

E-Letter responses to:

brevia:
Rajesh P. N. Rao, Nisha Yadav, Mayank N. Vahia, Hrishikesh Joglekar, R. Adhikari, and Iravatham Mahadevan
Entropic Evidence for Linguistic Structure in the Indus Script
Science 2009; 324: 1165 [[Abstract](#)] [[Full text](#)] [[PDF](#)]

► **E-Letters: Submit a response to this article**

[To Advertise](#) [Find Products](#)

PUBLISHED E-LETTER RESPONSES:

▼ Literacy Existed in the Indus Valley

Clyde Winters (2 June 2009)

Literacy Existed in the Indus Valley

2 June 2009



Clyde Winters,
Professor
Governors State
University,
University Park, IL
60466-0975, USA

The Brevia by R. P. N. Rao *et al.* ("Entropic evidence for linguistic structure in the Indus Script," published online 23 April 2009) is consistent with recent research indicating that the distribution of Indus signs meet the symbol pattern for words in a text pursuant to Zipf's Law, and that they may represent "wish statements" or talisman, given the use of tokens bearing similar signs among ancient and modern Tamil (1).

Respond to this E-Letter:

[Re: Literacy Existed in the Indus Valley](#)

It has been argued that because between one and five symbols usually appear on Indus seals, the system must lack a linguistic character. Rao *et al.*'s computation of the conditional entropy matches the word boundaries in the natural language and suggests that this is a false method of determining the morphological and/or semantic use of a sign. This is because the context or genre of a text will define the function and meaning of a sign and not the number of signs per text (2).

Rao *et al.*'s study is supported by ancient scripts such as Oracle bone writing, in which symbols were joined together to make new words (3-4). The empirical evidence of Rao *et al.* agrees with ancient textual material that provides examples of linguistic text of one to five characters. In Sumerian, for example, each sign represents a monosyllabic word and the use of one to three characters can provide meaningful statements such as, ze eš "(This) righteous shrine"; mi lu du "(This is) a favorable oracle of the people."

The evidence presented by Rao *et al.* is good science, and supports the view that the Indus Valley seals represent the existence of literacy among the people who used this script.

Clyde Winters

Governors State University, University Park, IL 60466-0975, USA.

References

1. C. Winters, *Int. J. Dravidian Ling.* 35, 139 (2005).
2. D. Biber, S. Conrad, R. Reppen, *Corpus Linguistics* (Cambridge Univ. Press, 1998).
3. D. N. Kightley, *Sources of Shang History: The Oracle Bone Inscriptions of Bronze Age China* (Univ. of California Press, Berkeley, 1978).
4. L. Wieger, *Chinese Characters* (Dover Publications, Mineola, NY, 1965).

Science. ISSN 0036-8075 (print), 1095-9203 (online)