# Subhuman primates in Shakespeare's oeuvre

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Since this year marks the 450th birth anniversary of William Shakespeare (1564–1616), I provide a synopsis on how primatology-linked words had been used by him. Ape, monkey, baboon and marmoset are the four words relating to subhuman primates which occur in Shakespeare's oeuvre. Inferences derived were: (1) Shakespeare was unaware of the existence of 'real apes' as we understand now. Thus, his cavalier use of the 'ape' word for monkeys can be exempted. The word 'monkey' was gaining prominence as a popular generic word in English, only just before he began writing his first plays in 1590. (2) Occasionally, he had used either 'ape' and 'monkey' or 'baboon' and 'monkey' combinations adjacently. (3) 'Nape' was an earlier form of 'ape' in Middle English. In four occasions, Shakespeare had used the word 'jackanapes' as a contemptuous term. (4) True to prevailing period trends, Shakespeare also made use of ape or monkey motifs for contempt, endearment, imitativeness and sorcery.

The genius of William Shakespeare (1564-1616) had been the subject of numerous studies in medical sciences for the past century. His plays and sonnets have been analysed for contents in varied fields of medicine, such as dermatology<sup>1,2</sup>, general medicine<sup>3-9</sup>, genetics<sup>10</sup>, gynaecology<sup>11</sup>, neurology<sup>12</sup>, ophthalmology<sup>13</sup>, proctology<sup>14</sup>, psychiatry<sup>15–17</sup>, psychoanalysis<sup>18</sup>, rheumatology<sup>19,20</sup>, sleep medicine<sup>21–24</sup>, surgery<sup>25,26</sup> and thanatology<sup>27-29</sup>. Kail<sup>4</sup> had asserted that in his 37 plays, Shakespeare had practically covered all the diseases and drugs that were known during his era. The fact that his son-in-law John Hall (husband of Susanna, daughter of Shakespeare) was a physician might have helped Shakespeare in paying attention to medical themes.

However, with few exceptions, Shakespeare's oeuvre had not been dissected equivalently for descriptions on natural science themes. One reason could be that, during his era, contributions by his peer scientists to natural sciences were insignificant. A handful of papers have appeared on Shakespeare's treatment of plants<sup>30,31</sup>, though by training and practice he was not a botanist. In Table 1, I provide a select list of 13 scientistphysician contemporaries of Shakespeare from Europe. Six among the 13 were from Italy; and three (Cesalpino, Aldrovandi and Alpini) were the only naturalists who studied fauna and flora. As Bentley<sup>32</sup> had observed, 'In Jacobean England the man of science enjoyed little admiration or respect, he was popularly feared or laughed at as a magician or an alchemist, his biography was seldom written'. What is notable was that, among those listed in Table 1, many were astronomer-mathematicians and

they were harassed by the Church authorities for attempting to bring a paradigm shift in scientific thinking. Also, none were recognized for their contribution to zoology.

Nevertheless, Shakespeare had used words like 'ape' and 'monkey' in his lines for some of his famous characters in plays. Here are five examples<sup>33</sup>.

Antony: 'Villains, you did not so when your vile daggers

Hacked one another in the sides of

You showed your teeth like apes, and fawned like hounds,

And bowed like bondmen, kissing Caesar's feet'

[Julius Caesar, Act 5, Scene 3].

Hamlet: 'Ay, sir, that soaks up the King's countenance,

his rewards, his authorities. But such officers do the

King best service in the end. He keeps them, like an

Ape an apple in the corner of his jaw, first mouthed to

be last swallowed'

[Hamlet, Act 4, Scene 3].

Isabella: 'Most ignorant of what he's most assured,

His glassy essence, like an angry ape Plays such fantastic tricks before high heaven

As makes the angels weep, who, with our spleens

Would all themselves laugh mortal'
[Measure for Measure, Act 2, Scene 2].

Table 1. Shakespeare's scientist-physician contemporaries: a select list

Scientist-physician <sup>a</sup>	Lifespan	Region/country	Speciality
Gerardus Mercator	1512–1594	Flanders (modern Belgium)	Cartography
Andrea Cesalpino	1519-1603	Italy	Physician/naturalist
Ulisse Aldrovandi	1522-1605	Italy	Naturalist
William Gilbert	1540-1603	England	Physician/physicist
Tycho Brahe	1546-1601	Scania (then in Denmark)	Astronomer
Giordano Bruno	1548–1600	Italy	Astronomer/ mathematician
John Napier	1550-1617	Scotland	Mathematician
Prospero Alpini	1553-1617	Italy	Physician/botanist
Santorio Santorio	1561-1636	Italy	Physiologist
Galileo Galilei	1564–1642	Italy	Astronomer/ mathematician
Johannes Kepler	1571–1630	Germany	Astronomer/ mathematician
William Harvey	1578-1657	England	Physician
Pierre de Fermat	1601–1665	France	Mathematician

<sup>&</sup>lt;sup>a</sup>Arranged according to chronological order of birth.

