabic nafakh 'blow/breath' in which /n & f/ merged into /h/ while /kh/ turned into /v/, lahath 'heave, pant' where /l & th/ merged into /v/, onomatopoeic heh/hef/fff 'sound of breath/air' where /h/ change to /v/, or hawa 'air' where /w/ became /v/ (cf. upheaval from Arabic hawa 'fall down').

Heaven 'star' from Arabic kawn 'world, universe' where /k & w/ became /h & v/ each, or a reordered janna(t/h) 'Heaven' where /j & h/ became /h & v/ each (cf. haven from Arabic 'amaan 'safety' where /m/ & m/ changed to /h & v/ each.

Hiss (hush) from Arabic 2asees, hasees 'sound of trees' where /2 & h/ merged or Sah 'shut up, silence' in reverse.

Hurricane from Arabic 2areeq(an) 'fire, burning' in which /2 & q/ turned into /h & k/ each.

Inflate (inflation, deflate) from a reordered Arabic lafa2, inlafa2, iltafa2, laf2(at) 'very cold (wind)' via /2/-deletion, nafas, tanaaffas 'breath(e), deflate' where /s/ changed to /l/, or tafal, intafal 'spit' via reversal and lexical shift.
Inhalation (exhalation) from Arabic 3aleel 'sound of breathing' where /\3/ passed into /h/, a reversed lahath 'pant' in which /\th/ merged into /h/, or hawa 'air' where /w/ became /l/. Inspiration (expiration, respiration, perspiration) from Arabic zafeer 'expiration' in which /f/ passed into /l/, a reordered saraba 'of water, penetrate', or shirb 'drink' in which /sh/ turned into /s/ (cf. spirits 'drinks' from Arabic sharbat 'drink' in which /sh/ became /s/).
Jet 'a stream of water, send, throw' from Arabic shaTT 'shore, coast' or zatt or shaTT 'throw' where /sh/ or /z/ turned into /f/.
Meteor (meteorite, meteoroid, meteorology) 'rock falling to earth' from a reversed Arabic rujm 'stones' where /j/ became /l/ or maTar 'rain, object falling from above' (cf. Greek meta 'over, beyond, in the midst of, in common with, in quest of', German mit 'with', Old English midh/mid plus aoros 'lifted, hovering in air' from Arabic ma3a 'with' or muntaSaT 'middle' through the merger of /m & n/ and /S & f/ into /l/ and air/iar or ree2 'air' where /2/ became /s/).
Mist from a reordered Arabic sadeem 'steam' where /d/ turned into /l/, a reordered qaatim 'dark' where /q/ became /s/, or a reversed 3atm 'darkness' where /3/ changed to /s/.
Musk from Arabic misk 'musk'.
Nature via Latin natus 'born', nasri 'to be born' from Arabic nataja, naatij 'of sheep, (to be) born' where /j/ became /s/, faTara, fiTra(t) 'create, creation, one's nature' where /f/ became /s/ or nasha'a, nash'(at) (n) 'stem from, grow (up), early rain' where /sh/ changed to /f/.
Nebula (nebulous) 'cloud' from a reordered Arabic waabel 'rain, cloud' via lexical shift and the change of /w/ to /n/ or baleel (mablool) 'dew-carrying wind' through /n/-split from /b/.
Odour (deodorant) from Arabic 3iTr, 3uToor (pl.) 'perfume' via /3/-deletion and the change of /T/ to /d/.
Oscillate from Arabic hazz(at) 'oscillate' via /h/-deletion and /l/-insertion or zalzal(at) 'move, shake' where /z/ became /s/.
Perfume (fume) from Arabic fa2am 'of fire, black, smoke, char' via /2/-loss and lexical shift, samoom 'hot air' where /s/ became /l/, or a reversed naf2a 'sweet air' where /n & 2/ changed to /m & /O/ each.
Plane from a reordered Arabic nibaal 'arrows' via reordering and lexical shift (cf. plain, explain, plan from Arabic baiyen, baiyan 'clear, clarify' and bayaan 'clarification, plan' via /l/-insertion).
Phenology via Latin and Greek phaeno/phaino of phainein 'to show' from Arabic baana 'appear' where /b/ became /f/.
Pneuma (pneumonia, pneumatic) 'a blowing wind, blast' via Greek pnein 'to blow, breathe' from Arabic baleel 'dew-carrying wind' where /l & l/ became
/n & m/ each or a reordered nasma(t), naseem 'breeze' where /s/ changed to /p/.

