Fig. 1 Agora inscriptions I 1872 (top) and I 1864 (bottom) joined. Photograph courtesy of Agora Excavations, American School of Classical Studies at Athens
E-Epigraphy
Reflections on Three Decades of Computing Attic Inscriptions

JOHN TRAILL

When David Jordan suggested a conference on Attic inscriptions at CAIA with the title “A Day of Attic Epigraphy” and asked that I participate I first thought of a paper entitled “A Day of Attic E-Epigraphy” in which I would talk about the effect the computer has had on my routine work on Greek inscriptions. Like an Aristotelian-defined drama I would focus on a single day to which I would add both reminiscence of the past and speculation on the future of our relationship to the most important invention since grammata themselves. Of course I am not a computerist, nor have I ever formally enrolled in a course in computing science, but convection in physics and osmosis in biology can have remarkable effects: I have spent more than 30,000 hours electronically connected, and I have been fortunate to have had the association over many years of computerists whom I would rank among the best in the world. At least three days a week from our hard-wired house of a half dozen quickly aging computers in a small deme I make the long commute (I often say compute) to my university in the company of Dan Derkach, supervisor of one of our largest electronic facilities. I have three daughters who are technologically intrepid and patient parent-teachers. I must caution also that, despite the hours, the breadth of my experience with computers is limited; to me apples, especially MacIntosh, grow on trees around Bowmanville (small deme, above). David Packard taught me something of his Ibycus system, on which for many years I did the Hesperia Epigraphical Index, and on which our daughter Ariana became quite proficient and made the electronic transcription of Inscriptiones Creticae. The majority of my experience has been with UNIX, usually on large machines with programs written in C (UNIX, much enhanced from the original system developed at the Bell Laboratory at Murray Hill NJ 30-odd years ago, is the preferred system of scientists and comes with a vast array of facilities; it is the engine of the web). In the last 10 years I have supplemented UNIX, now LINUX, with DOS, and most recently, several versions of Windows, which we are using for the digitized images of inscriptions, squeezes, traditional photographs, and maps.

In the late 50s I was an undergraduate student of Latin and Greek; I filled spare time, both winter and summer, with mathematics and physics; classics was, and is, to me another science. One evening the wonderful Mary White came to our Victoria College

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Classics Club and talked about inscriptions and passed around a squeeze of the famous Agora archon list with the names of Hippias, Kleisthenes, Miltiades, and, with some restoration, Πεσίστρατος. A few years later Sterling Dow introduced me more formally to Attic inscriptions, and later still, in Athens, Eugene Vanderpool, more informally. Still in Greece in 1966, I met Ben Meritt, who possessed the most computer-like mind of any classicist I have known. I remember well his warm personality, his kindly humanity, and his brilliant intellect. Having spent 70 of his 90 summers in Ontario, he became a profound philo-Canadian, an appropriate reflection at a CAIA symposium.

The following year in Princeton he showed me his file of Attic prosopography, and from that time and during my two years and many summers through the 70s at the Institute for Advanced Study (where Greek epigraphy was the third subject after physics and mathematics both in chronology and importance) with Ben’s enthusiastic and helpful encouragement I pursued the means to computerize it. Michael Barnett, a teacher of computing science at Columbia and a resident of Princeton, took me to the giant local RCA computing facility, and gave me an introduction to the leading computerist in Canada, C.C. Gotlieb, who directed me to his gifted student, Dionysios Konstantinos Tsichritzis (the Greek connection in this project has always been important), who had students of his own, Ivor Ladd and John Kornatowski, creating at that time a data-base management system, first “mis”named MISTRESS, later better called EMPRESS, running within the UNIX operating system. The Social Sciences and Humanities Research Council of Canada provided financial support; Philippa Matheson joined me; with the help of colleagues, students, family, and friends ATHENIANS began.1

I return to a day of Attic e-epigraphy. One evening at the end of January 2000 I ran into Merle Langdon at the entrance to the American School; he informed me there were new inscriptions on display in the Syntagma Metro station just opened. Next morning daughter Larisa, epimeletria of the ATHENIANS epigraphical digitizing program, checked the flash card and batteries and we left on a “study” tour, epigraphiki ekdromi. After a little gentle pushing and shoving to gain access to the documents, voilà . . . we returned to our base computer, examined the images, checked the readings, and compared the names with those already in our database.2 Several of the persons, as expected, were known, or had known relatives. Spoudas of Plotheia on the loutrophoros was new, but

