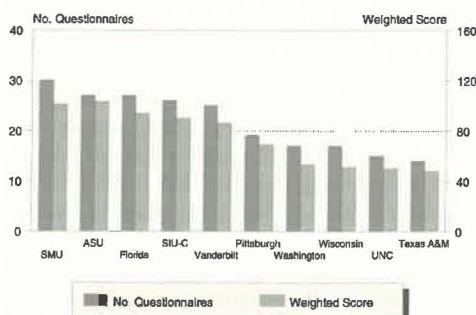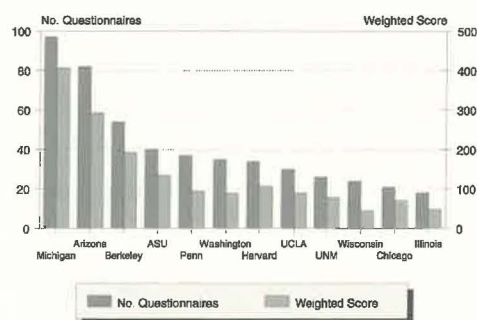# *Results of An SAA Bulletin Survey*

What characteristics distinguish the best programs?

Which programs are ranked highly?

Which programs are considered improved?

Software as if Money Mattered: Shareware Programs that Challenge Commercial Packages

Alex W. Barker, University of Michigan
Miichael Adler, Southern Methodist University

While the growing importance of computers in archaeology cannot be denied, much of the focus to date has been on newer and more expensive top-of-the-line commercial applications. Users faced with a growing mountain of computerized data and computer-based tasks may sometimes feel that their options are limited to either shelling out thousands of dollars for software packages to handle their word-processing, database, spreadsheet, statistical and communications requirements, or hoisting the jolly roger and committing software piracy. But the world of shareware, also called user-supported software, affords a less expensive, legal alternative. Shareware is software that can be freely copied and distributed. It is not free--if you use the package, like it, and plan to keep using it, you are required to register the product and pay a (usually small) registration fee to the author(s). But you're welcomed to spread copies around to friends and colleagues, to encourage them to try the product as well.

Many universities maintain archives of shareware programs, either on diskette or in mainframe archives accessible via modem or through remote file transfer (ftp) from another mainframe. Computer bulletin boards often contain large directories of program files which may be downloaded by modem, as do online services like CompuServe. These programs may be copied without cost or legal obligation (although connect charges may apply). There are a number of mail-order sources for shareware, and many local vendors now stock or can order shareware for you. PC-SIG (1030D East Duane Avenue, Sunnyvale, CA 94086) publishes both an encyclopedia of shareware programs (ISBN: 0-915835-19-3) and a magazine called Shareware (ISSN:1042-0681) devoted to low-cost, freely distributed programs. What follows is less a review of individual programs than notes on a few of the alternatives to commercial software packages.

Word Processing: Perhaps the granddaddy of shareware is the venerable *PC-Write* (PC-SIG #78,627,1235), a powerful word processor that is the equal of many expensive commercial packages *PC-Write* has become the first choice of many users. It supports more than 800 printers, permits editing of multiple documents at once, and includes a spell-checker. It converts *Wordstar* files and accepts most *Wordstar* commands, and can handle files as large as your computer's RAM. It also supports foreign language characters, Postscript printing, and multiple column layouts. Many universities use *PC-Write* for courses requiring extensive writing and rewriting assignments, so it may be widely available on some campuses. Another powerful word processor is *Word Fugue* (PC-SIG #1970,1971), which also supports *Wordstar* file and command formats, and supports up to eight editing windows, pull-down menus, a pop-up calculator, and a 100,000 word, customizable dictionary for registered users. Time and date strings, or the result of calculator operations, can be pasted into *Word Fugue* documents, which are ASCII text files, and so can be easily viewed or transmitted electronically. (Registration fees: *PC-Write* $129, *Word Fugue* $55).

Databases: There are a number of fine database programs available, but perhaps the most complete is *Wampum* (PC-SIG #830). *Wampum* is a *dBase* compatible, fully relational database management system supporting most features of the dBase programming language. Even commercial databases using a non-*dBase* format can generally export files in a format *Wampum* can read, and *Wampum* databases can be read by any of the main commercial packages. So when you decide to upgrade, your data can move with you. It is also possible to construct graphics databases using *Wampum* and .PCX format image files. Users with less-sophisticated needs might consider *PC-File*, a widely-used, flat-file database with *dBase* compatibility and mouse support, but *Wampum* probably represents a sounder bargain. (Registration fees: *Wampum* $50, PC-File $129).

Spreadsheets: *Lotus 123* is the industry-standard database, and *AsEasyAs* (PC-SIG #751) is a powerful shareware "clone" that can read and write Lotus format files, and which uses a command set similar to that of its commercial rival. It can support 256 columns and 8192 rows of data, and it permits data plots in 11 different graph styles. Unlike *Lotus 123*, *AsEasyAs* uses fairly intuitive menus to guide users through available commands. *AsEasyAs* lets you create spreadsheet files that any of the major commercial packages can read and users can, in turn, read .WK1 files created by *Lotus 123, Excel, Quattro-Pro* or other major packages. Data in .WK1 format can be shared between any of these packages and moving up to a commercial package will not require recreation of *AsEasyAs* spreadsheets. An ambitious and original alternative is *ProQube Lite*, a three-dimensional spreadsheet that can handle up to 512 pages of data in each 3-D worksheet, and that offers support for both *Lotus 123* and *dBase IIIPlus* file formats. It also supports a mouse, and includes a macro language which is not, unfortunately, Lotus-compatible. (Registration fees: AsEasyAs $50, ProQube Lite $25).

Statistical Packages: A variety of shareware statistical packages are available. Some, such as *STAT*

(PC-SIG #1618) provide basic descriptive statistics using *Lotus 123* (hence *AsEasyAs*) or *dBase* (hence *Wampum*) files. Others, like *Kwikstat* (PC-SIG #654-655) and *Micro Statistics Package* (MSP) (PC-SIG #1931) offer more advanced techniques including ANOVA, various kinds of regression, and non-parametric statistics. *Kwikstat* also reads *dBase/Wampum* files, and all three include data editors (of varying quality) for entering and checking data. (Registration fees: *Stat free*, *Kwikstat* $49, *MSP* $39.95).

Data Plotting: Several data-plotting packages are available to those who do not require full-service statistical packages. One such packages is *XY*, an elegant program that allows the user to perform least-square curve fits of straight-line equations or polynomials up to the fifth order. Best fit equations are generated along with the graphical output. Because the output graphs use standard printing characters, no graphics display is required. Versions are available for systems with or without a math co-processor. (*XY* ver. 1.2, J. Klein, 1708 Aberdeen, Grand Rapids, MI. Registration fee: $35).

Communications: Many of the most widely used communications packages are either shareware, or had their start as shareware. One of the most popular is *ProComm* (PC-SIG #499). *ProComm* offers support for a variety of terminals, a 100 number dialing directory, support for all common file transfer protocols, including Xmodem, Ymodem and Kermit, and the ability to execute *DOS* commands from within the program. Other popular shareware communications programs include *Boyan Communications* (PC-SIG #1206, 1343), which boasts a nice file viewer and browser, and *Weaklink* (PC-SIG #893), designed to facilitate transfers of files between *DOS* computers without a modem, using the RS-232 serial ports. (Registration fees: *Procomm* $75, *Boyan Communications* $40, *Weaklink* $15).

Anti-Virus Utilities: If you plan to poke around bulletin boards searching for software, antivirus programs are fast becoming a necessity. Several of the best, including the well-respected *McAfee Utilities*, are available as shareware for home use. *McAfee* offers two important features; first, it includes the program *VShield* as a memory-resident watchdog to prevent corruption of your system between virus scans; and second, it includes checker programs to insure that you received an error-fres (virus-free) copy of the original program. Upgrade virus utilities often--newer versions recognize and can kill more viruses. Because anti-virus software changes rapidly, permanent disk archives such as PC-SIG are probably not the best source for these programs. (Registration fees: *McAfee Scan, Clean* and *VShield* $85).