Puff from onomatopoeic Arabic pif, fff 'sound of blowing off at fire'.

Reek from Arabic ree2 'wind' where /2/l turned into /k/ (cf. The mermaid reeks of fish: the from Arabic tha 'this' (Jassem 2012c), mermaid from Arabic marr 'much water', of from fee 'in', maid from amat 'girl' where /l/ became /d/, fish from Arabic samak where /s & k/ merged into /sh/ while /m/ became /lf/.)

Rot(ten) from Arabic 3aTeen 'rotten' in which /3/l became /l/, natn 'rotten' in which /n/ turned into /l/, or rath 'of clothes, dirty, torn' in which /th/ turned into /l/.

Rubbish from a reversed Arabic zibl 'litter, waste, rubbish' in which /z & l/ turned into /sh & r/ respectively.

Scent via Latin sentir 'to feel, smell, perceive' from Arabic shamm(at) 'smell' where /sh & m/ became /s & n/ each or Sannat 'good smell (Libyan Arabic), body odour' (cf. scenery from Arabic zain(at) 'beautiful, decoration' in which /z & t/ passed into /s & r/ each; obscene from Arabic shain 'bad, obscene' via the change of /sh/ to /z/ and /b/-insertion).

Sigh from Arabic shahaq 'sigh' where /sh & h/ merged into /s/ while /q/ became /g/.

Siren from Arabic garn 'horn, siren' in which /q/ turned into /s/ or Soor 'siren' where /n/ split from /l/ (cf. crown, coroner, coronation from Arabic qarn above where /q/ became /k/ (Jassem 2012c)).

Smell from Arabic shamm 'smell' in which /sh/ turned into /s/ while /l/ split from /m/ (cf. smile from Arabic Sammal 'move lips' or latham 'kiss' via reordering, lexical shift, and changing /th/ to /s/).

Sparrow from Arabic subbar 'bird'.

Soar from Arabic Taar 'fly' where /T/ changed to /s/ (cf. sore from ArabicDur 'hurt' where /D/ became /s/ or jur2 'wound' where /j & 2/ merged into /s/).

Squall 'sudden, violent gust of wind' from Arabic Sar(Sar) 'strong wind' where /S/ split into /s & k/ while /t/ became /l/ or a reordered qaaSil 'cutting, breaking'.

Stench (stink) from Arabic zan(a)kh 'stench, bad smell, dirty' in which /z/ split into /s & t/ while /kh/ turned into /k (ch)/ or a reordered najaasat 'dirt' where /j/ became /ch/.

Stiff from Arabic jaaaf, qaaaf 'dry' where /j & q/ split into /s & t/ or qaaaf 'hard' where /q/ split into /s & t/ while /s/ became /fl/.

Storm/Stream 'water course' from a reversed Arabic majra 'stream' where /lj/ split into /s & t/, a reordered jamr 'pebbles, ember, spark' or rajm 'throwing stones' in both of which /lj/ split into /s & t/, or from a reversed maTar 'rain' in which /T/ split into /s & t/.

Language in India www.languageinindia.com ISSN 1930-2940
13:3 March 2013
Zaidan Ali Jassem
The Arabic Origins of "Air and Fire" Terms in English, German, and French: A Lexical Root Theory Approach
Temperate (temper 'due proportion of elements' via Old English temperian 'to bring to a proper state, modify, restrain') from Arabic Tabba3 'of animals, to domesticate, restrain' where /m/ split from /b/ while /l/ became /l/ (cf. temper from Arabic Tab3 'one's nature' in which /T/ became /l/ while /l/ became /l/ or Dameer 'conscience' via lexical shift and /b/-split from /m/).