1 A list of acknowledgments appears at the beginning of volume 1 and of the cumulative supplements of PAA (most recently, with volume 8). Among the many computerists who have helped us I wish particularly to thank Doug Orr, John Hogg, Njai Wong, and, more recently, Professor John Mylopoulos. Among classicists I wish to remember especially the late Homer A. Thompson who supported the ATHENIANS project ab initio with characteristic kindness and never failing intellect. The Institute for Advanced Study at Princeton was the centre of much of my earlier work both on PAA and also on the second volume of the Lexicon of Greek Personal Names (the updated and enlarged Prosopographical Index of Personal Names from Ag. XV – the original compiled by Terry-Ellen Traill – provided more than 12,000 references for LGPN II).

2 In the incorporation and dissemination of this kind of material, and other unpublished material sent to us by scholars, our intent is to follow the guidelines of B.D. Meritt, viz that PAA is not a formal epigraphical publication, but rather a tool to serve epigraphers and other scholars. Meritt often
Speusandros, the name of the father, was attested as a trierarch in 322 BCE. We searched the references database under class 58 (sepulchral other) with modifier “loutrophoros” in the references comment section (at this time the literary record is substantial, but our database of images is still small, though rapidly increasing); there was an inscribed loutrophoros in the Epigraphical Museum which invited comparison; though larger, the script, the dating, and the architecture, particularly the volutes, were similar. In sum, architecture, epigraphy, and prosopography were brought together under the auspices of the computer to reinforce and confirm academic opinion. As the day went on, I checked the documentation of the *hapax* (occurring once only) Theolaos – I was reediting names commencing in theta at the time, and unique names always demand unique attention – it does not exist, the reading on which it was based is unsound, the spacing not fully determinate, and the restoration gratuitous. In a word, it is a *ghost*, which, like a thousand others, we mark with code 60 and conserve as part of the prosopographical, virtual heritage. For my third item I noted that the father of Theotimos, *grammateteus kata prytaneian* in 291/0, had the following sequence of letters and spaces, A . . . L . . . S (genitive) and asked the computer to do a very simple search. It responded that Charikles, Phanokles and Pasikles were much more likely than the rare names Tachykles, Nauteles, Damokles or Panellen, and Pasikles was attested in the right deme, Trikorynthos, at the right time. In a similar vein, several years ago Christian Habicht sent me a copy of a new list of Samian bouleutai. Noting the complete names which were not attested elsewhere...
I also ran the broken names, of which only a few letters here and there were preserved, through the computer and added another group of *hapax* “names” to the list. These are extremely simple, but typical, routine searches on a day of Attic e-epigraphy. Our system is capable of much more complex requests, especially on a number of attributes at once in joined relations, some of which will emerge as I proceed to my larger topic.

It is more than a decade now since Philippa and I reported on the status of the *ATHENIANS* project in volume 7 of *Horos*. In that interval there have been many changes, of which I distinguish the following four. (1) A typographical format has been developed, and over 63,000 computerized records of ancient Athenians have been published in ten volumes of *Persons of Ancient Athens*. A *record*, following the scheme of the Meritt File, is a person linked to a biographical fact or a relative and supported by the documentary sources. The “person,” of course, need not have a name, as in the case of many women in the database, or may have a broken name with one or more preserved letters or spaces in any place or sequence, as in the many fragmented epigraphical and papyrological texts, or may have one of several, or many, possible names, “polynomials,” even with alternate spellings. The computer is ecumenical in these matters and is happy also to suggest probabilities for the various choices. In fact, a person need not be defined with respect to a name at all, but rather according to a minimal set of data which indicate a function or relationship and a date, however approximate. (2) More significantly, six years ago the website “attica” was opened to facilitate remote, public, electronic searching of the

227, 62 line 340, and 72 line 260). The probabilities here I would estimate at about 95% to 5% in favour of Mnesiergos.

7 Traill and Matheson 1989.
From *Prosopographia Attica*

387 ΑΙΣΧΡΩΝ (V) ΑΙΣΧΡΙΩΝΟΣ (IV) ΔΙΟΝΥΣΙΟΥ ΜΕΛΙΤΕΥΣ, Ἀθήνη. IV 462

ιερεῖς ἀγνής Ἀφροδίτης ἐπὶ Ἀριστάρχου ἄρχ. (a. 107/6) in tit. votivo De-
lacio. Stemma sub A. (II) A. (I) M.

