



An Attempt of Exploration of Shakespeare's Mental Lexicon

Kristina Kostova

Department of English language and literature, Faculty of Philology, University "Goce Delcev" - Stip, Lithuania.

Email: kristina.kostova@ugd.edu.mk

Abstract

The primary objective of this paper is to delve into the possible foundations and approximations of William Shakespeare's mental lexicon—the internalized vocabulary that shaped his linguistic creativity. While a comprehensive understanding of any individual's mental lexicon is inherently elusive, especially in the case of historical figures, this study aims to offer a plausible reconstruction based on textual evidence. Since most empirical methods for examining mental lexicons require interaction with living subjects, this research adopts a literary and linguistic approach. By analyzing Shakespeare's extensive and inventive use of language, the paper explores how his choice of words reflects cognitive and cultural influences. Special attention is given to his incorporation of Latinisms and other borrowings, as well as his remarkable ability to coin new terms. Through this exploration, the study seeks to shed light on the linguistic richness and cognitive processes that may have underpinned Shakespeare's unparalleled contribution to the English language.

Keywords: Coinage, Mental lexicon, Shakespeare, Shakespeare's vocabulary.

1. Introduction

To try to unravel the complexities of anyone's mental lexicon is a dire and difficult task. It is even more so when the attempt in question is to assess the mental lexicon of a person who is no longer alive. However, it is of great importance to linguists to delve into the evaluation of the vocabulary and mental lexicon of the English bard and one of the greatest writers in history, William Shakespeare. Between 1591 and 1611 Shakespeare wrote thirty-seven plays, two long narrative poems and 154 sonnets. His literary works are a testament to his consistent desire to experiment with linguistic resources and in particular with the lexicon. The aim of this essay is to attempt to provide an insight into what might be considered Shakespeare's own mental lexicon.

It is obvious that many of the methods used nowadays for the evaluation and successful assessment of one's mental lexicon are meant to be carried out with the involvement of living people. In this essay an attempt will be made to assess and evaluate the mental lexicon of the Bard, an operation which will be based solely on the texts of his literary works. Such an attempt would not result in the complete exploration of Shakespeare's mental lexicon, but it is important to showcase a glimpse of it, as is provided in his texts.

The assessment of Shakespeare's mental lexicon will be carried out through a combination of corpus-based approach and discourse analysis. The way in which Shakespeare used words, their meaning, as well as the coinage of new words is of great interest when assessing his mental lexicon. Therefore, examples will be provided of the ways in which Shakespeare used Latinisms, archaisms, as well as the combination of old and new words. It is important to showcase the usage of such words in different literary genres, as well as certain specific phrases that connote distinction. Of special importance are the Shakespeare's coinages which are used nowadays, since they are a testament to the innovativeness, creativity, and linguistic importance of the Bard.

2. Literature Review

For an exploration of Shakespeare's mental lexicon to be established, the connection between the theoretical framework and Shakespeare's literary works must be found and explained. As Jean Aitchison explains in *Words in the Mind. An Introduction to the Mental Lexicon*, the mental lexicon is the human word-score. Jarema and Libben define the mental lexicon as "the cognitive system that constitutes the capacity for conscious and unconscious lexical activity." There are many methods which could provide for a successful assessment of one's mental lexicon, such as testing lexical decisions, naming latency, word monitoring, cross-modal priming, form priming, morphological priming, etc. However, all of these tasks should be performed by living persons. In the attempt to access and assess Shakespeare's mental lexicon, that would obviously be impossible, which is why such an assessment must be carried out differently and based solely on the texts of his literary works. As Aitchison points out, the number of words known by an educated adult is unlikely to be less than 50,000 and may be as high as 250,000. While it cannot possibly be determined with what speed Shakespeare could locate the large number of

words which were part of his mental lexicon, what can easily be provided is the number of words he himself used in his literary works.