Temperature from a reordered Arabic ramDaa 'heat, warmth' in which /D/ passed into /l/ while /m/ split into /m & p/ or from jamr(at) 'fire, spark' in which /j/ turned into /l/ while /m/ split into /m & p/

Tempest from Arabic deemat 'rain' via the change of /d/ to /l/ and split of /s & p/ from /t & m/ each, Tabee3a(t) 'very cold, rainy and windy' where /m/ split from /b/ and /l/ became /s/, Tumaas(at) 'literally subside; a weather condition of invisibility' where /p/ split from /m/.

Tornado 'turn in Spanish' from a reordered Arabic dawaraan 'turning around' in which /d/ split into /l & d/ or Tayaraan 'flying' where /T/ split into /l & d/ (cf. torrent from (a) a reordered Arabic maTrat, maaTira(t) 'rain, raining' via turning /m/ into /n/ or (b) jaariat, jarayaan 'stream, flowing' by changing /j/ to /l/).

Twister (twist) from Arabic Ta3aj, Ta3waja(t) 'twisting' in which /3 & j/ changed to /w & s/ each.

Ventilate via Latin ventus 'wind, toss grain in the air to blow away the chaff' from Arabic dhaaariat 'winnowing wind' where /dh & t/ became /v & n/ each, a reordered nafath 'breath, air' where /th/ became /l/, or fatal, infatal 'turn around' (cf. vent (off) from a reordered Arabic naafidha(t) 'vent, window' or nafath 'breath, air' (cf. wind below.)

Vibrate from a reordered Arabic Darab 'beat' where /D/ became /v/.

Wave from Arabic hawa 'air' in which /h & w/ became /w & v/ each.

Weather (ether) from Arabic 'atheer 'air, ether' where /l/ turned into /w/.

Whistle from a reordered Arabic Safeer(at) 'whistle' where /f & t/ became /w & l/ each.

Whiz from Arabic 'azz 'whiz' where /l/ became /w/.

Wind from a reversed Arabic nada, nadwa(t) 'dew' via lexical shift, a reordered naf2a(t) 'sweet air' where /f & 2/ merged into /w/ and /t/ changed to /d/, or nafath 'breath, air' where /f & th/ became w & d/ each.

Winnow 'Old English windian 'air in motion' from Arabic hawaa 'air' where /h/ became /w/ with /n/ being an insertion (cf. wind above) or a reordered nafnaf or fanfan 'of air, to blow' where /f/ became /w/.

Wuthering 'Old English hwidha 'air, breeze' from a reordered Arabic hawia(t) 'airy' where /h & w/ merged into /w/ while /t/ became /th/, or raff(at), rafraaaf(at) 'moving air' where /f/ became /w/.

Zephyr 'Greek zephyros, Old English zefzer 'west wind' from Arabic Sabeer 'type of rain or wind' via changing /S & b/ to /s & f/ each and lexical shift,
or Safeer/shafeer '(sound of) air, whistling', safer, saafi 'dust-carrying wind'.

To sum up, the total number of air words amounted to 80 or so, all of which have direct Arabic cognates. In other words, the percentage of cognates is 100%.