From *Athenians*

### MAIN ENTRY

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<th>115445 ΑΙΣΧΡΩΝ ΜΕΛΙΤΕΥΣ (ΚΕΚΡ*) son of ΑΙΣ-</th>
<th>(phyle).. link..</th>
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</thead>
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<td>kin.. (PA nr)..</td>
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<td>kin's relative</td>
</tr>
<tr>
<td>id.. date.. stat..</td>
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<td>NB/kincom</td>
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<td>text of 1st ref</td>
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<tr>
<td>refno.. 2nd ref.. refline..</td>
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<td>text of 2nd ref</td>
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<tr>
<td>refno.. 3rd ref.. refline..</td>
<td>3.1 IdeD 2250, line 5 (ded sacr).</td>
<td>text of 3rd ref</td>
</tr>
</tbody>
</table>

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**Fig. 2b** Sample entries from *PA* and from *PAA*. Top: reproduced from *PA* 387. Lower: from *PAA* 10: *K- to Kóphas*, p. xviii

Published data and to distribute regularly updated *addenda* to, and *corrigenda* of, the printed volumes of *PAA*. (3) More recently lower-case Greek texts with full epigraphical sigla have been added to the website, and, (4) most recently, a research initiative has been made into the electronic scanning, *viz* digitizing, of ancient inscriptions, squeezes, and photographs of inscriptions, and into the integration of this data, and also topographical data, including maps, with the prosopographical information already on the website.

Today the format of the *Athenians* databases looks very much the same as it did two decades ago (Fig. 2). Although our software accords us the facility to make fundamental changes, even a total reorganization of the schemata if desired, in reality we have changed only a few details. Several matters beg attention. At the beginning in designing *Athenians* we created two relational databases, one of fifteen sections, or attributes, for the main information, and another of eight sections for the references or documentation. One may visualize tables composed of an indeterminate number of lines of data arranged in a fixed number of columns which represent the attributes or fields. Each database contained one or two variable-length commentary sections (abbreviated v.f. in Fig. 2a), which, in turn, had a number of formatted subsections.
From some of these subsections it was envisaged that additional, independent databases would be created. *Archon* in the *NB* comment of the main relation, for instance, along with a specific name, was employed to distinguish a record which had been dated by an archon whose date was questionable or disputed. I once devised a demonstration exercise which by using an extremely simple command rearranged all the pertinent dates in a sample portion of the database according to a preferred, even individually customized, scheme of archon dates: M for Meritt, H for Habicht, etc. *Refloc*, a subsection of the comment attribute in the references relation, listed the findspot of an inscription, so that one might retrieve all the texts found, for example, at Marathon or Paiania. The listing of most of the major city findspots, Akropolis, Agora, Kerameikos, however, was postponed; these need now to be thoroughly researched, utilizing early publications where pertinent, and added to the present, or a newly created, independent, table.

For many years I have made use of a computerized topographical database both in my own work on the Attic demes and also in the preparation of the map and gazetteer of Attica for the new APA *Barrington Atlas of the Greek and Roman World*. I would like now to make this information available to the public on our website “attica” and to connect it with the prosopographical database through a clickable version of the schematic ten-colour map of the Attic demes in *Demos and Trittyss*.\(^8\) We have experimented with a small easily downloadable facsimile of the whole map, then four sections, each on a larger scale, large enough to distinguish the small demes, perhaps enhanced after clicking with blinking or highlighting, so that one may summon, for instance, the topographical, bouleutic, archaeological, and bibliographical data pertaining to Marathon or neighbouring demes, including detailed maps of the region of the order of an updated *Karten von Attika*, or review the Marathonoi in the prosopographical database (the last, of course, may readily be accomplished now by entering a few letters of the demotic in the Place field on the website search form). Of course, we ought to go further; sites and findspots should be given in GPS coordinates, but they will take time to convert, and there are other problems too complex to discuss now.\(^9\)

There is, however, one important topographical correction with respect to the Attic demes and trittyes I would like to discuss.\(^10\) Recent excavations conducted by the Greek Archaeological Service on a site being prepared for a health centre 2 kilometres north of Koropi have uncovered a group of gravestones belonging to demotai of Oe.\(^11\) This deme should now be moved from the site NE of Aspropyrgos at the foot of Kalistiri

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8 In the table in *Demos and Trittyss* (127) Ionidai is correctly located at the desmesite of Draphi, but it appears incorrectly on the Map at Kato Charvati, 3 kilometres south of Draphi.

