
THE ISBA NEWSLETTER

Vol. 5 No. 3

December 1998

The official newsletter of the International Society for Bayesian Analysis

President: Susie Bayarri

President-Elect: John Geweke

Past-President: Steve Fienberg

Treasurer: Rob McCulloch

Executive Secretary: Mike Evans

Board Members: Alan Gelfand, Jay Kadane, Robert Kass, Luis Pericchi, Phil Dawid, Enrique de Alba, Ed George, Malay Ghosh, Alicia Carriquiry, David Rios Insua, Peter Mueller, William Strawderman

Message from the President

Susie Bayarri, University of Valencia

Happy New Year to all ISBA members! This is a short report on the latest ISBA happenings, appointments, Board and Executive Committee activities in 1998, etc. Some of these are still tentative.

The main event has been, of course, the elections. This was the first 'normal' election in the history of our society. They went smoothly and on time. We are very grateful to all who are leaving this year for their services to ISBA, and welcome to the new ones. See the report on the elections by our Executive Secretary, Mike Evans (University of Toronto, Canada) in this Newsletter. The elections produced a vacancy in the Board, as Phil Dawid (University College, U.K.), who still had one year to go, becomes President-Elect. The Board appointed Daniel Peña (Universidad Carlos III, Madrid, Spain) as he was the next highest in number of votes for the Board, in the election.

A major upcoming event will, of course, be ISBA 2000. The Program Committee has been very busy preparing for this. The Program Chair for 1998, Mark Steel (University of Edinburgh, U.K.), was the principal coordinator of all the efforts and he will fill you in with some preview details in this Newsletter. The only responsibility of the Executive Committee was to appoint a Financial Committee, since for this meeting ISBA, and not the local organizers, is receiving the funds.

An ISBA Newsletter Editor has been appointed. The new Editor is Fabrizio Ruggeri (CNR-IAMI, Milano, Italy). He begins with the March 1999 issue. He is full of new ideas and enthusiasm. The Newsletter will begin a promising and, at last, normal existence. We are definitely looking forward to it! This issue of the Newsletter is again done without an Editor and Mike Evans, has been kind enough to put it together.

In another action the Board has approved reduced rates for students and residents of certain countries. You will find details in this Newsletter.

Chapters of ISBA are little by little being regularized. We now have three chapters one in each of India, Chile and South Africa. The Board approved temporary rules governing Chapters for 1999. More will have to be done in the future! The temporary rules appear in this Newsletter.

As I write this, the Bayesian archives will have become operative. This is a joint venture of ISBA and SBSS. Its existence is largely due to the efforts of Robert Wolpert (Duke University, Durham, USA). He also writes in this Newsletter providing more details and in particular describes how to gain access to it. Thanks to all who participated in developing this initiative.

An old agreement made by ISBA for contributing to the maintenance of Bayes' Tomb is finally coming into effect. Anthony O'Hagan (Sheffield University, U.K.) is the one relentlessly pursuing this; devoting time and money to keep Bayes' Tomb in good condition. He will tell you more know about it here. Thanks Tony!

A new period will also begin for the Mitchell Prize. This has been a joint venture between the Mitchell Committee and SBSS and now ISBA is a co-sponsor. Don Berry (Duke University, USA) has been instrumental in arranging this. Thanks Don!

Jay Kadane (Carnegie Mellon University, USA) is the Chair of the Constitution Committee, and our new President, John Geweke (University of Minnesota, USA) is the Chair of the Publications Committee. Both report on the activities of these committees in this Newsletter. We thank all the members for participating.

1999 ISBA Elections

Mike Evans, University of Toronto

The elections were held during the fall of 1998. We had an excellent slate of candidates for President-Elect, Treasurer and four new Board members. This was an extremely close election. Thanks are extended to all the candidates.

Those elected to positions are listed below. Due to Phil Dawid's election, a vacancy was created on the Board. To fill this, the candidate for a seat on the Board, with the next highest vote count was asked to complete Phil's term. So there are five new Board members listed.

On the technical side 164 ballots were returned (there are 339 members). Of these, 19 were deemed invalid as no name was placed on the envelope (or inside) that would allow them to be validated as coming from an ISBA member. All names were checked against the membership list. The counting was carried out by the Executive Secretary in the presence of a witness.

President-Elect

Philip Dawid (UK)

Treasurer

Valen Johnson (USA)

Board Members

Mark Berliner (USA)
Petros Dellaportas (Greece)
Jayanta Ghosh (India)
Daniel Peña (Spain)
Sylvia Richardson (France)

ISBA Website

Mike Evans, University of Toronto

The ISBA website has a new and final URL:

<http://www.bayesian.org/>

ISBA owns this domain name subject to paying a small annual fee. As the webmaster changes, and perhaps the physical location of the computer files as well, it is a relatively simple matter to change the computer to which this address points.

A tracker was also placed on the web-site (the button at the bottom of the sidebar) to monitor usage. This provides a variety of useful information. For example, there have been about 1300 visits for the period (Oct. 19, 1998 – Jan. 19, 1999) averaging about 15 per day. Of special interest is the geographical distribution of the visitors. The tracker reports visits from over 45 countries.

If you have something that you think would be of interest to ISBA members please contact the webmaster about having it referenced on the site. Also, if possible, please have any local statistical sites put up a link to the ISBA site. This increases the traffic and accordingly the value of our web-site.