3.2 Fire Terms
Ablaze (blaze) from a reordered Arabic lahāb 'flame, heat' where /h/ became /zl/.
Battery 'beat, thrash' from a reordered Arabic Darab 'beat' in which /D/ changed to /t/.
Beam 'tree, shine' from Arabic baan 'appear, tree type' where /n/ became /m/ or baheem 'dark' via lexical shift and /h/-loss.
Blair from Arabic bahar 'dazzle' via /h/-loss and /l/-split from /r/.
Brilliant via Greek beryl 'precious stone' from a reordered Arabic billawr(at) 'glass, crystal' via lexical shift or bahar, inbihaar 'light, dazzle' via /h/-loss and /l/-split from /r/.
Bright (brightness) from Arabic bareeq, baariqat 'bright' where /q/ passed into /l/.
Burn from a reordered Arabic naaR/noor, neeraan (pl.), nawwar (v.) 'fire, light' where /w/ passed into /b/ or a reversed nabar 'of fire, burn'.
Calorie 'heat' from Arabic 2arr(oor) 'heat' where /2 & r/ became /k & l/.
Candle (chandelier, kindle) from Arabic qandeel 'light, lamp' via the change of /q/ to /k/ or /ch/.
Char from Arabic sha22ar, shi2waar 'char, smoke' where /2 & sh/ merged into /ch/.
Chimney via Latin caminata 'fireplace' and Greek kaminos 'furnace' from a reordered Arabic dukhaan, dakhana(t) 'smoke', midkhana(t) 'chimney' where /d & kh/ turned into /t & ch/, or sakan, maskana(t) 'fire ash, fire place' where /s & k/ merged into /ch/.
Coal from Arabic ku2l 'black (substance)' in which /2/ was dropped.
Combustion from Arabic baSSat 'spark'.
Cremation from a reordered Arabic jamr(at), tajmeer 'a piece of fire, burning red' in which /j/ turned into /k/.
Dazzle from a reordered Arabic laTash 'of light, to shine' in which /T & sh/ turned into /d & z/ each.
Electricity (electronics) via Latin and Greek electrum/electron 'substance attraction through rubbing' from Arabic lagaT, luqTaan 'catch', 3alaq, 3alaqt 'hang, catch fire' where /3 & q/ became /Ø & k/ each, or 2arqa(t) 'burn, fire' via /2/-deletion and the change of /q/ to /k/.
Energy (energetic) via Latin and Greek (en)ergon 'work' from Arabic 2arak 'move' where /l & k/ changed to /Ø & g/ each or naar, naari (adj.) 'fire' where /y/ split into /y & j/.

Engine (engineer, ingenious) via Latin ingenium 'talent, inborn skill' from a reordered Arabic Sana3, maSnoo3 'design, make, something designed' in which /S & 3/ merged into /g/ or jaan, mijan 'striker, stick' where /m/ turned into /n/.

Fire (fiery, inferno, infernal, infernality) from Arabic naar/noor, neeraan (pl.) 'fire, light' where /n/ passed into /f/, sa3eer 'soaring fire' in which /s & 3/ merged into /f/, or saqar 'fire, hell' where /s & q/ merged into /fl/, or Silaa' 'fire' where /S & 1/ turned into /f & t/ each.

Flame (inflame, inflammation, inflammatory) from Arabic fa2am 'fire leftovers' through /2/-deletion and /l/-insertion or from Diraaam 'flame' via the passage of /D & r/ into /f & l/ each.

Flash from a reordered Arabic laSf 'flash' where /S/ changed to /sh/.

Fume from Arabic fa2am 'fire black' via /2/-deletion, ghaim, ghuyoom (pl.) 'cloud' through the change of /gh/ to /fl/, or samoom 'hot air' via the change /s/ to /fl/.

Furnace from Arabic furn, afraan & afrina(t) (pl.) 'oven' where /t/ became /s/.

Gleam/glean from a reordered Arabic jamr 'ember, spark' or qamar 'moon' via the change of /j & q/ to /g/ and /t/ to /l/.

Glimmer from Arabic jamr 'ember, spark' or qamar 'moon, light' via /l/-insertion or split from /t/ and the change of /j & q/ to /g/.

Glimpse from Arabic qabas 'light, fire' via /m/-split from /b/ and /l/-insertion.

Glisten from a reordered Arabic laqas(at) 'shine'.

Glow from Arabic ghala 'burn, boil' or Salee 'burning hot' in which /gh & S/ changed to /g/, a reversed wahaj 'gloom' via the merger of /h & w/ and /l/-insertion, or a reversed lajj or wajj 'gloom' in which /j/ turned into /g/.

Grill from Arabic ghalee 'boil', ghill, aghlaal (pl.) 'chain' where /gh/ split into /g & r/ or qalee 'fry' where /q/ turned into /g/ while /t/ split from /l/.

Hearth from Arabic 2arrat 'hot place, hearth' in which /2 & t/ turned into /h & th/ respectively.

Heat, Hot from Arabic 2aad 'sharp, hot' where /2 & d/ became /h & t/ each, 2arrat 'hot place, hearth' in which /r & t/ merged into /l/, a reversed daafee 'warm' in which /d & f/ turned into /h & t/ respectively.