9 The rapidly increasing number of recently discovered rupestral *horoi* would be an excellent place to introduce GPS coordinates along with consistent traditional reference to the *Karten von Attika* (cf. the plea in *SEG* XLVI 212).

10 In the continuing discussion of the purpose of the trittyes (cf. *The Political Organization of Attica*: 79) Plato *Republic* 475a may be interpreted as an effective contrast between the military functions of the *strategoi* and the financial responsibilities of the trittycharchs (“third masters”).

which did not have a great deal of archaeological evidence and was not well supported by the reference to Oiatis in Sophokles’ *Oedipus at Colonus* (1059), a toponym better connected phonologically to Oai than Oe, but probably related to neither deme. The discussions in both Jebb’s old, and Kamerbeck’s more recent, commentaries are obscured by the traditional transliteration of Greek diphthong Oi as English Oe. The new location for Oe in the Mesogaia (in the bottom left corner of Blatt VII of the *Karten von Attika* at the fork in the road marked by “antike Grundmauer Reste”) creates yet another apparent anomaly in the Kleisthenic organization of Attica. This isolated deme will now be assigned to the group of tiny Oineid demes west of the city, *viz* Lakiadai, Boutadai, Perithoidai, etc., and the smaller section of Acharnai take its place with the neighbouring “coastal” demes of Thria, Kothokidai and Phyle. The disposition of Ag. XV 68, as restudied in *Demos and Trittys* (142–143) should be revised as follows: Column I (Inland), [Acharneis 5+] 10, [T]<y>r<m>eidai 1; Column II (Coast), [Phylasioi 2], [Kothokidai 2 or 1], [Acharneis] 6 or [1]+ 6, Thriasioi 2 [+5]; Column III (City), [Seven small city demes with a total of 10 or 11 ptyaneis], [Oethen 7 or 6]. Of the six names in Column II previously assigned to Oe (Ag. XV 68, lines 47–52), two can be completed with certainty and both can be connected with Acharnai: Thoukleides (line 48) should be identified with *PAA* 507940 and Euphiletos (line 52) will be a descendant of *PAA* 449920.

Another subsection of the NB or comment attribute in the main relation, *Pid*, signifying “possibly the same as,“ when introduced in volume 1 of *PAA*, suggested future modification with the words (Description of Entries, page viii, bottom):

At this stage no attempt has been made to evaluate the relative probability of the identifications supplied with the designation “Possibly to be identified with,” which varies from “very probable” to “barely possible.”

Just as I regularly request of my graduate students that they supply in the margin of their papers approximate probability figures, using a suggested tripartite scheme, low (1–33%), medium (34–66%), and high (67–100%), with respect to prosopographical identifications, so the same directive should be applied to our database (I now prefer a more precisely defined system, resembling the Herodotean climatic zones of the world, with five segments), and not only to the *Pid*, but also to the subsection *Xstem*, i.e., suggested filiations. There is much more statistical information now available in many sources, including *LGPN* and our own database, for forming these judgments, e.g., the relative frequency of certain names in certain periods, the relative size of the demes, the relative certainty of dating and/or the kind of document, e.g., a simple gravestone as opposed to a precisely-dated decree, etc. The matter is very useful in suggesting which of the names of the “polynomials” is (or are) more likely, and is of special significance as we return to another early field of interest, the creation by computer of stemmata or family trees. Our database was designed, in part, with this in mind – cf. *Kinx* for relationships connected to the “Kin” attribute in the main relation and the relevant discussion in the *Horos* article – but our first attempts in this enterprise quickly overtaxed the capacity of
the computers then available, and we postponed these endeavours until the time of more powerful facilities. That time is here, or, at least, is approaching.\textsuperscript{12}

I mention another small matter in the references database which may now be revised, or, at least, refined: the reftie symbol (=, <, >, +, −, /, %, &, ?) has served well for simple, linear connections between texts, when new fragments have been added or readings have steadily improved. It has also served well – with different symbols – for the reverse process, but when we judge that readings of a lemma progress and regress alternately, or we have a great number of non-consecutive variants, as in the Ariston-Habron-Antiphon crux of \textit{IG} I\textsuperscript{3} 11, the succession of refties can be confusing, the chronological order of publication is sometimes obscured, and a text which is designated as partially superior to the preceding entry (indicated by %-sign in reftie) does not always readily reveal precisely which part of the printed text we consider superior. Clarity and accuracy must take precedence over concision.