Using shareware, it is possible to load a computer with most of the applications you will need, for a fraction of the list price of commercial offerings. PC-SIG currently lists over 2000 shareware programs in its encyclopedia, so you will likely find several programs for any given need. Most of the shareware products mentioned here read and write standard format files, allowing direct access to data created by the more expensive programs. Since you are welcomed to distribute shareware, you can also legally include copies of the programs to generate or record data on the disks themselves. Even users of commercial packages may find shareware attractive for many purposes, since they can bundle fully functional shareware packages with data created by their commercial application, and send the disks off to collaborators who do not own a copy of the commercial package.

Shareware is also appealing to those who have not had the recent hardware upgrades, since few of the available packages require exotic or expensive hardware. All the programs reviewed will run on a *DOS* system with 512K and a hard disk, any of the commonly available graphics adapters and displays, and no math co-processor.

But please remember that shareware is not free. It may be freely distributed, but if you find a package useful and intend to keep using it, you should register the product. Not only does this insure that you will receive updates from the programmer or vendor, as well as technical support, it also encourages programmers to produce more software for free distribution.

"Boy, did we goof! The project is over, and we've got a half a million in grant money left over."

Reprinted with permission of the artist, Edwin Lepper.

Ph.D. Programs in Archaeology: Results of an SAA Bulletin Survey

Most archaeologists who work in an academic institution consistently face questions about the nature and quality of programs. Administrators ask us to justify new faculty lines or expenditures for laboratories, contract programs, or publications. From a different perspective, undergraduates or students with M.A.'s who plan to apply to doctoral programs in archaeology want to know what characteristics they should look for and what programs are the best. Given the traditional four-field organization of anthropology departments, however, there are few, if any, national surveys of archaeology programs alone. For these reasons, the editors of the *Bulletin* were encouraged by several colleagues to conduct an initial survey to define what our peers see as the most important characteristics of outstanding graduate programs and what specific programs are viewed as either the best or most improved over the past few years. The results of such a survey are described below. It should be emphasized, however, that this effort was not conducted as an official survey of the Society for American Archaeology, nor has the SAA specifically endorsed our survey methods or our analysis.

"Perhaps the most important factor in a good department is the 'quality' of the archaeology faculty--their ability as scholars, their ability as teachers/mentors, their 'social networks' and ability to guide students successfully into professional positions. These characteristics are, of course, difficult to measure."

The Sampling Design

The *Bulletin* questionnaire was sent to 290 archaeologists with Ph.D.'s who are employed in professional positions in North America. Selection of specific individuals was guided by a stratified, systematic sampling design. Based on the number of archaeologists in academic institutions, museums and research institutions, and government positions, we elected to sample 225 to 250 individuals from academic institutions and 50 to 75 individuals from museums, research institutions, or government agencies. In order to insure diversity, we wanted to avoid selecting more than one person from any institution or agency. Thus, using the American Anthropology Association's *Guide to Anthropology Departments*, we determined that a systematic sample in which an individual was chosen from two out of every three institutions listed would provide the desired sample size. This procedure produced a sample of 235 individuals from academic departments and 55 individual from government agencies or private institutions. Selection of individuals within departments alternated systematically between assistant, associate, and full professors in order to sample in-

dividuals with different ranges of experience. Finally, in order to maximize the number of females included in the sample, we chose those individuals whenever possible.
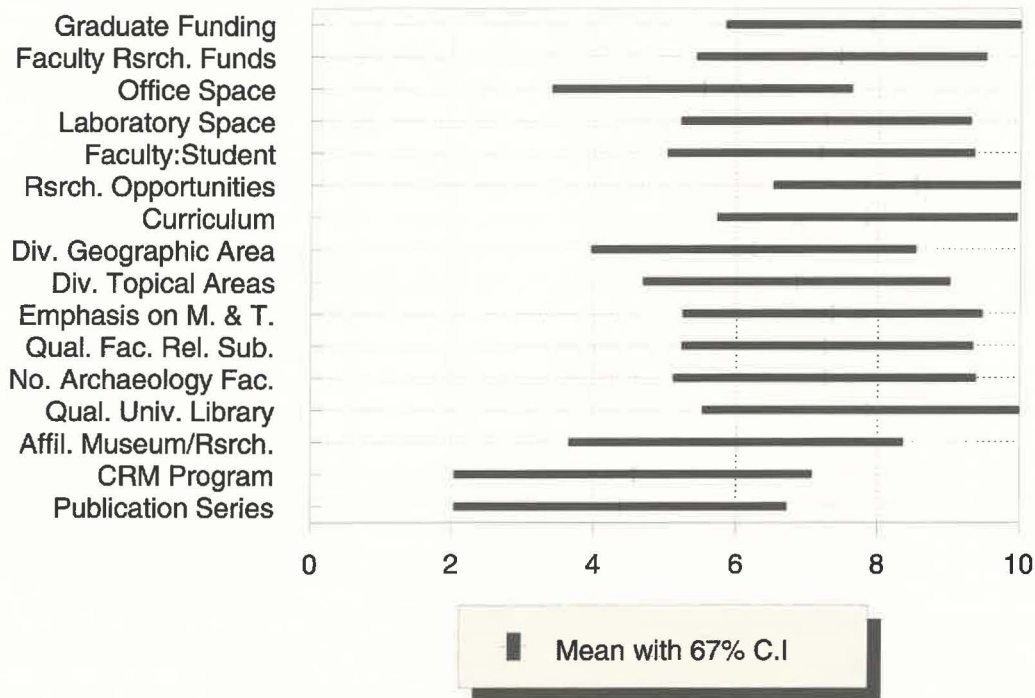
Who Responded?

One hundred and sixty-three questionnaires were returned by December 13, an excellent 59% return rate. We achieved reasonable samples of all the various subgroups of interest, with the exception of individuals employed in non-academic positions. Those employed in the latter positions returned only 24 questionnaires (44%), in contrast to the 60% return rate for individuals in academic positions. In regard to the other subgroups, 42 questionnaires were received from females and 121 from males; 59 respondents are employed at institutions that offer a Ph.D. in anthropology, while 101 are not; 17 received their Ph.D.'s during the 60's, 66 during the 70's, 66 during the 80's, and 13 during the 90's. A diversity of institutions also were represented. Respondents received their Ph.D.'s from 62 different institutions; only seven of those institutions (Arizona, Berkeley, Harvard, Illinois, Michigan, Pennsylvania, and UCLA) were represented by more than five individuals. Note that not all of these subtotals sum to 163 as some individuals failed to provide some of the requested information.

What Are the Most Important Characteristics of Outstanding Programs?

We began our survey with the assumption that the single most important characteristic of a graduate program is the quality of the faculty. As one respondent noted, "the most important factor in a good department is the 'quality' of the archaeology faculty--their ability as scholars, their ability as teachers/mentors, their 'social networks' and ability to guide students successfully into professional positions." We therefore asked individuals to evaluate the importance of 16 additional program characteristics, rating the significance of each on a scale from 1 (very unimportant) to 10 (very important). The characteristics, in order of their ranking by the respondents, are as follows: 1) research opportunities for students; 2) graduate funding; 3) and 4) (a tie) curriculum and the quality of the university library; 5) the success of faculty in competing for research funds; 6) a strong

Graduate Funding
Faculty Rsrch. Funds
Office Space
Laboratory Space
Faculty:Student
Rsrch. Opportunities
Curriculum
Div. Geographic Area
Div. Topical Areas
Emphasis on M. & T.
Qual. Fac. Rel. Sub.
No. Archaeology Fac.
Qual. Univ. Library
Affil. Museum/Rsrch.
CRM Program
Publication Series

0   2   4   6   8   10

■ Mean with 67% C.I

emphasis on method and theory; 7) the quality of faculty in related subdisciplines; 8) laboratory space; 9) the number of faculty; 10) the faculty to student ratio; 11) the diversity of topical specialities represented by the faculty; 12) the diversity of geographical areas represented by the faculty; 13) the presence of an affiliated museum or research institution; 14) office space; 15) the presence of a CRM program; and 16) the presence of a departmental or museum publication series. Mean ratings, along with 67% confidence intervals (plus or minus one standard deviation), are shown in the figure above.

