Trance, art and literature: testing for hallucinogens

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Helvenston and Bahn (2002, 2003) have provoked a renewal of discussion of prehistoric rock art in relation to trance states, as presented by Lewis-Williams and Dowson (1988). Intense debate continues, concerning the nature of trance experiences and their potential relationship with prehistoric art. The contribution which I would like to make is a response to recent commentary, with observations that concern conceptual associations, chemical analyses and literature.

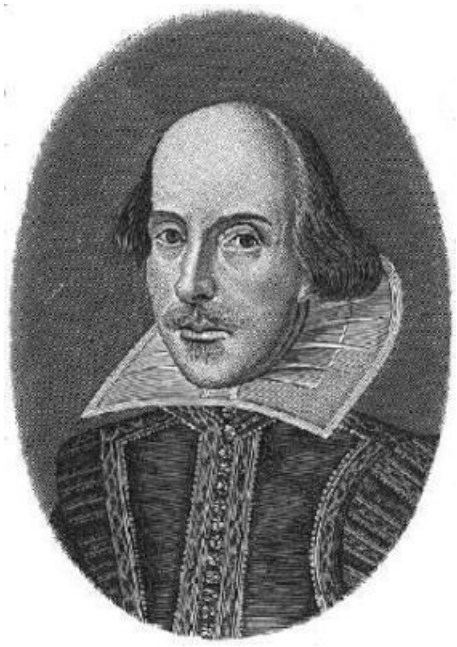


Figure 1. *William Shakespeare*

One of the South African (South Sotho) pipes known to have been used for smoking *Cannabis* is manufactured from durable soapstone. However, it is modelled after typical clay pipes of the kind used by European colonists in the seventeenth century. Not coincidentally, Thackeray *et al.* (2001) discovered indications of *Cannabis* in almost identically shaped seventeenth century clay pipes from Stratford-upon-Avon in England. The chemical analysis of organic residues in these pipe bowls was undertaken to test ideas based on exploratory analyses of Shakespeare's sonnets, including the following excerpts:

1. '*Then begins a journey in my head, to work my mind, when body's work's expired*' (Sonnet 27). Thackeray (1999) noted that such verse could be explored in the context of 'out of body mind-travel perceptions of the kind previously explored in the study of art'.
2. '*Invention in a noted weed*' (Sonnet 76). Thackeray (1999) wrote 'It may be suggested that the sonneteer's use of 'weed' is not only a veiled reference to hemp, but is also a reference to the perception that the use of hallucinogenic compounds was a source of inspiration (*cf* muse) for verse (creative writing/invention)'. In the same sonnet, the poet refers to his disregard for other 'compounds' (drugs), preferring instead the 'noted weed'. In Sonnet 38, Shakespeare appeals for a 'Tenth Muse', in addition to the nine classical Muses as sources of inspiration. Thackeray (1999) suggests that Shakespeare's 'Tenth Muse' was *Cannabis*, which the church had outlawed as a plant associated with witchcraft (hence the need for writers to be cryptic, especially as explicit reference to *Cannabis* could have led to prosecution by the church, including the burning of books).
3. '*Who will believe my verse in time to come?... The age to come would say "This poet lies, such heavenly touches ne'er touch'd earthly faces"* ' (Sonnet 17). Thackeray (1999) wrote '*It could be suggested that the sonneteer is referring to*

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imagery "touched" by heaven perceived in an altered state of consciousness. An analogous conceptual association, between trance experience and a perception of heaven, would seem to have been given by one of Cardena's subjects who described her altered state experience in the following terms: '*People talk about heaven, and I think that's what it's like*' (Wilson 2004: 87).