It was always our goal, but recently we have become more concerned, to present the documentary evidence, epigraphical, papyrological, palaeographical, and architectural, which underlies, and is fundamental to, the prosopographical information. For example, the join of Agora inventory I 1872 to I 1864 has been questioned. In response, a detailed petrographical study of the fragments, including spectrograms and enlarged digitized photographs of front, back, and sides showing first the joining surfaces and lines of foliation and fracture, and then the “joined” fragments (Fig. 1 p. 112), should be distributed by the most economical means now available, the internet.\textsuperscript{13} Just as experiments in science must be capable of replication, so readings, especially controversial readings, should be verifiable. I cite the example of the epigraphical reading of Diakris as the heading of the inland trittys in a prytany list of Leontis.\textsuperscript{14} The documentation I supplied was a photograph of a squeeze, printed by mistake upside down and unreversed, of a stone which was encrusted with cement. Although the significant letters were still

\textsuperscript{12} Another area of potential development is in the collocation of names. We have noted in the link attribute persons who appear together on the same vase, coin, gravestone, or belong to the same philosophical school, etc., and we are now offering more context for searching the collocation of names on curse tablets and in catalogues.

\textsuperscript{13} The two fragments were discovered on the same day in close proximity and published as belonging to the same bouleutic list of 304/3 (Traill 1966: 205–240). The join was noted in \textit{Demos and Tritys}: 18–20, and criticized in a review by R.S. Stroud (1989). Subsequently, at my invitation a well-known authority on ancient marble, Professor Norman Herz, spent several hours with me examining these pieces. His considered opinion is that these two fragments are from the same piece of marble and that they belong together. In response to the criticism of the reviewer, "significantly he prints no photograph to document the join ... In fact the two fragments could never have stood close enough to each other to justify the 'composite text' concocted by T. out of his alleged join," I provide now a documentary photograph of the joined fragments (Fig. 1a p. 112) showing the "composite text" exactly as published in \textit{Demos and Tritys}, and on a later occasion will supply a full petrographical analysis with spectrographic data. I am grateful to Craig Mauzy for the photograph supplied here which has been taken precisely perpendicularly with a Kodak DCS 660 digital camera having 3040 × 2080 pixel dimensions.

\textsuperscript{14} Traill 1978: 90, line 52.
Fig. 3 Top: Upper right side of M 741, Library of Hadrian, showing heading Diakris. Photograph courtesy of Ministry of Culture of Greece. Bottom: Tracing of lettering of same inscription.
legible, the reading was questioned by at least one scholar. Through the kindness of Mrs. Theocharis and her expert staff at the apotheke of Ares in the Library of Hadrian the inscription was cleaned of the Roman cement and new, improved photographs were taken by TAP service. These photographs show every letter of Diakris (Fig. 3), and they, or digitized images taken directly from the stone, should be linked to the relevant entries in the database and made available as documentary evidence on the web. The new photographs also show that the second prytanis of Pelex should now be read as Amphithos instead of Charithos which appears in Traill 1978: 90, line 55. A trace of the bottom of the left stroke of nu of the patronym is also now visible.

Another computer application was suggested in a publication on homonymy at Athens by Christian Habicht in Hesperia about 10 years ago in which he supplied 14 pairs of fathers and sons with differing names but matched in different demes. The next time I was in Princeton after seeing this publication I showed him the results of

15 Stanton 1994: 182. In contrast to this article which, without adding new information, defends the interpretation I once accepted in The Political Organization of Attica, my views on the Attic trittyes have evolved considerably since 1975 in response to newly discovered evidence, of which I consider the following most significant: (1) the reading of Diakris with its reinforcement of the evidence of the trittys headings in Ag. XV 26 (IG II² 1748); and (2) the expansion of the demotic of the tribal epimeletes in Meritt 1963: 41 (32) as Kytherrios in preference to Kydathenaieus (Demos and Trittys: 86). Even the most recent topographical “find,” viz the new location of Oe discussed above 118–119, supports the interpretation I now accept, viz that the trittyes of Kleisthenes were made equal in size through the deployment of enclaves.