"I see balance (among programs) leading to more options and opportunities for students."

T-tests run to compare the ratings of the different subgroups revealed few statistically significant (i.e., $p < .10$) differences. None were present between males and females. Respondents representing Ph.D. granting departments differed from those employed in non-Ph.D. granting institutions only in their assessment of the importance of the presence of an affiliated museum or research institution ($t = -2.53, p < 0.01$), a CRM program ($t = -4.55, p < 0.01$), and a departmental or museum publication series. ($t = -3.58, p < 0.01$). In all three cases, those working at non-Ph.D. granting institutions regarded those characteristics as more important, with mean ratings at least one point higher

on the scale. A final comparison was made between individuals who received their Ph.D. prior to 1980 or after 1979. Again, only four statistically significant differences were discovered. Individuals who received their Ph.D.'s more recently rated graduate funding as slightly less important ($t = 1.66, p < 0.10$), the diversity of topical ($t = -2.01, p < 0.05$) and geographical specialties ($t = -2.53, p < 0.02$) represented by faculty as more important, and a strong emphasis on method and theory ($t = -2.69, p < 0.01$) as more important. The latter three differences may be a product of increasing specialization within the discipline--a phenomenon noted by several of the respondents--such that fewer individuals are competent to teach or guide research in different areas or on particular topics. Greater diversity among the faculty thus provide students with the opportunity to explore more research avenues.

As a final component of this section of the questionnaire, we asked what is the minimum number of archaeology appointments necessary for an outstanding graduate program. The range of answers is illustrated in the figure at the top of the next page. Despite the variation in responses, it is clear that most respondents (87%) believe that at least four faculty appointments are necessary and a strong majority

Number of Questionnaires
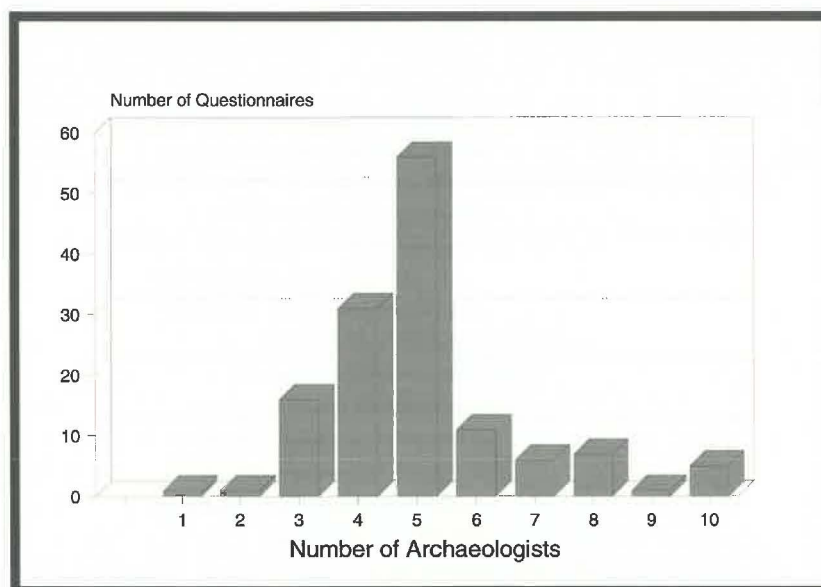
(64%) assert that at least five appointments are the minimum.

Which Programs are Ranked Highly?

Our request that respondents list what they consider to be the top five archaeology Ph.D. programs in North America, taking in account the program characteristics they ranked as most important, elicited a range of responses. Several suggested that such rankings are subjective and we agree. Nevertheless, we are frequently called upon to make such recommendations when students ask where they should apply for graduate training. Comments by the respondents indicated that at least two strategies are followed when we offer suggestions to students. Some believe that students should apply to the best overall programs, ones that are strong in a variety of areas, including method and theory. Others believe that there is no overall set of "best" programs, as it depends on the interests of the student. Thus, one respondent wrote that "I advise students to match their regional interests, theoretical/methodological interests, and personal style of learning with appropriate Ph.D. programs. I don't think that any one program is 'tops' in all area or for all potential students." Still others noted the impact of recent budget cuts at many institutions: "These are tough times in archaeology/anthropology. Rising departmental and university expectations for faculty, and cuts in library support and materials, are being felt throughout the country. I am urging students to meet with faculty and graduate students at 'desired' institutions to learn what expectations they should have for funding."

This diversity of strategies is reflected in the large number (23) of programs listed either as the best program in North America or rated among the best five (55 different programs). For those 55 programs, we tabulated the number of questionnaires that mentioned each institution and also calculated a weighted score that gave greater weight to higher rankings. Twelve different programs are included in the ten top ranked programs based on these two different measures, as shown by the histogram at the bottom of this page. Three programs--the University of Michigan, the University of Arizona, and California-Berkeley--stand above the rest in the opinion of respondents, with much smaller differences among the remaining institutions, supporting statements by respondents that "I see balance (among programs) leading to more options and opportunities for students" and "the tendency is toward increasing specialization."
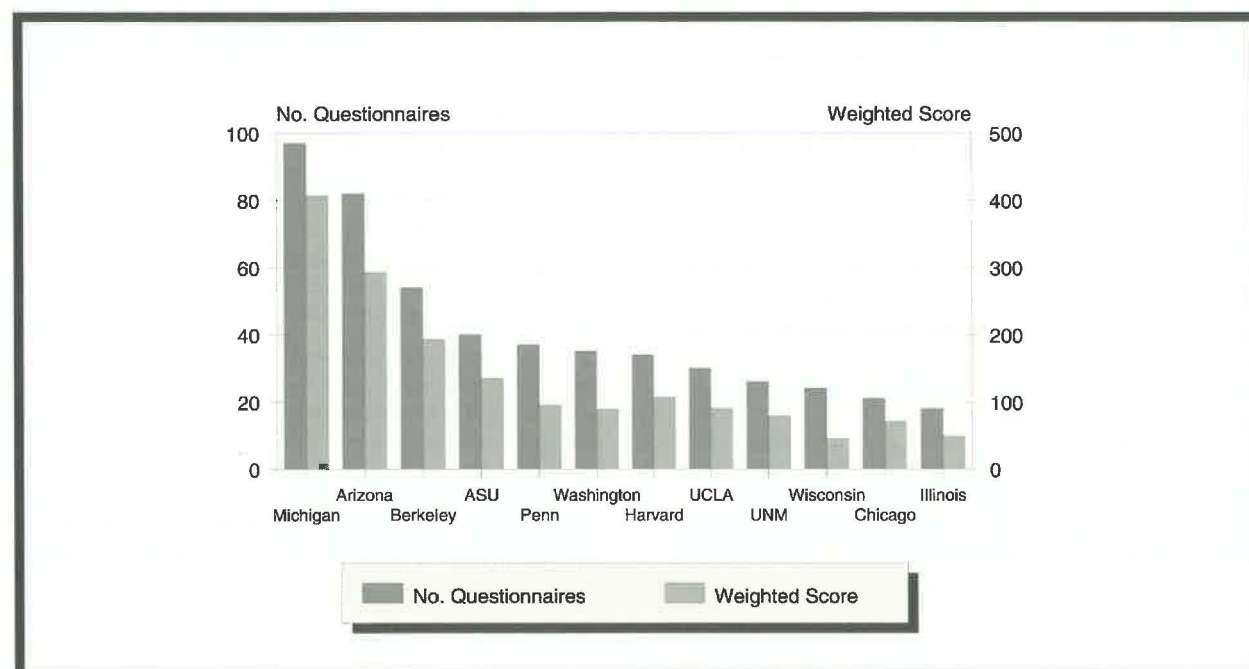
PH.D. BEFORE 1980 (n=72)	PH.D. AFTER 1979 (n=70)	PH.D. GRANTING (n=56)	NON-PH.D. GRANTING (n=84)	MALES (n=106)	FEMALES (n=37)
1. Michigan	1. Michigan	1. Michigan	1. Michigan	1. Michigan	1. Michigan
2. Arizona	2. Arizona	2. Arizona	2. Arizona	2. Arizona	2. Arizona
3. Berkeley	3. Berkeley	3. Berkeley	3. Berkeley	3. Berkeley	3. Berkeley
4. ASU	4. Pennsylvania	4. ASU	4. Harvard	4. Harvard	4. ASU
5. Pennsylvania	5. ASU	5. Washington	5. ASU	5. ASU	5. Pennsylvania
6. Washington	6. Harvard	6. Pennsylvania	6. Pennsylvania	6. Pennsylvania	6. Washington
7. Harvard	7. UNM	7. Wisconsin	7. UNM	7. Washington	7. Harvard
8. UCLA	8. UCLA	8. Harvard	8. Washington	8. UNM	8. UCLA
9. UNM	9. Washington	9. UCLA	9. Chicago	9. UCLA	9. Illinois
10. Wisconsin	10. Wisconsin	10. UNM	10. UCLA	10. Wisconsin	10. UNM