Oberon: 'I'll watch Titania when she is asleep

And drop the liquor of it in her eyes.

The next thing then she waking looks upon –

Be it lion, bear, or wolf, or bull, On meddling monkey, or on busy ape – She shall pursue it with the soul of love' [A Midsummer Night's Dream, Act 2, Scene 1].

Tubal: 'One of them showed me a ring that he had of your Daughter for a monkey.'

Shylock: 'Out upon her! Thou torturest me, Tubal. It was

My turquoise. I had it of Leah when I was a bachelor.

I would not have given it for a wilderness of monkeys'

[The Merchant of Venice, Act 3, Scene 1].

Crystal and Crystal34 indicate that Shakespeare had used about 29,066 different words, if variants of the same word are counted separately, in his canon. Ignoring such variations, Shakespeare's vocabulary may range from 17,000 to 20,000. Previously, Strunk<sup>35</sup> and Hall<sup>36</sup> had focused on Shakespeare's specific use of the word 'ape' in plays Romeo and Juliet and Measure for Measure respectively. Excluding these reports, to the best of my knowledge none had attempted to study Shakespeare's treatment of subhuman primates in totality. Since this year marks the 450th birth anniversary of Shakespeare, I provide a synopsis on how primatologylinked words (as we currently understand) had been used by him.

#### Method

Shakespeare's oeuvre<sup>33</sup>, lexicon<sup>37</sup> and characters<sup>38,39</sup> were studied for primatology-linked words to identify how monkeys were portrayed in his canon.

## Results and discussion

During Shakespeare's days 'ape' was the preferred term for subhuman primates. 'Monkey' was first introduced in the late 16th century and it might have been derived from a German proper name Moneke; the Italian variant of which was

'Monna'<sup>40,41</sup>. As to the confusion that existed with the words 'ape' and 'monkey', Morris and Morris<sup>42</sup> had observed:

'History has not been kind to these words. They have been shunted about so much in the past that it is impossible to use them in a single exact way...In earlier times the great apes of today were comparatively unknown, and Barbary apes (now classified as monkeys) were the apes. At different times and at different places the emphasis has shifted and the names have changed their meaning.'

Table 2 provides a listing on primatology-linked words which occur in Shakespeare's oeuvre. Four relevant terms can be identified namely, ape and its variant forms, monkey, baboon and marmoset. Among these, specific mention of marmoset (Figure 1; a small Neotropical monkey with distinguished large ear tufts, body length ~18.5 cm and tail length ~27.5 cm) is interesting. Caliban's (Prospero's savage slave) lines include:

'I prithee, let me bring thee where crabs grow,

And I with my long nails will dig thee pig-nuts,

Show thee a jay's nest, and instruct thee how

To snare the nimble marmoset. I'll bring three

To clustering filberts, and sometimes I'll get thee

Young seamews from the rock'

[*Tempest*, Act 2, Scene 2, lines 166–171].

The plot's setting was in a lonely, mysterious island, inhabited by Caliban (a savage and deformed slave), who represented untamed wild man. The Tempest was dated to 1611. The Virginia Company (London) had its first settlement in Bermudas in 1609. Presence of marmoset in Bermudas in those days could be attributed to the fact that they were introduced as pets by some tribals like Caliban, characterized on trickling accounts about West Indian savages. It has been suggested that the name Caliban was an anagram of the word 'cannibal'39. Thus, Shakespeare's use of 'nimble marmoset' was a novelty, and a realistically appropriate prop for Caliban character.

Apart from this solitary example of marmoset, Shakespeare's other references to subhuman primates were to Old World monkeys, especially Barbary apes (monkeys) and baboons. This was the accepted classification of primates in medieval era<sup>42</sup>. In his introduction to *The* Life of Primates, Schultz<sup>43</sup> recorded, 'In Western Europe during the middle ages and the renaissance African and Asian monkeys as well as apes were used with surprising regularity in folklore, art and literature in the role of fools, imitators, tricksters and sinners, or as representing vanity, lust and still other abhorrent traits. With increasing frequency they were chosen as human caricatures for satirical writing.'

The following inferences could be made: (1) Shakespeare was unaware of the existence of 'real apes' (smaller and higher apes such as gibbon, orangutan, chimpanzee and gorilla, as understood by

Table 2. Primatology-linked words occurring in Shakespeare's oeuvre

Word	Occurrence count	Meaning/remarks	
Primatology proper			
Ape	12	Older word in use for subhuman primates, used as terms of reproach, endearment and as a symbol of imitativeness.	
Apish	5	Like an ape/imitative like an ape	
Jackanapes(s)	4	Used as a term of contempt	
Ape bearer	1	One who leads the apes	
Monkey	7	Came into currency in late 16th century	
Baboon	7	Older word in use for subhuman primates	
Marmoset	1	Small monkey, native to South America	
Other related words			
Anthropophagi	1	Man-eaters, cannibals	
Anthropophaginia	n 1	Man-eaters, cannibals	
Misanthropos	1	Hater of humans	