Language in India www.languageinindia.com ISSN 1930-2940
13:3 March 2013
Zaidan Ali Jassem
The Arabic Origins of "Air and Fire" Terms in English, German, and French: A Lexical Root Theory Approach

Page 643
Hell 'low' from Arabic saaﬁl 'low' where /s & f/ merged into /h/; 2arr 'heat' in which /2 & r/ turned into /h & l/ each; hala3 'fear, fright' via /3/-loss; hawl 'fear, terror' (cf. hill from Arabic 3ula, 3aali 'hill, high' in which /3/ passed into /h/); hawiyya(t) 'hell, fall' where /w/ became /l/; jahannam 'hell' via the mergers of /j & h/ into /h/ and /n & m/ into /l/.

Ignite (ignition) via Latin ignis, ignire 'fire' from Arabic sakan 'fire' where /s & k/ merged into /g/, a reversed siyyeen 'fire' where /j/ became /g/, zand 'light a fire' where /z & d/ became /g & t/ each, awqad, iqaad (n) 'ignite' via /n/-insertion, or qada2(aan), inqada2 'to light a fire' where /q & 2/ became /g & s/ each.

Illuminate (illumination, luminance, luminary) from Arabic lama3aan 'illumination' via /3/-loss.

Incineration from Arabic jamra(t), jammar, injamar 'spark, burn red' where /m/ became /n/.

Lamp via Greek and Latin lampas from a reordered Arabic miSbaa2 'lamp' where /S & 2/ merged into /s/, which turned into /O/ later while /l/ split from /m/, a reversed Arabic billawr 'glass, lamp' where /l & r/ merged while /m/ split from /b/, or lam3(at) 'shine' where /3/ became /s ( & then Ø)/ while /p/ split from /m/.

Lantern from Arabic inaarat, noorat 'lighting' in which /l/ split from /n/.

Lava from Arabic laDha 'molten heat' where /Dh/ became /v/.

Light (alight, lightening) (German Licht) from Arabic 3alaq, 3alqat 'light a fire, burning' where /q & 3/ merged into /g/, a reordered shu3lat 'light, flame' in which /sh & 3/ merged into /g/, lajj(at) 'glow' in which /j/ turned into /g/, or a reordered wadq 'light, lightening' where /w & d/ became /l & t/.

Luminance from illuminate above.

Lustre (lustrous, illustrate) from Arabic laSf(aan) 'glow' via the change of /f/ to /l/ and /r/-insertion or asFara, Sulfra(t) 'yellow(ness)' via the change of /f/ to /l/, /l/-split from /r/, and lexical shift.

Negative from Arabic naha 'forbid' where /h/ became /g/ (Jassem 2013b) or naqiSat 'lacking, missing' where /q & S/ merged into /g/.

Oil (olive) via French huile from Arabic ihaala(t) 'oil, fat' in which /h/ was lost or turned into /v/.

Oven from Arabic furn 'oven' in which /n/ split into /n & t/.

Petrol from Arabic baSra(t) 'soft rock' where /S/ became /l/, a reversed turaab 'dust', a reordered balTa, balaadT 'a stone' where /l/ changed to /t/, barTeel 'long rock' or Dhirb 'firm stone' where /Dh/ became /t/.

Paradise 'orchard in Greek' from a reordered Arabic bustaan 'orchard' where /t & n/ turned into /d & t/ each, burood(at), barada 'coolness' in which /s/ evolved from /t/ or firdaus 'paradise' in which /f/ became /p/.

Positive (positron) 'laid down' from Arabic basaTa 'lay down, stretch'.

Language in India www.languageinindia.com ISSN 1930-2940
13:3 March 2013
Zaidan Ali Jassem
The Arabic Origins of "Air and Fire" Terms in English, German, and French: A Lexical Root Theory Approach
**Power** from Arabic *murr, mirra(t)* 'bitter, strong, strength' where /m/ turned into /p/ or *ba's* 'power' in which /' & s/ passed into /w & r/ each.