Certainly, any attempt to access Shakespeare's mental lexicon could not result in its complete exploration, not only because Shakespeare has not been alive for more than four centuries, but also because the content of anyone's mental lexicon is by no means fixed. People add new words all the time, as well as altering the pronunciation and meaning of existing ones. Humans, however, do not just add on words from time to time, in between utterances. They often create new words and new meanings for words from moment to moment, while speech is in progress. (Aitchison). Furthermore, it has been established that of all aspects of language, the lexical component changes the most over the lifespan, with the acquisition of new words extending throughout adulthood. In that sense, our mental lexicons are never fixed and never cease being linguistic capacities. In lexical activities, not only are new words encountered, but also many new words are created. This capacity deserves to have central status in any characterization of the mental lexicon (Jarema, Libben). A complete assessment of anyone's mental lexicon is far from likely. In the introduction to *The Mental Lexicon. Core Perspectives*, the editors express their belief that it is hubris and/or naïveté to believe that such a goal is achievable. The multi-faceted structure of language is represented in distressingly complex ways neurologically. The idea that somewhere there is a central place (the mental lexicon) where it all comes to together seems both highly unlikely and conceptually unnecessary (Jarema, Libben). It has been pointed out in *The Mental Lexicon. Core Perspectives* that the mental lexicon as an intervening variable: a short-hand and sometimes useful way of conceiving and discussing a system that is in fact dynamic and far too complex to be fully captured by any static representational metaphor.

The attempt to access Shakespeare's mental lexicon is based on the theoretical frame provided in *Words in the Mind. An Introduction to the Mental Lexicon* and *The Mental Lexicon. Core Perspectives* and enriched with the corpus of his own literary works, which serve as source material for the specific vocabulary in question. As Mary Thomas Crane elaborates in *Shakespeare's Brain. Reading with Cognitive Theory*, the barriers to exploring the mental lexicon of an author such as Shakespeare as one material source for his texts are mostly due to the fact that he is a long-dead author who is not available to us in any living, material form. However, any attempt to take into account even a living author must usually slide into talk about the immaterial "concepts" or "intentions" behind the material text that we possess, which is why exploring Shakespeare's mental lexicon as exposed in text may be considered a valuable and justified attempt.

It is worth noting that when exploring the texts of Shakespeare's literary works, especially his plays, one must always bear in mind that they were results of a collaborative cultural process. Thus, when assessing Shakespeare's mental lexicon via the vocabulary found in his literary works, there must be an awareness of the implications of the collaborative nature of textual production in the Elizabethan and Jacobean theatre and the preparation of printed texts of the plays. However, even though the literary text of a Shakespearean play was most probably a result of the contributions of many people, it still remains a fact that every single word that literary text was physically put there because of the executive decision made by Shakespeare. And if, in the multiple texts of a play attributed to Shakespeare, the same word appears in every instance of a particular line, there is a good chance that there was some sort of material connection between Shakespeare's brain and that word. (Thomas Crane). Thus, the validity of accessing Shakespeare's mental lexicon via his written texts remains. The literature necessary for this exploration is a combination of the theory behind the mental lexicon and Shakespeare's literary works. The focus is on the specificities of the vocabulary found in Shakespeare's literary works.

3. Research Methodology

The assessment of Shakespeare's mental lexicon will be carried out through a combination of corpus based approach and discourse analysis. It is important to provide insight into Shakespeare's use of language on various levels, so the focus will mostly be on words, but also on phrases, as well as certain metaphors.

For the aims of this essay, Shakespeare's works are accessed as a whole in their electronic format which constitutes a corpus of almost 900,000 words. Based on the information supplied by opensourceshakespeare.org, the complete number of words in his plays is 835,997 in his 37 plays, whereas the number of words per play is provided as well. The corpus-based data is also important when making a distinction between the usages of words in different genres of his dramas.