4. '*Looking on darkness which the blind do see, save that my soul's imaginary sight presents thy shadow to my sightless view*' (Sonnet 27). The same sonnet refers to 'a journey in my head'.
5. '*Then thou whose shadow shadows doth make bright, how would thy shadow's form form happy show?...What is your substance, whereof are you made, that millions of strange shadows on you tend?*'(Sonnet 53). Thackeray (1999) wrote '*Is it possible that Shakespeare is addressing imagery perceived in trance, personified, and addressed in verse?*.
6. In Sonnet 6, Shakespeare refers to distillation and a vial associated with 'sweetness' and a 'willing loan', which can be related to '*rent for compound sweet, forgoing simple favours*' (Sonnet 125). It is highly probable that Shakespeare's wordplay, in the context of 'simple' and 'compound', relates to drugs which were referred to by the terms 'simples' and 'compounds'.

These examples of Shakespearean verse may indicate that '*at least some literature, as well as art, may be associated with hallucinogenic stimuli*' (Thackeray 1999).

Cannabis was certainly available in Europe in Shakespeare's time, when it was grown in England for its fibre (for clothing, rope and sails). It is not known when *Cannabis* was first used in Africa. However, linguistically, it is of great interest that the Greek word for the plant (*kannabos*) comes from a Sanskrit word incorporating the form *kan*, and a San word for *Cannabis* is *kana*, probably reflecting common heritage, extending back many millennia.

The chemical analysis of plant residues is worth pursuing, to test for the presence of hallucinogens that might have contributed to altered states of consciousness, associated with a spectrum of trance experiences.



Figure 2. *Geometric engraved art mobilier from Wonderwerk Cave, South Africa, from Holocene deposits.*

In his article on 'Hallucinations in Caves', Clottes (2004) refers to the experiences of a caver who perceived 'luminous dots moving like comets'. It may not be coincidental that relationships between entoptic and astronomical phenomena, including comets, meteors and stars, have been identified in southern African and also in Eurasian contexts (Thackeray 1988; Thackeray & Knox-Shaw 1992). In particular, conceptual associations between trance and astronomical events are suggested from linguistic evidence, ethnography and art.

In their description of three stages of trance experiences, Lewis-Williams and Dowson (1988) attempt to classify types of imagery, but as in the case of other classification systems, difficulties arise when clear

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boundaries between types or stages are not discernible. For example, Lewis-Williams and Dowson (1988: 204) state that '*exclusively entoptic imagery is characteristic of the first stage*', but apparently geometric imagery of the kind associated with entoptics (including grids) may also feature in later 'stages'. Perhaps it would be more appropriate to refer to a 'spectrum of trance states' (STS).

Siegel (1977) noted that grids or lattice-frameworks were among the most common entoptic images (phosphenes) perceived in altered states. Citing Siegel's evidence, Thackeray *et al.* (1981) reported such grids on engraved stones (*art mobilier*) from Wonderwerk Cave in the Northern Cape near Kimberley in South Africa, from sealed and datable archaeological deposits. Recognising a potential association between entoptic imagery and the engravings, Thackeray *et al.* (1981) cautiously stated '*as all except one of the Wonderwerk engravings are broken, it is not possible to establish whether the grid and line depictions are examples of representational art or are best interpreted in terms of concepts associated with trance experience*'. The example from Wonderwerk, used later by Lewis-Williams and Dowson (1988) to illustrate grids in San engravings, is dated *c.* 5180 BP.

Helvenston and Bahn (2004) report that grids may be perceived in response not only to the consumption of LSD, mescaline or psilocybine, but also to 'high doses of marijuana'. There is evidence for the use of *Cannabis* in Africa within recent millennia (Abel 1980), including the use of clay pipes from Ethiopia (van der Merwe & Blank 1975). San and South Sotho pipes from South Africa have recently been analysed (Thackeray & Young in prep.), confirming the smoking of *Cannabis* known locally as 'dagga'. Southern African dagga pipes are sometimes decorated with geometric images depicted on the pipe bowls (Walton 1953). It would seem not improbable that the geometrics represent entoptics (phosphenes) of the kind perceived in altered states.

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