We examined the extent to which these rankings varied among the different subgroups in our sample and found little variation (top of this page; these lists are based only on the number of times a program was mentioned on the questionnaires). Michigan, Arizona, and Berkeley were consistently the top three programs in all groups. The placement of other programs typically varied only a small amount, with the exception of Washington (rated much higher by respondents who received their Ph.D.s before 1980 and who teach at Ph.D. granting institutions), Harvard (rated much lower by respondents from Ph.D. granting institutions and much higher by males), and Wisconsin and New Mexico (rated higher and lower, respectively, by respondents from Ph.D. granting institutions).

The greater differences between respondents employed in Ph.D. and non-Ph.D. granting institutions may be a result of several factors. One respondent noted that "it is very difficult or impossible for someone who has labored for 20 years in an undergraduate program to evaluate what is going on in various graduate programs... I'm afraid that recommendations we make to our graduates seeking a re-spectable grad. school are woefully dated, and based on what we knew when we were seekers ourselves."

Which Programs Are Considered Improved?

As a final component of the survey, we asked individuals in our sample to list the five programs that that they thought have improved to the greatest extent over the past five years. Respondents found this the most difficult question to answer; 45 respondents left the section blank and many others listed only two or three programs rather than five. In addition, responses were highly variable. Forty-seven different programs were listed as the most improved and 71 programs were included in at least one list of the top five. The histogram below shows those ten programs thought most improved, with tabulations made in the same manner described above. Southern Methodist ranks first, based on number of times it was mentioned, while Arizona State is first in weighted score. Southern Methodist, Arizona State, Florida, Southern Illinois-Carbondale, and Vanderbilt form a similar ratings group at the top of these rankings.

The Editors would like to thank the individuals who took the time to return our questionnaire.. We regret that we could not include all of their interesting comments.
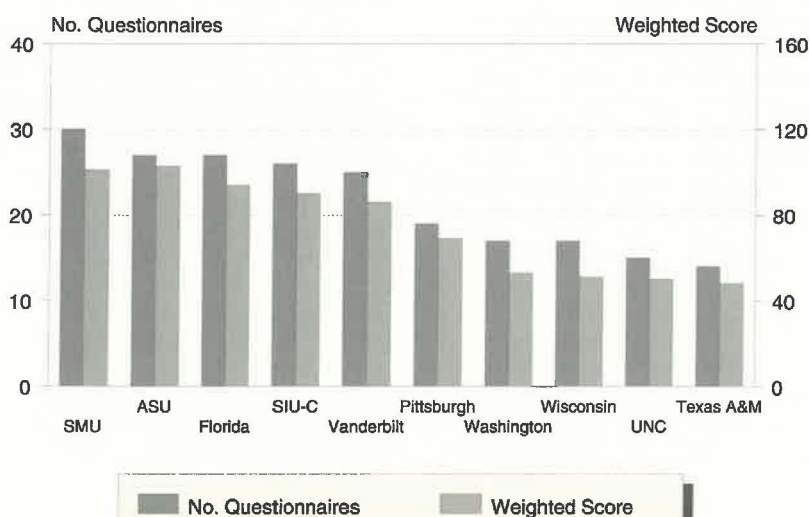
Is Fission the Future of Anthropology?*

Peter J. Brown, Emory University
Norman Yoffee, University of Arizona

Is anthropology coming apart at the seams? Is it breaking down into academic specialties whose practitioners cannot or will not talk with one another? Are departments organized around the traditional "four-field" approach clinging to a myth about the unity of the discipline? Or is the traditional four-field approach strong enough to withstand current intellectual and bureaucratic stresses? What is anthropology's future as an academic discipline within universities and in society as a whole?

Intellectual fragmentation and the future of anthropology were the themes of a weekend Exploration seminar held at the School of American Research in March 1992. Nine representatives of the four subdisciplines--cultural anthropology, archaeology, physical anthropology, and anthropological linguistics--and of major academic departments throughout the country took part: Peter Brown (Emory University), Margaret Conkey (University of California at Berkeley), James Peacock (University of North Carolina), Joel Scherzer (University of Texas), Douglas Schwartz (School of American Research), Richard Shweder (University of Chicago), Brackette Williams (University of Arizona), Norman Yoffee (University of Arizona), and Adrienne Zihlman (University of California at Santa Cruz).

The goal of the conference was simple: to begin a serious dialogue about the structure of anthropology both on the level of academic departments and as a whole discipline. The group discussed the configuration of departments, the intellectual and fiscal climate in universities, the costs and benefits of splitting up departments, the implications of fragmentation for teaching programs, and the potential role of the American Anthropological Association (AAA) and other professional organizations for understanding and shaping the future of the discipline.

Four interrelated trends in anthropology figured prominently in the discussions: explosive growth in the numbers of anthropologists in recent years; increasing specialization of research orientations and professional organizations; the intellectual isolation of the traditional subfields from one another; and a disturbing new development, the actual or threatened breakup of anthropology departments.

The growth of professional anthropology has been impressive, but the consequences of this growth are only beginning to be played out. In 1947 there were 408 members of the AAA. In 1976 there were about 2,500, and now there are approximately 11,000 members. In the last 30 years, from its beginnings as a recondite niche in the university, anthropology has become a standard part of undergraduate offerings.

Besides teaching in universities or colleges (there are about 450 departments), anthropologists work in museums, research departments, government agencies, and private firms. Physical anthropologists can be found teaching anatomy in schools of medicine; archaeologists work for contract firms doing excavations in advance of construction projects.

The growth of anthropology has naturally led to specialization and fragmentation, which in turn have challenged the long-standing anthropological emphasis on holism--the idea that the "human career" encompasses cultural, biological, ecological, and historical aspects that must be investigated from a broad, comparative perspective. Increased numbers of anthropologists and research specializations make not only holistic research, but also communication across the traditional subdisciplines more difficult and less likely. Of necessity, graduate education has become more and more focused, so that newly trained anthropologists may have neither the tools to apply, nor an interest in, a holistic view of humanity. Specialization within anthropology means there is no longer a common core of theory, method, or questions that links all practitioners; anthropologists have lost their common culture. It is no longer possible to say, for example, that all anthropologists have the experience of fieldwork or the same set of intellectual forebears.

There is an important contrast between the view of anthropology held by the educated public and how anthropologists see the discipline themselves. The public tends to think of anthropology primarily as archaeology and, to a lesser extent, as physical anthropology and the study of "primitive" peoples. In fact, archaeologists and physical anthropologists are minorities in most anthropology departments, often feeling unappreciated and politically weak. And although most anthropologists are cultural anthropologists, very few of them do research on so-called "tribal" peoples.