Discourse analysis will be used as well. Discourse analysis covers a wide range of activities. Discourse Analysis is an umbrella term for a number of Qualitative Research methods and is broadly involved in studying and analysing the use of languages, as put forward by Hogdes et al (2008: pp 250). Gee (1999) has described language as serving two functions, to support the performance of social activities and social identities and to support human affiliation within cultures, social groups, and institutions.' Locke (2004) has quoted Norman Fairclough in the beginning, to describe discourse analysis as aiming:

"to systematically explore often opaque relationships of causality and determination between (a) discursive practices, events and texts, and (b) wider social and cultural structures, relations and processes; to investigate how such practices, events and texts arise out of and are ideologically shaped by relations of power and struggles over power." (2004)

Language is at the heart of critical discourse analysis (Locke 2004). Discourse Analysis takes an interest in the ways in which linguistic forms are used in various expressions and manipulations of power. (Wodak 2007) Language possesses a unique adaptability, allowing us to tailor our communication to suit different contexts and situations.. (Gee 1999: 11) For Critical Discourse Analysis, Wodak (2001) claims, language is not powerful on its own – it gains power by the use powerful people make use of it

4. Results and Interpretation

Shakespeare's vocabulary has been the source of fascination for many linguists. Otto Jespersen said, "Many scholars consider Shakespeare's vocabulary to be among the most extensive ever used by a single author." (Jespersen, 1905). Many respected scholars have said that his vocabulary "dwarfed all others," whereas the great Victorian philologist F. Max Muller claimed that Shakespeare displayed a greater variety of expression than

probably any writer in any language. It is obvious that Shakespeare himself had an appreciation of the fact that his best means of communication was his vocabulary, i.e. the many words he knew with their multiple interpretations. That The vocabulary employed by Shakespeare demonstrates both diversity and depth. is shown in the different ways his characters use his vocabulary.

In the theatre, “the actor relies on tone, semantic drive, narrative context and body language to communicate the sense of unfamiliar terms and phrases, but on the page such words become more confusing.” (McDonald, 1996). Shakespeare’s own vocabulary seems to have been particularly large with a more ample assortment of specific topics and terms than the average modern reader can manage. But Shakespeare used a lot of words in his plays that would have appeared strange even to his own audience, mostly because he invented words that he needed for specific purposes or used them in a unique way.

Dictionaries did not exist in the Elizabethan period, nor was there a standard accepted norm of the language. This allowed for a vague or more relaxed approach to the meanings of the words used by writers. Shakespeare was not as concerned with grammar and the meaning of individual words as he was with sound or rhythm. Sound, rhythm and rhetoric had a special relevance. When Shakespeare wrote his plays, he was always concerned with several aspects of what he wrote, which had nothing to do with the plot: iambic pentameter, particular rhythmic effects, a need for emphasis, and questions of variety.

Shakespeare’s vocabulary is characterized by the combination of old and new words. Linguists regard two principal categories in Shakespeare’s vocabulary: the Anglo-Saxon and the Latin words. The English language was prominently enriched during the Elizabethan period, mostly was due to the introduction of borrowings from Greek and Latin. The classical Latin had been treated as “an augmentation of the spoken English of Shakespeare’s time.” (Hulme, 1977). Anglo-Saxon words, particularly compound words, became stylistically either neutral or low and they are found in insults, because they seemed to reflect a more colloquial register.

Most of the newly invented words by Shakespeare are Latinisms, archaisms and novel compounds, particularly applied to the high style. In *King Lear* there is a great number of Renaissance Latinisms such as “sulphurous,” “ingrateful,” “rotundity,” “germen,” “physic,” “pomp,” “expose,” etc. There are certain archaisms that Shakespeare uses, albeit with lower frequency: “brook” (endure), “clepe” (call), “dole” (sorrow), “hardiment” (valour), and “wight” (person) among others. Shakespeare uses quite a lot of compounds in his works: “rose-checked,” “sober-suited,” “wolvish-ravening,” “thought-executing,” “all-shaking,” etc. (McDonald, 2002). Most of Shakespeare’s compounds are new creations.

Table 1. (Damascelli) the data concerning the distribution of the Latinate neologisms in comedies, histories, tragedies, and poetic compositions is illustrated.