16 Habicht 1990. The upper portion of the Hippothontid roster of the bouleutic list of 335/4 (IG II² 1700, lines 166–177 = Ag. XV 43, lines 178–189) offers an interesting problem in this subject. These lines, with at least six bouleutai (the stone breaks off at the top making the complete total indeterminate), were assigned in the Corpus to the deme Dekeleia on the basis of the identification of the fourth bouleutes, Thrasyllos son of Thrasyllos, as the brother of Thrasyllos Thrasyllou who was choregos in 320/19 (IG II² 3056) but in The Political Organization of Attica (21–22) I reassigned them to Eleusis, because six or more councillors were too many for Dekeleia which is documented in Ag. XV 20, lines 33–37, with a quota of only four, and because Thrasyllos and the following name, Phokiades, were both attested in Eleusis. Without considering line 6 of IG II² 1933, where the demotic of Dekeleia has been restored after the name Thrasyllos Thrasyllou, the prosopographical connection with Dekeleia has been strengthened by the recent publication of a list of phylarchs of 282/1, among whom appears Thrasyllos Thrasyllou Dekeleeus (Camp 1996: 252, line 27, cf. Threpsiades and Vanderpool 1961: 104, line 32). The problem of the quota-variation may be resolved by the bouleutes following Thrasylkes, viz Phokiades Polynikou. Phokiades is moderately common in Attic prosopography, including an attestation, as just mentioned, in Eleusis, but it also appears in Oion Dekeleikon. The father’s name, however, is much rarer, attested in only three Attic demes, one of which is Oion, first as a treasurer of Athena in 425/4 (IG I² 300, 301, etc.), and second, as the son of the Phokiades just mentioned, the proposer of a tribal decree of Hippothontis dated to the middle of the fourth century (IG II² 1153 line 2). The bouleutes, a father-son homonym in reverse order, should be the son of the proposer, and the bouleutic roster will contain members of both Dekeleia and Oion Dekeleikon. These two demes, geographically and onomastically related, will have been treated like the split demes in some of the councillor lists, viz with a single entry. The remaining line missing from Hippothontis in 335/4 will be accounted for by the omission of one of the tiny demes, Korydallos or Auridai, a constitutional procedure attested elsewhere for a single deme, but not for more than one, on a number of occasions (The Political Organization of Attica: 78–80).
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Fig. 4  Heteronymous fathers and sons with the same names in different demes.
Results of a search in part of the ATHENIANS database.
Philippa’s search of the letters we were working on at that time, \textit{eta}, \textit{nu}, \textit{xi}, \textit{omikron}, and part of \textit{mu}, in sum about one tenth of the entire database: 17 pairs and 1 triplet (Fig. 4) in only a few seconds of computer time. The entire database contains about 200 such pairs. In addition to the names with demotics, the output also includes many pairs from different phylai, which, even though the demotics have not been preserved, must, of course, belong to different demes. And when one drops the restriction of differing names between father and son the computer pours forth a vast array of additional data. The whole subject and many like it lend themselves to electronic programmed analysis.

Ideally, all texts in the database should have illustrations, \textit{viz} digitized images of the lemmata taken from the stone at various angles and with various kinds of light, and/or from squeezes, and/or from conventional photographs, and distributed in such a format (e.g., jpeg or tiff) that the user may manipulate with software like the popular Adobe Photoshop. There are limitations at present: the supervisor of one of our university computer centres I mentioned earlier demurs when I suggest mounting 30,000 images, many as large as several megabytes, together with the facility to use sophisticated graphics software. Still, the electronic world is changing rapidly, and the future becomes present, and past, very quickly. My experiments using digitized images of squeezes, and of inscriptions themselves, reinforce the “impressions” I have had from conversing (by e-mail, of course) with many computerist friends around the world that this is a profitable route to travel, and the road for us leads directly to our website “attica.”

I turn now briefly to the website, www.chass.utoronto.ca/attica, and request that you explore it at your leisure; this is where most of our future is taking place. There is a search form (Fig. 5a), which has a number of pull-down menus, indicated by small rectangles within the appropriate slots, and buttons, shown by small squares. We have tried hard to make it user-friendly, but evidently we have not tried hard enough, if we may judge from the record of failed searches in our synopsis of the “hits” (Some of the users are clearly not very “computer-friendly,” and it takes a little practice to get the knack of faster, more efficient searches.) In any case, we have made, and will continue to make changes in the interest of both utility and friendliness. Already we have simplified some of the categories and added French translation, and soon other languages, for important portions of the instructions. \textit{Nonne Latina?} Most users, we have discovered, have simple requests, e.g., a list of persons from a particular deme or profession or period, or possible restorations of a partially preserved name. A simplified version of the search form aimed at beginners is an immediate \textit{desiderandum}.