Many cultural anthropologists today are more influenced by the intellectual approaches of non-anthropological, "post-modern" writers like Michel Foucault or Pierre Bourdieu than by early anthropological theorists like Franz Boas, Alfred Kroeber, or Emile Durkheim. Some cultural anthropologists believe that the traditional approaches of ethnology are not merely intellectually stagnant, but also, because of their relationship to political power, morally questionable. Cultural anthropology, the mainstay of the overarching discipline, is in such intellectual flux itself that concerns about interrelations with archaeology, physical anthropology, or linguistics are neglected. Cultural anthropologists often have closer ties with colleagues in history, psychology, literature, religion, and cul-

tural studies departments than they do with the other anthropologists in their own departments.

Without a sense of intellectual unity, larger anthropology departments are at risk of breaking up along subdisciplinary lines. This has happened recently in a few universities, while others are rumored to be about to fission. When anthropology departments are merely "holding companies" for the subdisciplines and no common ground is perceived, then the smaller groups of physical anthropologists or archaeologists may want to split off to gain political autonomy or access to academic resources. Anthropological archaeologists, for example, may see advantages in establishing brand-new departments with their archaeology colleagues from area-studies programs. Yet these moves may have hidden costs, such as the vulnerability of smaller programs to administrative cuts or, more importantly, isolation from the ideas and models that have characterized the archaeology practiced within departments of anthropology. Conversely, cultural anthropologists may have practical things to lose if their archaeological and biological colleagues leave, since those subdisciplines appear to be attractive to the public. Not only do large numbers of students take courses in these subjects, but foundations and donors also actively support archaeological and physical anthropological research. One seminar participant questioned whether, with physical anthropology and archaeology gone, cultural anthropology would be able to hold together as a separate discipline, since the centrifugal forces on cultural anthropology itself are so strong.

The SAR conference considered the future of four-field anthropology at the level of individual departments and at the more abstract level of the discipline as a whole. Participants in the SAR conference compared the configurations of their own departments and the relationship between the four fields as expressed in undergraduate and graduate curricula. Large departments like Arizona, Texas, and residually at Berkeley, are organized on the traditional four-field model (at Texas, a fifth field, folklore, flourishes). The ties among subdisciplines in these departments hinge on the relative numbers of faculty and, not surprisingly, individual personalities. Large

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Archaeology and Anthropology: The SAA *Bulletin* Survey

Should archaeology continue to be academically and administratively part of anthropology programs? The respondents to the *Bulletin* questionnaire answered an emphatic "Yes" to that question, with 86% favoring continued affiliation. One respondent commented that "archaeology's current problems working with Native Americans stem from too many stones and bones programs. Also, most of us who end up teaching at smaller programs have to teach more than archaeology." Another commented that "without continued refreshment from other branches of anthropology, archaeological theory will become sterile and irrelevant." Doubts about the continued affiliation also were expressed, however. One wrote that "I have grave doubts about the Boas vision; most of us are prehistorians." Another commented that "I no longer have anything in common with my anthropologist colleagues."

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departments especially experience the tension between the historical legacy of holism and the modern centrifugal forces of research specialization. In large departments there is a pedagogical irony in that undergraduate curricula tend to stress a four-field unity, while graduate training emphasizes one-field professionalization.

Given the variety of ways of organizing anthropology departments, the diversity and proliferation of research specializations, and the possible disintegration of the previous paradigm of holism, concern with the "other," and use of a comparative method, is there any reason to believe that anthropology could or should survive in and out of the groves of academe? Discussions at SAR were cautiously optimistic.

While no center or core of anthropology might be easily discovered (beyond a graduate "core course" in cultural anthropology), trends in universities would seem to demand the invention of departments of anthropology if current ones ceased to exist. Today, as in the past, it is singularly the mission of anthropology to teach citizens about the biological, cultural, and historical diversity of humanity, to plead for the dignity of cultural differences, and to insist on an interdisciplinary approach to understanding humanity. In modern societies characterized by increasing multiculturalism yet persistent ethnic tensions and "tribalism," the anthropological study of cultural diversity should be more, not less, relevant than in the past. For universities, anthropology comprises a multicultural curriculum, and one that avoids the current balkanization of intellectual efforts that characterize some university programs.

While the tensions among the traditional four fields are undeniable, they may also create an intellectual space within which productive dialogue and research opportunities may be fostered. The interplays between biology and culture, history and the present, circumstances and discourse, environment and signs, humanities and sciences are all traditional anthropological concerns. Universities are finding that openness to interdisciplinary linkages can allow different viewpoints and epistemologies to coexist; it

Tools For Quantitative Archaeology

Harold J. Hietala, Southern Methodist University

Finally, a package of computer programs designed specifically for the broad quantitative needs of the practicing archaeologist has risen from the garbage heap of software suppliers. The unusual analytical needs of archaeologists portended such a package long ago, but until recently one has not been available. This package, *Tools for Quantitative Archaeology*, is a PC program concerned with the special requirements of methods developed for archaeology and are, therefore, not available in general-purpose statistical packages. The applied methods range from simple calculations of diversity measures to reasonably complicated applications of spatial analysis algorithms.

There are six independently operating program modules available within this package, each of which may be individually purchased. In addition, there is a 90 page manual provided with the purchase of this package, with detailed, nearly fail-safe, instructions regarding program conventions and overview descriptions of the individual modules. The individual modules are described in great detail in separate chapters which lead the user, step-by-step, through each of the programs. The descriptions for the separate programs of each module are user friendly, and describe in detail the interaction between the user and the algorithm. Each program is thus described in the form of a hard copy tutorial. In addition, almost all programs have test-run data sets with detailed output files so the user can 'learn' by experience. The manual takes the user through the individual programs, with thorough explanations of the program prompts at each step giving the user a familiarity with the broad range of applications for each individual program. There is an implied downside to this, however. The package is not menu driven, so the potential user must be minimally familiar with the use of *DOS* 2.0 or higher.

Tools will install itself on a hard disk or a set of floppy disks. Simple instructions for installation are given in the user's manual. The hardware parameters are minimal but at least 256K of memory is required. If the entire package is installed on a hard disk, then slightly more than 1.5 megabytes are needed, exclusive of the test-run data and output files. These only add another tenth of a megabyte, so the overall storage requirements are not large. A math co-processor is not mandatory, but some programs utilize extensive mathematical calculations so it is useful to have one.

The *Spatial Analysis* module is one of the most extensive and it includes a complex set of individual programs. For example, this module will convert point provenience data to grid count data, if such is needed for a particular program application. Johnson's Local Density analysis, as well as Hodder and Okell's "A" statistic can be performed through the application of two specific programs. The latter statistic can be statistically evaluated through an extension which permits a Monte Carlo analysis of significance. Another program, useful for mean- or median-split grid count analyses, will perform Fisher's Exact Test. In addition, the local density analysis program will output percentages within circular neighborhoods, which can then be used with a separate k-means clustering algorithm to perform a variant of Whallon's Unconstrained Clustering. In addition to the k-means clustering program, a program is available to perform a Monte Carlo analysis of cluster configurations as suggested by Koetje. The k-means program is one which produces graphical output.