Genre	No. of words	No. of Latinate words	Latinate words per 1,000 words
Comedy	327,377	192	0.59
History	260,332	106	0.41
Tragedy	326,582	287	0.88
Poetry	50,385	41	0.81

The data shows that there is a difference in usage between tragedy and poetry, and comedy and history. The use of Latinate neologisms is more common in tragedies (0.88). Poetic compositions (0.81), comedies (0.59), and histories (0.41) follow, although the smallest number of Latinate items are found in histories. The data suggests that Shakespeare’s tendency was to mainly enrich his tragedies and poems with Latinate neologisms. A difference of occurrence in history plays and comedies is also shown and highlights that such devices are more frequently used in comedies. Scholars commonly agree when they state that some peculiarities of Shakespeare’s language are to be attributed to specific communicative needs and such distribution of Latinate neologisms may reflect such expectations. (Damascelli)

Shakespeare’s heroes use words that enhance their eloquence: Hamlet’s “malefactions” and “consummation”; Richard II’s “discomfortable cousin”; Romeo’s “unsubstantial death is amorous”; Macbeth’s “multitudinous seas incardine”; Lear’s “cataracts and hurricanoes” etc. Shakespeare often chose verbal elements that connote distinction. The hero’s speech is distinguished in many scenes from the language that is spoken around them.

There are many words which were created by Shakespeare and are still used nowadays in common speech. Estimates as to exactly how many words Shakespeare personally added to the English language vary, but there is general agreement that we still commonly use 1,700 words that he created (McQuain and Malless, 1998). Among those words, quite notable are: “bare-faced,” “critical,” “assassination,” “dwindle,” “bump” and many others. (Gordon, 1928; Baugh, Cable, 1978). The evolution of Middle English to Early Modern was shaped by writers such as Shakespeare, who greatly added to vocabulary by not only coining completely original words but by changing verbs to nouns (or vice-versa), connecting words together in new ways, or adding suffixes and prefixes to existing words (Mabillard, 2000). Below is a list of words that are familiar and often used nowadays, as well as the quote and play in which they first appeared:

- Advertising (adjective): “advertising and holy to your business”; *Measure for Measure*
- Amazement (noun): “wild amazement hurries up and down”; *King John*
- Bedroom (noun): “then by your side, no bed-room me deny”; *A Midsummer Night’s Dream*
- Drug (verb): “I have drug’d their possets”; *Macbeth*
- Excitement (noun): “a father kill’d, a mother stain’d, / excitements of reason and my blood”; *Hamlet*
- Eyeball (noun): “make his eyeballs roll”; *A Midsummer Night’s Dream*
- Fashionable (adjective): “Time is like a fashionable host”; *Troilus and Cressida*
- Gloomy (adjective): “darkness and the gloomy shade of death”; *1 Henry VI*
- Gossip (verb); “I’ll gossip at this feast”; *The Comedy of Errors*
- Laughable (adjective): “the jest be laughable”; *The Merchant of Venice*
- Obscene (adjective): “encounter that obscene and most prepost’rous event”; *Love’s Labor’s Lost*

- Puking (verb): “Mewling and puking in the nurse’s arms”; *As You Like It*
- Rant (verb): “I’ll rant as well as thou”; *Hamlet*
- Skim milk (noun): “I could divide myself and go to buffets, for moving such a dish of skim-milk with so honourable an action!”; *1 Henry IV*
- Swagger (verb): “What hempen home-spuns have we swagg’ring here, / so near the cradle of the Fairy Queen?”; *A Midsummer Night’s Dream*
- Undress (verb): “undress you, and come now to bed”; *The Taming of the Shrew*
- Worthless (adjective): “worthless threats”; *3 Henry VI*
- Zany (noun): “some carry-tale, some please-man, some slight zany”; *Love’s Labor’s Lost*

These serve as an illustration of Shakespeare’s creativeness and ingenuity, whereas in certain instances his adaptations of existing words can be recognized. In today’s modern English, there are a lot of expressions which are used daily, but were firstly introduced by Shakespeare: “a foregone conclusion,” “head and front,” “lush in my mind’s eye,” “the very pink of courtesy,” “the way madness lies,” etc.