**Radiate** (*radiation, irradiation, radiant, ray, radius*) via Latin *radius* 'ray, spoke, staff, rod' and *radiare* 'to beam, shine' from Arabic *zand, zind* 'fire, rod' where /z & n/ merged into /t/, a reversed Arabic *naar(at), nawwar* (v), *tanweer* (n) 'fire, light' or noor, *inarat* 'light' in which /l/ turned into /d/, *qada2* 'give light' via /q/ turning into /t/ and /2/-loss, or rahaj 'glow' where /h & j/ merged into /d/.

**Ray** (*rayon*) from Arabic *naar* 'fire' or noor 'light' where /n & r/ merged.

**Shine** from Arabic *sana* 'light' where /s/ changed to /sh/, a reversed *naaSi3* 'shine' via /3/-deletion, or *sha33* 'shine' in which /3/ turned into /n/.

**Show** from Arabic *sha33* 'shine' via /3/-loss, *shaaf* 'see' in which /f/ turned into /w/, or *zaha, zahoo* (n) 'beam, glow, happiness' where /z & h/ merged into /sh/.

**Spark** from a reordered Arabic *qabSa(t), qabas* 'spark' via the change of /q/ to /k/ and /f/-insertion or *barq* 'lightening' where /q/ split into /s & k/.

**Smoke** from a reordered Arabic *sa2am* 'blackness, smoke' or *sukhaam* 'smoke, black dirt' which /2 & kh/ developed into /kl/ (cf. *scum*).

**Scorching** from Arabic *2aariq* 'burning' where /2/ became /sl/ while /q/ split into /kl/ and /ch/.

**Soot** from Arabic *sawaad, sood* 'blackness' where /d/ became /l/.

**Stove** (*staff*) 'heater' from Arabic *Soba(t)* 'stove' where /b/ became /v/ or *waqood* 'fuel, heat' via reversal and changing /q & d/ to /s & t/ each.

**Sun** (*solar*) from Arabic *shams* 'sun' via the merger of /s & sh/ into /s/ and the change of /m/ to /n/.

**Theology** (*deity, divine, divinity, day, deus, Zeus*) via Greek 'light' from Arabic *Daw* 'light' via the passage of /D/ into /d or t/ and /w/ into /l/ (Jassem 2012b).

**Thermo** (*thermal*) 'heat' from Arabic *2aami* 'heat' where /2/ became /th/ and /t/ was inserted or *jamra* 'spark' via reversal and the change of /j/ to /th/ (cf. *warm* below).

**Torch** 'twisted thing' from Arabic *Ta3j* 'twist' where /3 & j/ became /r & ch/ each, *Tarq* 'beat, beat' in which /q/ changed to /ch/, *siraaj* 'torch' in which /s/ became /t/, or a reordered *laTTaash* 'torch' where /l/ passed into /t/.

**Warm** (*warmth*) from Arabic *2aami, 2amaawat* 'hot, heat' via the change of /2/ to /w/ and /t/-insertion.

To sum up, the total number of *fire* words amounted to 55 or so, all of which have direct Arabic cognates. That is, the percentage of cognates is 100%.

### 4. Discussion

*Language in India* www.languageinindia.com ISSN 1930-2940

13:3 March 2013

Zaidan Ali Jassem

The Arabic Origins of "Air and Fire" Terms in English, German, and French: A Lexical Root Theory Approach
In this discussion, the relationship of the present study to the previous ones and the relevance of the lexical root theory to the data at hand will be highlighted. The results show that air and fire terms in Arabic and English are true cognates, whose differences are due to natural and plausible causes of linguistic (phonetic, morphological and semantic) change. Thus, the above results agree with Jassem's (2012a) investigation of numeral words, common religious terms (Jassem 2012b), pronouns (Jassem 2012c), determiners (Jassem 2012d), verb to be forms (Jassem 2012e), inflectional 'gender and plurality' markers (2012f), derivational morphemes (2013a), negative particles (2013b), back consonants (2013c), and water and sea words (2013d) in English, German, French, Latin, Greek, and Arabic which were found to be not only genetically related but also rather dialects of the same language. In all, the results show that there is no clearer proof due to natural and plausible causes of deletion, reversal, reordering, merger, split, insertion, mutation, shift, assimilation, dissimulation, palatalization.