With the exception of one program, which produces a Monte Carlo evaluation of a subsurface testing program, all other programs that produce plots work with Hercules, VGA, EGA, CGA, and ATT compatible graphics displays. Plot files can be plotted on Hewlett Packard plotters, and can be imported into *Word Perfect* 5.0 (or 5.1) and, I believe, *Microsoft Word* 5.5. Easier plotting, however, occurs with the use of the graphics command in DOS. For example, with a 286 chip running DOS 5.0, with a VGA or EGA display monitor, connected to a Hewlett Packard Deskjet 500 with a standard printbox, one only needs to enter [graphics deskjet /pb:std] prior to entering the module when printing a screen is anticipated. When it is then desirable to print the screen, [shift print-screen] will produce a hard copy. The

Press any key to continue   Esc aborts

4 Cluster Configuration
Test Run
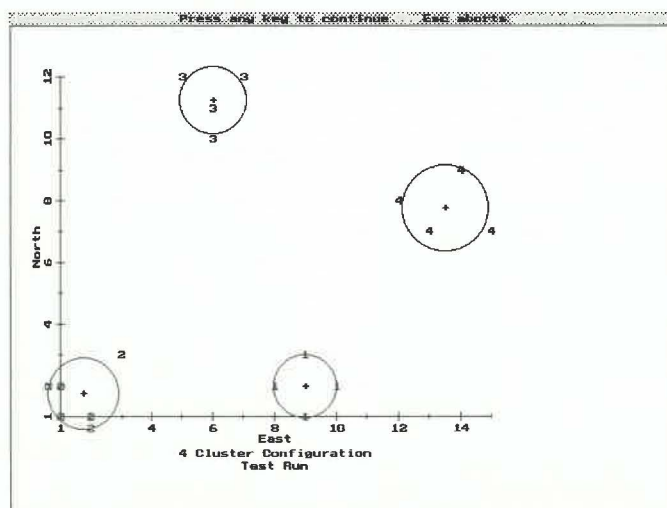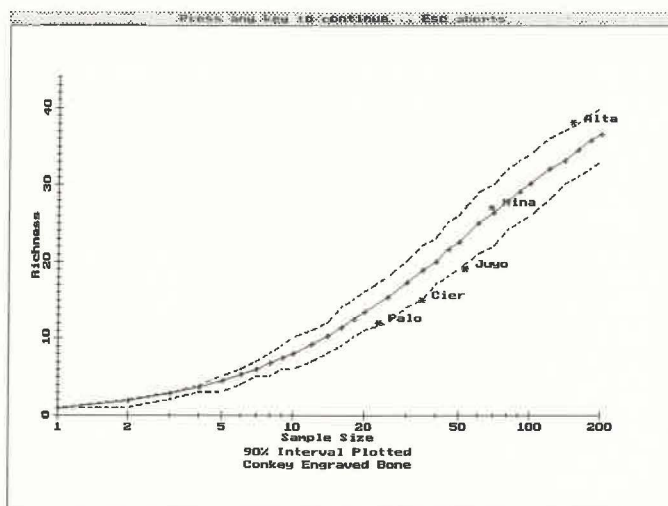
figures in this review were produced in this manner. Users should consult their DOS manual for specific instructions.

The *Spatial Analysis* module also has a wonderful, efficient nearest-neighbor program (which also does gravity analysis). It permits the calculation of nearest neighbors within or between classes. Although it calculates a nearest neighbor statistic, it does not always provide the appropriate p-value for testing the hypothesis of randomness. In addition, the gravity analysis portion of the algorithm would be more meaningful if it provided, as does the neighbor portion of the algorithm, a table listing the types and their gravity-based nearest neighbors.

Another module, particularly related to spatial data, is the *Subsurface Testing* module which calculates an optimal placement of test units in a rectangular or linear survey based on formulae revised by Kintigh.

The *Diversity* module calculates diversity measures, Boone's measure of assemblage heterogeneity, and provides a simulated richness-abundance curve (as illustrated in the above figure).

There are three other modules in this extensive complex that have not yet been mentioned. Two of them are the *C14* and *Distance* modules. The *C14* module provides programs that produce graphical analyses of C14 samples, as well as the Wilson and Ward Radiocarbon Analysis comparison and combination. The *Distance* module is a support module, in that it provides a matrix of similarity or distance measures, and calculates binomial probabilities or contingency table results for testing independence. Finally, one of the most important modules is the *Utility* module, which helps to insure that the data sets are "shaking hands" with the quantitative algorithms.

Each data set utilized in the *Tools* modules is assumed to be an Antana Data File (ADF), the format used by the analysis programs. That is, they are assumed to be ASCII files with header cards indicating the number of rows and columns. The *Utility* module manipulates files in the data format used by the analysis programs. For example, it allows the concatenation of two ADF files, side by side. This option allows the user to combine two data sets with the same number of cases. The *Utility* module also allows the deletion of individual columns, allows transformations (such as obtaining row percentages from row counts), has a sorting algorithm, and will allow Monte Carlo studies and the random selection of a specified number of rows. In addition, it will split one file into many and will do abstruse things such as replacing tabs and unprintable characters with blanks. The latter situation apparently occurs when one attempts to edit files in *WordStar* while in the document mode.

Complementary packages to *Tools* are *Antana*, *Minitab*, *SAS*, *SPSS*, *Systat*, *Surfer* and presumably many others. Some complementary packages may require the removal of the Antana header card. The cost of the complete package is $150, although special prices are available for individual program modules. For example, the individual price for the *Spatial Analysis* module is $75 and all other modules have individual prices of $40 or $50. In addition, the *Spatial Analysis*, *Diversity*, and *Distance* modules together are $100. Institutional prices are twice that of individual prices, but entitle the institution to distribute the copies to employees or members. This presumably applies to Departments of Anthropology and their students. It is a good bargain for any department or individual.

TOOLS FOR QUANTITATIVE ARCHAEOLOGY
   Desktop access to methods not found in general-purpose statistical packages. Includes 20 analytical programs developed for archaeological problems. Some produce publishable plots; others perform Monte Carlo analyses essential for small samples and ill-behaved distributions.

Spatial Analysis: k-means analysis for general purpose, pure locational and unconstrained clustering; Nearest-neighbor and Gravity Model analyses; Local Density Analysis; Hodder and Okell's A; Koetje's cluster composition analysis; point-provenience to grid count conversion.

Diversity: Sample size-controlled analysis of richness and evenness; calculation of Simpson's, Shannon's, Brillouin's, and Boone's diversity measures.

Distance and Similarity: Euclidean distance, Brainerd-Robinson, Gower, Jaccard's, and Simple Matching coefficients; Binomial and Poisson probabilities.

Two-way: χ^2, G^2, and Fisher's Exact tests of independence (including low expected counts), measures of association, median polish, and other table standardizations.

Radiocarbon: Graphical and statistical analysis of dates.

Subsurface Testing: Design and probabilistic evaluation.

Orders or Inquiries to: $150/$300 (individual/site
Keith W. Kintigh   license) with 120 page
2014 E. Alameda Dr.   printed manual. Specify
Tempe, AZ 85282-4002 USA   3.5" or 5.25" disks. Runs
Phone: (602) 968-7684   on all PC's; co-processor
ATKXK@ASUACAD.BITNET   supported, not required.

News
and
Notes

■ A symposium entitled **Pedological Applications in Archaeological Research** is planned for the November, 1993, Soil Science Society of America meeting in Cincinnati, Ohio. Poster presentations and short papers are now being solicited. Results of studies where pedological methodologies have been used as aids to archaeological research and where pedologists have worked with archaeologists are particularly requested. Plans are to publish selected papers in a volume of the Society's special publication series; those selected for publication will be subjected to peer review. Contact: David L. Cremeens or John P. Hart no later than February 28, 1993 at GAI Consultants, Inc., 570 Beatty Road, Monroeville, PA 15146; (412) 856-6400.

■ The **Minnetrista Council for Great Lakes Native American Studies** was formed in 1988 to preserve and promote Woodland culture. Originally composed of the Miami of Indiana, the Miami of Oklahoma, Ball State University, and the Minnetrista Cultural Center in Muncie, Indiana, MCGLNAS has grown to include 21 Woodland nations, 6 universities, and many other cultural institutions. MCGLNAS sponsors two annual events. The national conference in September includes both cultural presentations and scholarly papers on a theme chosen a year in advance. The Woodland Workshop and Gathering in June brings together craftspeople from member nations to teach week-long workshops. MCGLNAS also serves as a conduit for disseminating information among the member nations, academic and cultural institutions, and the general public. Contact: Nicholas L. Clark, Chairman, Minnetrista Council for Great Lakes Native American Studies, P.O. Box 1527, Muncie, IN 47308; (317) 282-4848.