More recently lower-case Greek texts with full epigraphical sigla have been added to the website. A sample is provided (Fig. 5b) from the \textit{addenda et corrigenda} which were printed with volume 8 of \textit{PAA}, and which appeared simultaneously, but have now been upgraded several times, on “attica.” As we explain, it is based largely on \textit{BETA} code, but we have tried to make it more recognizable. With a simple mapping program the user should be able to convert it to real Greek on her monitor, e.g., medial sigma can be differentiated (we conflated) from final, underdot is a plus-sign (+), backslashes embrace special sigla. The financial symbols, enclosed by sharp signs, e.g. \# Pd \#, will cause a
ATHENIANS Search

Enter NAMES in CAPITAL LETTERS, in Greek transliteration (e.g., B(QUS, DEC(0S). Choose at least one database (below).

Il faut écrire tous les noms grecs (Name, Place, Kin name, etc.) en MAJUSCULES (par ex. B(QUS, DEC(0S)), et spécifier les banques de données (beta, ou/et gamma ou/et delta) sur lesquelles doit porter la recherche.

We suggest you run your search on each database separately. Simple searches of the over 10,000 records in beta, gamma, and delta will seldom take less than 30 seconds, and may take many minutes. Also for faster searches, fill in a few blanks in only ONE of the two sections.

If you receive no results, did you choose a database? Did you use capital letters in the Name, Place, Phyle, Kin name fields? More information about searching in the Notes (en français).

**SECTION 1**

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<th>Status</th>
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</tbody>
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- **Name:** [Input field]
- **not:** [Input field] only if whole: [Checkbox]
- **PA or Roman name:** [Input field] [Input field]
- **Place:** [Input field] [Input field]
- **Phyle:** [Input field]
- **Kin Link:** [Input field]
- **Kin name:** [Input field] [Input field]
- **Activity:** [Input field] [Input field]
- **Date:** [Input field] [Input field] From: [Input field] To: [Input field]
- **Comment:** [Input field]

Choose database(s) to be searched: beta [Checkbox] gamma [Checkbox] delta [Checkbox]

**Do search** **Reset**

**SECTION 2**

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- **Refs:** [Input field] [Input field] Inverse: [Checkbox]
- **Class:** [Input field] [Input field] [Checkbox]
- **Ref comment:** [Input field] [Input field]

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**Fig. 5a** The ATHENIANS search screen at www.chass.utoronto/attica

little more trouble, and many old monitors, including our Concept-108s could not easily handle these graphics, but they pose no problem to new monitors. I have become used
to the accents and breathings, and occasionally I write to Greek friends using the system. If and when there is an international agreement on the mapping of ancient epigraphical Greek, we are prepared to change.

Finally, even fewer words about another, related, electronic obsession with which I am at present engaged: a new, e-edition of *Ag. XV*, which I want to make as interactive as possible. Some of these “musings,” which I refer to as my “e-musement,” I sent to Angelos Matthaaiou as a paper contribution (when I could not attend in person) to his wonderful Pittakys-celebrating conference on the future of *IG II*³ held a few years ago in Athens.¹⁷ The electronic book will be of database format, yet user-friendly. It will offer the facility to rearrange the entries according to the date of the inscription, or the phyle, or the type of prescript, findspot, editor, date of publication, or virtually any other criterion, so that the order of the texts will be completely flexible. I am including thumbnail images of the script, or scripts, of each inscription to facilitate identification of cutter, along with larger digitized photographs of the whole inscription, and sections of it, especially where the reading has been difficult or controversial, with precise details of the circumstances under which the images were made, and provision for their manipulation with the distributor’s (our) and/or the user’s (your) software. There will be a full epigraphical apparatus, with provision to reconstruct the entire text according to any of the major editions, a searchable (like everything else) bibliography, and a section for user-supplied e-scholia and e-marginalia (some propriety may have to be enforced), and provision for time-limited and restricted comments, e.g., with reference to unpublished material.¹⁸ Finally, a series of links will be provided to “attica” and other electronic databases. Our e-book will be free to be copied, in part or whole, by anyone wishing.