Language in India www.languageinindia.com ISSN 1930-2940
13:3 March 2013
Zaidan Ali Jassem
The Arabic Origins of "Air and Fire" Terms in English, German, and French: A Lexical Root Theory Approach
These three factors—spirantization (velar softening), duplication, syllable loss, resyllabification, consonant cluster reduction or creation and so on. Of all, the commonest are reversal, reordering, split, and merger, some of which may be due to Arabic script direction change from right to left at the hands of the Greeks. The results (3.) are replete with such examples. (For a detailed outline of the major sound changes in this area, see Jassem (2013c)).

It can also be clearly seen that sound change proceeds in three different courses (Jassem 2012a-f, 2013a-d). First, it may be multi-directional where a particular sound may change in different directions in different languages at the same time. For example, Arabic ree2 'wind' led to reek and air via reversal and the change of /2/ to /k/ in English, French, Latin, Greek, and so on (3.1 above). Secondly, it may be cyclic where more than one process may be involved in any given case. The changes from Arabic hawaa' 'air' to English wave, for example, included (i) turning /h/ into /w/ and (ii) /w/ into /vl/, (iii) /l/-loss, and (iv) vowel shift. Finally, it may be lexical where words may be affected by the change in different ways—i.e., lexical diffusion (see Bergs and Brinton 2012; Jassem 1993, 1994a, 1994b for a survey). That is, a particular sound change may operate in some words, may vary in others, and may not operate at all in some others. For example, the different forms wind, vent, ventilation in English is a case in point (3.1 above). These three factors make Arabic, English, German, and French mutually unintelligible although the words have the same roots (Jassem 2012a-b).

All the sound changes above exhibit naturalness and plausibility; for example, the change of /2/, a voiceless pharyngeal fricative, in Arabic ree2 'wind, smell' to /k/, a voiceless velar stop in reek, is plausible which would be natural if it were for /h/ as both are closer by place and voice (cf. Jassem 2012b). Likewise, the change of /j/ in hawj 'wind' to /zl/ in haze is plausible; the change of nash'at 'birth, early rain' or nitaaj 'birth, produce' to nasci, nature is natural and plausible. (For further detail, see Jassem (2012a-f, 2013a-b).)

Morphologically and grammatically, Jassem (2012f, 2013a) described the main inflectional and derivational affixes, most of which recur here to which the curious reader can be referred. In fact, all such differences do not alter the meaning of the root itself and so they can be ignored altogether outright.

Finally, the following lexical patterns recurred on the semantic plane, all of which were reported in Jassem (2012a-f, 2013a-d). Almost all the words exhibited lexical stability such as air, wave, avian, breeze, fan, wind, the cognates of all of which still retain the same or similar forms and meanings in both Arabic and English. Others showed lexical shift like cyclone, cycle, whose meaning shifted from Arabic lakka(t) or 3ajal 'round-shaped object' to its
current meaning in English as 'wind type, cycle'; *twister* has the same story which moved from *Ta3jat, Ta3wajat* 'twist, bend' to *wind type*. Lexical split took place in words like *breath, breeze*, which came from Arabic *bard(at)* 'cold (air)' through different phonetic processes; *blaze, blast, blizzard* derive from Arabic *lahab* 'blaze' via different routes of sound change (3.1 above). Lexical convergence was very common as in *air* which might derive from Arabic *air, iar, uiar* 'air', *raiya* 'gentle wind' in reverse, or *ree2* 'wind' via reversal and */2/-loss (see 3. above). There are many more such examples in which convergence is due to the existence of several formally and semantically similar words in Arabic such as the words for *air* above. Lexical multiplicity occurred often in words like *wave* 'air; point to; reveal' which derive from Arabic *hawaa* 'air', *wa2ee* 'revelation' where */2/ became */nl/, and *awma'a* 'point to' where */m/ changed to */nl/; *wind, wound* (v & n) are other examples. Like convergence, multiplicity is due to formal and semantic similarity between words. Finally, lexical variability was apparent in the presence of variant or alternative words for *air* and *fire* in both Arabic and English, which are utilized in different ways. For example, English *air, wind, wave, ventilation, breeze, reek, perfume, fan* are a few such examples (see 3.1 above); Arabic *fire* has ten such variants (Altha3alibi 2011) whereas *air* has countless (Ibn Seedah 1996).