■ Entries are now being accepted for the **5th Annual Exhibit Competition** sponsored by the **AAM** Curators Committee. The Exhibit Competition recognizes excellence in the year's exhibitions through an emphasis on concept, content, and the successful development and communication of both by the entire exhibit team. Award winners are selected by a panel of three judges representing a range of disciplines. Each winning exhibit will also be given national recognition through publication in *Museum News*. Contact: Lin Nelson-Mayson, Columbia Museum of Art, (803) 799-2810; or Nancy Blomberg, Denver Museum of Art, (303) 640-7038.

■ **The Advisory Council on Historic Preservation** has installed new telephone numbers in its Washington, DC, offices. The new numbers are: Executive Offices, (202) 606-8503; Section 106 Review Offices, (202) 606-8505; Fax Transmissions, (202) 606-8672. The Council's Washington address remains: The Old Post Office Building, 1100 Pennsylvania Ave., NW., Suite 809, Washington, DC 20004.

■ **The United States Committee, International Council on Monuments and Sites (US/ICOMOS)** is seeking US-citizen graduate students or young professionals for paid internships in Great Britain, Russia, Lithuania, Poland, France, Israel and other countries in summer 1993. Participants work for public and private non-profit historic preservation organizations and state agencies, under the direction of professionals, for a period of three months. Internships in the past have required training in architecture, architectural history, landscape architecture, materials conservation, history, planning, archaeology, or museum studies. Applications are due by March 15, 1993. For further information on qualifications, age restrictions, and stipends, and to receive application forms, contact: Ellen Delage, Program Officer, US/ICOMOS, 1600 H St. NW, Washington, DC 20006; (202) 842-1862; fax (202) 842-1861.

■ The Department of Social Sciences at Michigan Technological University has initiated a **Master of Science Degree in Industrial Archaeology (IA).** This new graduate program emphasizes a truly interdisciplinary approach and fuses the individual perspectives of archaeology, history of technology, and anthropology. The application-for-admission deadline is March 1, 1993. Contact: Dr. Larry Lankton, Chair IA Graduate Committee, Department of Social Sciences, Michigan Technological U, 1400 Townsend Drive, Houghton, MI 49931-1295; (906) 487-2113; BITNET:PEM-194 MTUS5.

■ **The University of Wisconsin-LaCrosse** has initiated a new undergraduate major in Archaeological Studies. The program is interdisciplinary and includes the fields of Prehistoric Archaeology, Classical Archaeology, Geo-Archaeology, Cultural Resources Management, Biblical Archaeology, Cultural Anthropology, and eventually Historical Archaeology. The theme integrating them is past human cultural adaptation. Contact: Jim Theler or Jim Gallagher, Department of Sociology and Archaeology, U of Wisconsin-LaCrosse, LaCrosse, WI 54601; (608) 785-6780 or (608) 785-8463.

■ **The Advisory Council on Historic Preservation** is offering introductory courses in Federal Projects and Historic Preservation Law. The Council is offering 21 classes in 1993. For information on dates and locations, contact: Shauna Holmes, (202) 606-8505.

■ **The University of Nevada, Reno** is offering a program of continuing education short courses in cultural resources management. This program is conducted in cooperation with the Advisory Council on Historic Preservation, the Bureau of Land Management, the National Park Service, and the US Forest Service. The courses are designed for historic preservation and cultural resource management professionals working in government agencies, museums, or the private sector, and those working in related fields, such as land management or environmental assessment. Each class carries optional graduate-level university credits. Contact: (702) 784-4046.

■ The **Sainsbury Research Unit** (SRU) for the Arts of Africa, Oceania & the Americas, University of East Anglia, announces a new stipendiary three-month **Visiting Research Fellowship**, tenable at the SRU during academic year 1993/94. Established scholars (recipients of a PhD or equivalent and/or those with at least 5 years professional experience) in the fields of anthropology, art history, archaeology, history or a related discipline, who are undertaking research for publication in the arts of Africa, Oceania or the Americas, are invited to apply. Application deadline is March 15, 1993. Contact: Admissions Secretary, Sainsbury Research Unit, Sainsbury Centre for Visual Arts, U of East Anglia, Norwich, NR4 7TJ, UK; (0603) 592498; fax (0603) 259401.

Calendar, continued from back page

July 26-31 15TH INTERNATIONAL CONGRESS FOR CARIBBEAN ARCHAEOLOGY, San Juan, Puerto Rico. The Congresss covers prehistoric and historic archaeology. Papers are accepted in English, French, or Spanish. Contact: Miguel Rodriguez, Instituto de Cultura Puertorriquena, Apartado 4184, San Juan, PUERTO RICO 00902-4184; (809) 724-1844.

Aug 23-25 THE INTERNATIONAL SYMPOSIUM AND FIELD EXCURSION TO ARCHAEOLOGICAL SITES OF ALTAI, sponsored by the Institute of Archaeology and Ethnography of the Siberian Division of the Russian Academy of Sciences, Novosibirsk, Russia. Theme: "The Origins and Evolution of Ethnocultural Processes in Asia." Contact: Academician Anatoly Panteleevich Derevyanko, Institute of Archaeology and Ethnography SD RAS, Acad. Lavrent'yev Ave., 17, Novosibirsk-90, 630090, RUSSIA (RF), USSR.

Oct 3-8 CONSERVATION OF ANCIENT SITES ON THE SILK ROAD, sponsored by the Getty Conservation Institute and the State Bureau of Cultural Relics of the People's Republic of China, Mogao Grottoes near Dunhuang City, China. Themes: Conservation Principles and Practices; Site Management, Environmental and Analytical Studies; Geotechnical Aspects of Conservation of Sites. Abstract deadline: November 30, 1992. Contact: Neville Agnew, 4503 Glencoe Ave., Marina del Ray, CA 90292-7913; (310) 822-2299.

Oct 14-17 CROSSING BOUNDARIES IN PRACTICE, at the Netherland Plaza Hotel, Cincinnati, OH. The Fifth International and Interdisciplinary Forum on Built Form and Cultural Research, and second Center for the Study of the Practice of Architecture (CSPA) Symposium on Architectural Practice invites abstracts of papers, symposia, workshops, and exhibits. Contact: David G. Saile, CSPA, U of Cincinnati, Cincinnati, OH 45221-0016; (513) 556-3413; fax (513) 556-3288.

1994

Apr 18-24 59TH ANNUAL MEETING OF THE SOCIETY FOR AMERICAN ARCHAEOLOGY, Disneyland Hotel, Anaheim, CA.

Is Fission the Future?, contined from p. 13

may be an ideal, but it is a worthwhile one, that such differences may sometimes be complementary. It is interesting to note that while departments in the United States threaten to break apart, the ancient University of Oxford, where it was once considered inappropriate to offer an undergraduate major in anthropology, is now uniting anthropological subfields in an American-style four-field integrative model.

The SAR conference generated some practical suggestions for future study and for programs that might be engaged by the American Anthropological Association. The participants agreed that further study of how anthropology is taught and how departments are organized needs to be done. They saw team-teaching by faculty of different subdisciplines as a good thing, and they believed the AAA should explore how this practice is administered or encouraged at different institutions. The Association itself should be careful to avoid serving only the interests of cultural anthropologists, and at its annual meeting the AAA should try to encourage more intellectual interchange across subdisciplinary boundaries. Finally, professional organizations need to plan strategies for bureaucratic cooperation and mutual intellectual aid.

The SAR seminar featured, not least, enormous good feeling among anthropologists for talking about anthropology, for listening to colleagues discuss trends and problems in subdisciplines, and for thinking creatively about the future of anthropology. We strongly recommend that departments of anthropology initiate such discussions for themselves.

