

From Reading to Research: How the Study of the Classics with Contemporary Resources
Uncovers Opportunities with Broad Implications for the Humanities

The Alpheios project was originally motivated, almost ten years ago now, by the belief that the literatures of the great classical traditions form unique resources for understanding and appreciating literature in general, and that modern technology can reduce many of the barriers to their enjoyment. Although such technology was available on the big repository sites like Perseus and TLG with Diogenes, many other sites were putting up Greek and Latin texts without such tools.

Putting such functionality into a browser plugin made it available on any web page with the correct HTML and Unicode, so a portable reading environment was created in the Firefox browser. Access was provided to multiple dictionaries, morphological analyzers, inflection tables and grammars. Some very fundamental annotation functionality was supported by creating editors for diagramming the syntax of sentences according to a dependency grammar and aligning original texts with translations at the word level. The goal was to produce a professionally-crafted software plugin that could not normally be produced in the academic world, where funding, time, and expertise would all be lacking. In order to provide the widest possible access, the software was made free and the code open source.

Although the tools were designed as a reading environment, it was clear from the beginning that some people would use them to learn the language, on the extensive reading model popularized by Steve Krashen (1987; 1988); the tools were helpful to prepare for any tests that specified the texts about which the student was to be examined, such as the AP Latin exam. Some simple language learning games were added in a Quiz Mode, but there was insufficient

time to develop much pedagogical software before funding ran out and collaborators took other positions.

In the hope of eventually regaining funding, project participants began to explore what was known about computer-assisted language learning (CALL), and discovered to their dismay how little real consensus existed. Even in conventional second language learning, there is remarkably little well-replicated research. In terms of practice, individual teachers are often self-directed, rather as if every doctor had his or her own methods that were trusted implicitly.

A fundamental problem in second language acquisition research, as in many related fields, is the lack of unambiguous variables linked to concrete biological phenomena. Accordingly they began to turn their attention to the emerging science of neurolinguistics, and its implications for second language acquisition and retention.

The study of classical languages has a number of features that distinguish it from that of modern languages, where the emphasis is understandably on “communicative competence” in conversation, with much less focus on literacy. The majority of modern languages typically used in research are also much less highly inflected. Some of these differences may however be advantages for certain kinds of research: i.e. ancient languages are relatively isolated from accidental influences outside the classroom; thanks to their rich grammatical morphology they can be used to track the development of semantic and proficiency separately; they have a relatively standardized syllabus throughout the world.

Now that funding has been restored, Alpheios functionality is being added to other browsers, tablets and smartphones and is being made available to run independently on any web site. Opportunities are now being explored for using the Alpheios platform to collect big longitudinal data on how students around the world acquire proficiency in Latin, in an attempt to

record relevant individual differences and interpret them neurophysiologically. So the developers have more or less been forced to support research simply to guide the development of CALL tools for these languages.

Once the project became involved with neurolinguistics it was realized that it could be used to shed new light on the other traditional dimension of philology: the understanding and appreciation of literature. How is literature created with poetics and rhetoric and how is it appreciated with hermeneutics and criticism? So the project mandate has broadened to include neuroaesthetics. One might say that they focus is now less digital philology than neurophilology.

At this point the project developers have returned in their journey, perhaps not entirely coincidentally, to their original interest: how literature works and why it is important.

Bibliography

Krashen, Stephen D. 1987. *Principles and Practice in Second Language Acquisition*. Englewood Cliffs, NJ: Prentice-Hall International.

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