Concerning the relational procedure, many of the above lexical cognates are both formally and semantically similar, for example, *air* and Arabic *air, iar* 'air' or *raiya* 'air' in reverse; *dew* and Arabic *Tal* 'dew' where */T & l/ became */d & w/ each. Some, however, are formally different but semantically similar such as *air* and *reek*, both of which might derive from Arabic *ree2* 'wind' or *2arr* 'hot air' via different sound changes where */2/ turned into */k/ in one but */Ø/ in the other. Others still are formally similar but semantically different such as *blaze, blast,* and *blizzard* in English, all of which derive from similar Arabic cognates: i.e., *lahab* 'blaze', *shalhoob* 'spark', and *balaj* 'sound-break' via different sound changes (see 3.1 above). Thus it can be seen that Arabic cognates can account for the formal similarities and/or differences between English words themselves.

In summary, the foregoing *air* and *fire* words in Arabic, English, German, French, Latin, and Greek are true cognates because they have similar forms and meanings. So it can be safely said that Arabic is their origin all for which Jassem (2012a-f, 2013a-b) offered some equally valid reasons such as lexical multiplicity and variety. It is true that English, German, French, and Latin too have lexical variety and multiplicity but not to the same extent as Arabic does. One has just to compare the number of *air* and *fire* words in English dictionaries.

**Language in India** www.languageinindia.com ISSN 1930-2940
13:3 March 2013
Zaidan Ali Jassem
The Arabic Origins of "Air and Fire" Terms in English, German, and French: A Lexical Root Theory Approach

[648]
and thesauri and Arabic ones (e.g., Ibn Seedah 1975; Ibn Manzoor 2012; Altha3alibi 2011). In short, Arabic is comprehensive whereas English is selective.

6. Conclusion and Recommendations
The main findings of this paper can be summed up as follows.

i) The different 80 air and 55 fire words or so in English, German, French, Latin, Greek, and Arabic are true cognates due to their similarity in form and meaning.

ii) The different forms amongst such words within and across those languages resulted from natural and plausible phonological, morphological and/or lexical factors or conditions (cf. Jassem 2012f, 2013a-d). Reversal, reordering, split, and merger were very common sound changes.

iii) The main recurrent lexical patterns were stability, convergence, multiplicity, shift, and variability; convergence and multiplicity were rife due to formal and semantic similarity between Arabic words from which English words came.

iv) The multiplicity and variety in Arabic air and fire terms compared to those in English and European tongues point to their Arabic origin in essence.

To conclude, the lexical root theory has proven to be applicable to and adequate for the analysis of the close genetic relationships between Arabic, English, German, French, Latin, and Greek air and fire words. To support these findings, this work agrees with Jassem's (2012a-f, 2013a-d) calls for further research into all language levels, especially vocabulary. Moreover, the application of such findings to language teaching, lexicology and lexicography, translation, cultural (including anthropological and historical) awareness, understanding, and heritage is badly needed, which will be very useful, indeed, for the promotion of linguistic and cultural understanding, cooperation, acculturation, and peaceful coexistence amongst peoples of the world.

Acknowledgements
I wish to thank everyone who contributed to this research in any way worldwide. For my supportive and inspiring wife, Amandy M. Ibrahim, I remain indebted as ever.

References


---

**Language in India** www.languageinindia.com ISSN 1930-2940

13:3 March 2013

Zaidan Ali Jassem

The Arabic Origins of "Air and Fire" Terms in English, German, and French: A Lexical Root Theory Approach

650


==========================================

Zaidan Ali Jassem  
Department of English Language and Translation  
Qassim University  
P.O.Box 6611, Buraidah, KSA  
zajassems@gmail.com

---

*Language in India* [www.languageinindia.com](http://www.languageinindia.com) ISSN 1930-2940  
13:3 March 2013  
Zaidan Ali Jassem  
The Arabic Origins of "Air and Fire" Terms in English, German, and French: A Lexical Root Theory Approach  
651