Another linguistic aspect of the Elizabethan period which is of great importance is the existence of variants. The verbs used in Shakespeare’s texts show different variants, especially in strong verbs, which could form the past with their irregular form and adding –ed. At that time, both forms were acceptable. For instance, “climbed” and “clomb” were accepted. This is also the case with the third person singular in the Present Simple tense. It was possible to use both –eth and –es as endings. (Taylor, 1976). This provided Shakespeare with the variety he needed for the expressions in his plays.

In order to understand Shakespeare’s vocabulary, one must take into consideration the history and the cultural context in which he wrote and created his literary works, since words do not exist in isolation but in a particular context. Therefore, the interpretation in Shakespeare’s works depends on the particular function and intention of the context. (Onions. 1986; Dent, 1981; Brook, 1976.)

As Mary Thomas Crane elaborates in *Shakespeare’s Brain. Reading with Cognitive Theory*, critics have acknowledged that Shakespeare had an unusually large mental lexicon that was most organized around particularly strong image-based mental models. He was also particularly adept at coining “new” words that came to be accepted as additions to the larger cultural lexicon and was fascinated by the forms of homonymy that yield puns. It is also evident that Shakespeare seemed to have been intrigued by polysemy, more “aware” (consciously or unconsciously) than most people of prototype effects, semantic webs, and meaning chains, and interested in exploring the multiple meanings of single words (famously, nothing and honest) as well as the nature of cultural metaphors of various kinds (Thomas Crane).

Shakespeare’s literary works are a testament to his fascination with words, the ways they can be used in, as well as the ways in which cultural structures could shape and change their meanings. His plays consist in explorations of cognitive and cultural forces that determine the meanings of words and the shape of subjectivity (Thomas Crane). Shakespeare’s literary texts abound in innovation, creativity, coinage, as well as patterns of word use that provide an insight to what can be deemed the organizational feature of his mental lexicon. By looking at the texts of Shakespeare’s literary works and identifying the words and phrases he invented and used, it is possible to have a firmer grasp of knowledge regarding Shakespeare’s mental lexicon.

5. Conclusion and Recommendations

This essay was an attempt to further investigate the specificities of what most probably was Shakespeare’s mental lexicon. The use of computational tools contributed in the detection of certain linguistic phenomena, whereas the meanings of certain phrases were used to showcase the specific use of language in social activities, in the wider social and cultural structures, relations and processes. Shakespeare’s mental lexicon was evaluated by means of an exploration of the vocabulary he used in his literary works, especially the vocabulary which demonstrates certain specificities.

The sum of words used in Shakespeare’s works amounts to almost 900,000, however not all of them have the same level of importance. Shakespeare’s innovativeness and creativity in coinage and metaphor uses is of interest, since he created his works in a language which, at the time, did not have a standard accepted norm. Shakespeare was more concerned with rhythm and rhetoric and not as much with grammar and meaning, which might be considered as another factor which contributed to the proliferation and profusion of words.

The way Shakespeare uses Latinisms, archaisms and novel compounds as opposed to his usage of words of Anglo-Saxon origin is also significant. Words of Anglo-Saxon origin were used in what he deemed a more colloquial register, whereas his stylistically superior parts of the texts abound in Latinisms and novel compounds. Shakespeare had a tendency to enrich his literary works with Latinate neologisms, most of which were used for the first time in his own plays.

Many words were created by Shakespeare and are still used nowadays in common speech, even though most people are not aware that those words were practically invented by Shakespeare. Such words are important, because they not only illustrate the richness of his mental lexicon, but also the influence he has on the development of English.

The words Shakespeare uses in his literary works cannot be fully understood in isolation. One must also consider the historical and cultural context in which he used these words in the creation of his literary works. By identifying the words Shakespeare coined, as well as the specificities of the words and phrases that he used and introduced in a completely new context in his literary works, a better understanding of Shakespeare’s mental lexicon can be provided.

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