All of this presentation has been very “coloured.” I have provided a “rosy” picture of what I regard as the successes – others may feel differently – and nothing of the many acknowledged failures …, for example, of all accents removed from the lower-case texts in the dead of night, of runaway loop processes which brought an immense logariaismos along with some very strong criticism, both personal and corporate, the next morning, of a very recalcitrant Zilog computer – the cutting edge of technology (I know it, I have the scars of many slashings) – which was understandably jostled by an irate user when it was less than friendly (it informed), but was almost “excommunicated” after the last in a seemingly continuous series of disk crashes and “fatal error” messages, of all the rejections by funding bodies with comments which implied, if they did not outrightly state, “personal public insanity.”

I close with a reference to one of my aberrant schemes, to which I shall undoubtedly return as senility and the above-mentioned “ppi” increase, the use of colour in presenting


¹⁸ One of the advantages of an electronic database format is that variant readings may be given right in the text, even with an order of probability if desired (above 119). In numerous instances the *Corpus* has left a name unrestored, even when there was a choice of only two restorations. In fact I can see no advantage of a traditional book over an electronic database; since all *addenda et corrigenda* will be date-stamped, a “Corpus” of any date at any time may be retrieved and printed from the database.
Translittérations utilisées dans les textes:

La plupart des lettres sont translittérées dans le code BETA, mais en utilisant aussi bien les minuscules que les majuscules. Le sigma final est 'ς', chi est 'χ', et kxi est 'κ'.

Acents. L'aigu est ' [guillemets doubles], le grave est !, le circonflexe est =., Les esprits sont ' et ' [guillemets simples d'ouverture et de fermeture].

Certsains caractères spéciaux sont placés entre deux barres obliques inverses:

\i... iota ssouscrit
\k... kappa
\a... aspirée archaïque
\x... digamma
\v... symbole d'un patronyme homonyme

Les symboles numériques sont placés entre deux #:

#O# ... quart d'oboè, #V# ... demi-oboè, I ... oboè,
K ... drachme, T ... talent, S ... statère.
P ... 5, D ... 10, H ... 100, X ... 1000, M ... 10000.
Les ligatures sont indiquées par une majuscule suivie d'une minuscule:
par ex.: #Pd... 50.

Autres symboles utilisés:

+ ... point sous la lettre précédente
$ ... croix/obè
\[ ... entourant une ou plusieurs lettres ... texte souligné
\[[ ... marque de texte résé
:\ ... double point grec ou trépunct
\~ ... indique qu'une portion du texte correspond exactement au texte d'une entrée précédente

Printed in PAA vol. 6

Online at "attica" website

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367340 ΔΙΟΦΑΝΤΟΣ ΕΡΜΕΙΟΣ (AKAM*) son of
ΕΚΑΤΑΙΟΣ (PA 4427)
proposer of decree of kleuchoi at Delos
honoring poet Ariston Phokaieus, 145/4a.
1.1 IdeD 1506, line 3 (decr kle).
Διοφάντος Εκαταιών Ερμύειος επαρ... Αλεξάιων
official of finances in accounts of Delos, 144/3a.
Archon Andreas.
1.1 IdeD 1421 Ab col I, line 14 (inv Delos).
\[k]τιβαλιν Διοφάντος επαρ... Αλεξάιων
séf[ηςει] / XXXX

Fig. 5b The Athenians system for transliteration of epigraphical Greek at
www.chass.utoronto/attica, and sample with corresponding text in the volume 6
data. The old typewriters had red-black ribbons, David Packard’s Ibycus was often connected to a red-black printer from which the requested lemma emerged as a red island of data surrounded by the wine-black sea of context. A few years ago I tried a little of this and rather liked it, names and places and kin, or whatever, in different colours; one of my students, Dr. (now Prof.) Bruce Robertson, an accomplished computerist as well as classicist, even suggested shades or tints for probabilities (a result of my essay marginalia requests, above). Too much of this, however, cloys, and one can quickly become insensitive to a multiplicity of colours or distracted from other information by them, but it reminds me, as my very last reflection, of lines 42–45 of Virgil’s 4th Eclogue, which, in forecasting the coming of the computer age, described technicolour sheep. I am, after all, primo atque denique, a Latin teacher, which is one reason I importune—followed by the subjective— that the language of the Corpus remain (maneat) Latina:

nec varios discet mentiri lana colores
ipse sed in pratis aries iam suave rubenti
murice, iam croceo mutabit vellera luto;
sponte sua sandyx pascentis vestiet agnos.

BIBLIOGRAPHY