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Positions Open

Law Environmental, Inc. seeks an archaeologist for the position of Principal Investigator. The position requires a masters degree in archaeology/anthropology, at least one year of experience as field director, and writing experience in compliance level reporting (a writing sample is required). If the applicant is not in the Atlanta area, he or she must be willing to relocate. Duties include: (1) supervising survey, testing and data recovery projects; and (2) authoring compliance level reports. Salary is commensurate to experience. Benefits include: (1) health, dental, and life insurance; (2) paid vacations and holidays; and (3) 401 K program. The position will be filled as soon as possible. Contact: Dr Richard W. Whiteside or Mr. Larry Bowers, Law Environmental, Inc., 114 Town Park Drive, Kennesaw, GA 30144; 404-421-3584.

Birmingham Museum of Art seeks a Curator to oversee all aspects of the Museum's African, Native American and Pre-Columbian permanent collections. Research, lecturing, and publication. M.A. or Ph.D. in Art History or related field. Minimum two years experience in a curatorial or academic position. Demonstrated skills of organization, research, connoisseurship, and demonstrated ability in grant writing. Send letter, resume, and a transcript to: Larry Baldwin, Birmingham Museum of Art, 2000 8th Avenue, North, Birmingham, AL 35203.

The Cultural Resource Group, Louis Berger and Associates, Inc., (LBA) solicits applications from archaeologists to serve as Principal Investigators. We seek highly motivated individuals to pursue quality archaeological research in a CRM context. PI responsibilities include: design and implementation of research; coordination of laboratory analysis; and report/proposal preparation. Ph.D. or M.A. in Anthropology required, eastern or midwestern U.S. experience desirable. Competitive salaries, benefits, and retirement plan. Submit vita and references to: Dr. Jonathan Lothrop, The Cultural Resource Group, Louis Berger and Associates, Inc., 100 Halsted Street, East Orange, NJ 07019; (201) 678-1960; ext. 796. EOE.

University of Arizona, Department of Anthropology, seeks an Archaeologist, Ph.D. completed: specialization in Western Old World Paleolithic/Mesolithic, with particular expertise in lithic analysis and desirable strengths in paleoenvironmental studies, and with demonstrated commitment to ongoing field work and student training at both the graduate and undergraduate levels. Beginning Fall 1993, Asst. Professor (tenure track) pending budgetary approval. Women and minorities are particularly urged to apply. Send vita, letter of application, evidence of teaching excellence, and the names and addresses of three references by March 15, 1994 to: Chair, Old World Archaeologist Search Committee, Department of Anthropology, University of Arizona, Tucson, AZ 85721. EO/AAE.

The Cleveland Museum of Natural History, a mid-size, outstanding natural history museum, is seeking nominations and applications for a scholar in archaeology with administrative experience and skills to lead department whose focus is prehistoric archaeology of the Ohio region. Interest, skills, and involvement in museum cooperative educational/exhibits programs and community outreach are essential. Extensive knowledge about museum collections, their management, and curatorial research is expected in order to supervise 13 collections departments. Minimum requirements include Ph.D. in archaeology and administrative experience in curatorial area of museum. Send letter of application, c.v., statement of museum, research, and administrative philosophy, and names and addresses of three references by March 1, 1993 to: Dr. J. Mary Taylor, Director, The Cleveland Museum of Natural History, 1 Wade Oval Drive, University Circle, Cleveland, OH 44106. Position available on or before July 1, 1993. EOE.

Arizona State University, Department of Anthropology, invites applications for a tenure track position of Assistant or Associate Professor in Anthropology, to direct the new Rock Art Center at Hedgpth Hills and to teach in the graduate Museum Studies Program on ASU's Main Campus. Ph.D. in anthropology or equivalent required. Strongly preferred: experience in museum administration; curation and/or exhibition development; research interests in rock art, Southwestern U.S. archaeology and/or ethnology. Duties will be to: 1) administer and develop the museum of rock art, including curation, exhibitions, and public programs; 2) teach half-time in the museum studies program and supervise graduate research; and 3) maintain an active program of research and publications. Salary commensurate with qualifications and experience. Deadline for receipt of applications is March 1, 1993. Send curriculum vitae and name, addresses, and phone numbers of three references to Professor Ann Hedlund, Chair of Search Committee, Department of Anthropology, Arizona State University, Tempe, AZ 85287-2402. EOE/AAE. This position is pending final budgetary approval.

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Calendar of Upcoming Meetings

Feb 27-28 MIDWEST CONFERENCE ON ANDEAN AND AMAZONIAN ARCHAEOLOGY AND ETHNOHISTORY, Washington University, St. Louis, MO. Contact: Dr. D. Browman, Department of Anthropology, Campus Box 1114, Washington U, St. Louis, MO 63130.

Mar 12-14 GEOGRAPHIC INFORMATION SYSTEMS AND THE ADVANCEMENT OF ARCHAEOLOGICAL METHOD AND THEORY, 10th Annual Visiting Scholar Conference sponsored by the Center for Archaeological Investigations, Southern Illinois University at Carbondale. Contact: Herbert D.G. Maschner, CAI, SIUC, Carbondale, IL 62901; (618) 453-5031; Bitnet: GE2610@SIUCVMB.

Apr 7-11 27TH ANNUAL MEETING OF THE SOCIETY FOR CALIFORNIA ARCHAEOLOGY, Asilomar, Pacific Grove, CA. Contact: Tom Jackson, 303 Potrero St., #203, Santa Cruz, CA 95060; or William Hildebrandt, 58 2nd St., Woodland, CA 95695.

Apr 14-18 SOCIETY OF PROFESSIONAL ARCHAEOLOGISTS MEMBER APPLICATION WORKSHOP, SAA annual meeting, St. Louis, MO. Those wishing to complete an application at the workshop should bring a c.v. and the $15 filing fee. For information concerning SOPA activities or the application workshop, contact: Vergil E. Noble, SOPA Membership Chair, National Park Service, Federal

Bldg., Rm. 474, Lincoln, NE 68508-3873; (402) 437-5392.

May 12-15 INTERNATIONAL SYMPOSIUM ON CONSERVATION OF URBAN SQUARES AND PARKS, Montreal Convention Center, Montreal, Canada. The conference is co-sponsored by the Canadian Society of Landscape Architects, ICOMOS, and the Quebec Association of Landscape Architects. Contact: Pierre M. Valiquette, Coplanor Congres, Inc., 511 Place d'Armes, Bureau 600, Montreal, Que. H2Y 2W7, CANADA.

May 13-16 ROANOKE DECODED, Ft. Raleigh National Historic Site, Manteo, NC. The four-day symposium is co-sponsored by the National Park Service and the Eastern National Park and Monument Association. The program will feature over 33 presentations on the history of Roanoke Island. Contact: Bebe Woody, Project Coordinator, Ft. Raleigh National Historic Site, Rte. 1, Box 675, Manteo, NC 27945.

May 24-June 11 TEACHING INSTITUTE IN LITHIC ANALYSIS, University of Tulsa, Tulsa, OK. The course can satisfy graduate or undergraduate credit, and can be used as a professional refresher course. Contact: George H. Odell, Anthropology Dept., U of Tulsa, Tulsa, OK 74104.

June 14-16 LITHIC ANALYSTS CONFERENCE, University of Tulsa, Tulsa, OK. Contact: George H. Odell, Anthropology Dept., U of Tulsa, Tulsa, OK 74104; (918) 631-3082.

July 19-22 VII SIMPOSIO DE ARQUEOLOGIA GUATEMALTECA, Guatemala City, Guatemala. The annual conference will be held in the Museo Nacional de Arqueologia y Etnologia. Those wishing to participate are invited to submit an abstract before April 15, 1993 to: Licda. Dora de Gonzalez, Museo Nacional de Arqueologia y Etnologia, Edificio 5, La Aurora, Zona 13, Guatemala City, GUATEMALA, CENTRAL AMERICA.

Apr 14-18 58th ANNUAL MEETING OF THE SOCIETY FOR AMERICAN ARCHAEOLOGY, Adams Mark Hotel, St. Louis, MO. For additional information, contact Jay Custer, Program Chair, Department of Anthropology, University of Delaware, Newark, DE 19716.