**Figure 1.** Common marmoset (*Callithrix jacchus*) – a mother and its offspring (Photographed by the author from a captive colony).

current scientific terminology in primatology). Thus, his cavalier use of the word 'ape' for monkeys can be exempted. The word 'monkey' was gaining prominence as a popular generic word in English, only just before he began writing his first plays in 1590. Its origin could be from Italian 'mona', which according to Morris and Morris<sup>42</sup> came to be used as a colloquialism for prostitute (a symbol of sexually unrestrained woman). This was because, imported monkeys were kept as pets by Italian courtesans. (2) Occasionally, Shakespeare had used either 'ape' and 'monkey' or 'baboon' and 'monkey' combinations adjacently. (3) An earlier form of 'ape' in Middle English was 'nape',41. In four occasions, Shakespeare had used the word 'jackanapes' as a contemptuous term; especially in one instance he accentuated the word with an expletive adjective 'whoreson jackanapes' in the Cymbaline. This word meant 'a man who exhibited performing apes'. According to Scott<sup>41</sup>, 'the word Jack was often used with reference to Italians...Apes were introduced into England from Italy, and were often exhibited by Italians.' (4) True to prevailing period trends (as described by Schultz<sup>43</sup>), Shakespeare also made use of ape or monkey motifs for contempt, endearment, imitativeness and sorcery.

Fourteen choice examples (not presented above) by famous Shakespearean characters using monkey motifs in plays are assembled below:

'On meddling monkey, or on busy ape – she shall pursue it with the soul of love'

[Oberon, A Midsummer Night's Dream, Act 2, Scene 1].

'For every trifle are they set upon me; Sometime like apes, that mow and chatter at me And after bite me'

[Caliban, Tempest, Act 2, Scene 2].

'Thou liest, thou jesting monkey, thou. I would my valiant master would destroy thee. I do not lie'

[Caliban, Tempest, Act 3, Scene 1].

'More new-fangled than an ape, more giddy in my desires than a monkey'

[Rosalind, As You Like It, Act 4, Scene 1].

'And all these courtesy! The strain of man's bred out into baboon and monkey'

[Apemantus, *Timon of Athens*,

Act 1, Scene 1].

'Cool it with a baboon's blood, Then the charm is firm and good'

[Second Witch, *Macbeth*, Act 4, Scene 1].

'Ere I would say I would drown myself for the love of a guinea-hen, I would change my humanity with a baboon'

[Iago, Othello, Act 1, Scene 3].

'This is the monkey's own giving out. She is persuaded I will marry her out of her own love and flattery, not out of my promise'

[Cassio, Othello, Act 4, Scene 1].

'Imitari is nothing. So doth the hound is master, the ape his keeper, the tired horse his rider'

[Holofernes, Love's Labour's Lost, Act 4, Scene 2].

'I have grated upon my good friends for three reprieves for you and your coachfellow Nim, or else you had looked through the grate like a gemini of baboons'

[John Falstaff, Merry Wives of Windsor, Act 2, Scene 2].

'I should quickly leap into a wife. Or if I might buffet for my love, or bound my horse for her favours, I could lay on like a butcher, and sit like a jackanapes, never off'

[King Harry, *Henry V*, Act 5, Scene 2].

'I will teach the children their behaviours, and I will be like a jackanapes also, to burn the knight with my taber'

[Hugh Evans, Merry Wives of Windsor, Act 4, Scene 4].

'That jackanapes with scarves. Why is he melancholy?'

[Diana, All's Well That Ends Well, Act 3, Scene 6].

'Was there ever man had such luck? When I kissed the jack upon an upcast, to be hit away! I had a hundred pound on't, and then a whoreson jackanapes must take me up for swearing'

[Cloten, Cymbaline, Act 2, Scene 1].

As indicated in Table 2, Shakespeare also had used three other anthropology-linked words once. These are, 'anthropopaghi' (*Othello*, Act 1, Scene 2), 'anthropophaginian' (*Merry Wives of Windsor*, Act 4, Scene 5) and 'misanthropos'

(Timon of Athens, Act 4, Scene 3).

That Shakespeare followed Italian sources is revealed by the lines he penned for the Duke of York (King Richard's uncle):

'The open ear of youth doth always listen, Report of fashions in proud Italy, whose manners still our tardy-apish nation limbs after in base imitation'

[Richard II, Act 2, Scene 1].

#### Conclusion

One can safely assume that Shake-speare's first-hand knowledge on sub-human primates was minimal for the following reasons: (1) England was not a native habitat for nonhuman primates. (2) There were no zoos exhibiting sub-human primates during Shakespeare's period. (3) Shakespeare did not travel to countries where primates were living. Thus, his knowledge on nonhuman primates was largely derived from secondary literature, mostly from Italian settings.

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