ISBA Newsletter Editor Appointed

Fabrizio Ruggeri (CNR-IAMI, Milano, Italy) has been appointed as the new Editor of the ISBA Newsletter and will be responsible for the next issue. If you have suggestions for content or a possible submission contact Fabrizio at:

fabrizio@iami.mi.cnr.it

Bayesian Archives

Robert Wolpert, Duke University

The International Society for Bayesian Statistical Analysis (ISBA) and the Section on Bayesian Statistical Sciences of the American Statistical Association (SBSS of the ASA) have jointly sponsored a searchable Electronic Archive for abstracts of Bayesian papers and conference presentations, hosted by the Duke University Institute of Statistics and Decision Sciences (ISDS).

We hope that all authors of statistics papers and speakers giving conference presentations with substantial Bayesian content will consider submitting an abstract of the paper or talk to the ISBA/SBSS Bayesian Abstract Archive, and will include links to e-prints where available.

To submit a Bayesian abstract to the archive, or to search the archive by author, title, or keyword for existing abstracts, simply follow the instructions at the abstract's web site:

<http://www.isds.duke.edu/isba-sbss/>

The archive is new and relatively untried, so some Problems may arise; please report difficulties or suggestions to the archive staff by sending e-mail to:

archive@isds.duke.edu

Mitchell Prize

Susie Bayarri, University of Valencia

Some of you may be wondering what has happened to the Mitchell Prize. What follows is just my partial interpretation of the situation as it is now. It might not be entirely accurate or it might lack a description of important aspects. Please think of this as a 'preview' of developments to come. I have obtained all this information from Don Ylvisaker and Don Berry. As soon as the Mitchell Committee gets organized and begins working, you will get a much better description of its activities.

The Mitchell Prize is intended to acknowledge the best paper presenting a real Bayesian application. I borrow Don Ylvisaker's description of this to mean that a client's problem was respected on its merits and a Bayesian answer tailored to it was persuasive (as opposed, for example, to a Bayesian procedure looking for a problem that it might solve).

Don was pioneering in establishing the prize. He, together with others, gathered some money in memory of Toby Mitchell, who did applied work for his entire career; he was a pragmatic Bayesian, and quite influential in a quiet way. They established a fund and the first Mitchell Prize was given to Mike West in 1995. The Mitchell Committee was James Press (Chair), Persi Diaconis, Diane Lambert, Max Morris, and Don Ylvisaker. The first committee decided on an every other year schedule for the award. The second committee was comprised of Don Ylvisaker as Chair, Jim Berger, Persi

Diaconis, Diane Lambert, and Max Morris. The prize went again to Mike West in 1997.

ISBA was approached in 1997 to contribute to this Prize, and we agreed, as did SBSS. The organization behind this prize is now being completely renovated under the guidance of Don Berry. I can only outline the main parts of this.

The Mitchell Committee will have representatives from all three organizations, the Mitchell fund, ISBA and SBSS, and will be chaired on a rotating basis. Tentatively, there is only one member from each organization. The initial committee, to begin serving this year, will write a protocol, outlining guidelines for submission of nominations, criteria for selection, and the process for the committee. The appointment of representatives is almost finalized, so you may hear from the Mitchell Committee quite soon. They are moving quickly so that we can have an award in 1999. After that, and this is also a novelty, the award will be given every year and not every two years as in the past. So, if things go smoothly, the Mitchell Prize for the year 2000 might be given in Crete, at our meeting ISBA 2000! The prize will likely be a \$1000 award; \$500 from SBSS, \$250 from ISBA, and \$250 from the founders fund.

A Report on the Activities of the Publications Committee

John Geweke, University of Minnesota

At its June, 1998, meeting in Valencia the Board appointed a Publications Committee to study the question of what kinds of information dissemination would be most useful for ISBA members. The committee members are indicated below.

The committee is taking up a number of related questions. These include providing links and search engines that will be useful to Bayesians in teaching and research in far flung disciplines and locations. The material drawn together would include technical reports, course materials, and free software. The committee is also looking at the question of whether the Newsletter should be made available either on-line or as a supplement to the hardcopy now mailed to all ISBA members.

The committee solicits input from all members of ISBA. What services can ISBA provide that would make it easier for Bayesians to do their work, and would encourage the use of Bayesian methods? Please contact

any one of the committee members below.

Publications Committee
John Geweke, (Chair)
Siddhartha Chib
Julia Mortera
Bruno Sanso
Robert Wolpert

A Report on the Activities of the Constitution and Bylaws Committee

Jay Kadane, Carnegie Mellon University

The ISBA Constitution specifies the bare outline of how the organization is to function. The idea was to put into the Constitution only those matters that can be changed only by a vote of the whole membership. The bylaws are matters entrusted for change to the Board. Our intention for this spring is to propose bylaws about how elections should be conducted, as we now have at least some experience with these. There are other matters, such as chapters, where ISBA really hasn't got a policy yet, and not much experience. In this case, it is better for the officers and the Board to make policy according to their best judgment, and later consider adding something to the bylaws when a clear consensus has emerged.

The Constitution and Bylaws Committee intends to operate as a kind of institutional memory for ISBA. This is important as officers rotate, to give some sense of what has been worked out in the past. It is also important to give the organization the flexibility to meet new challenges. It is this balance which the Constitution and Bylaws Committee intends to keep.

Constitution and Bylaws Committee
Jay Kadane (Chair)
Steve Fienberg (Past-president)
Merlise Clyde
Udi Makov
Herman Van Dyck

A Report on the Activities of the Program Committee

Mark Steel, University of Edinburgh

As you may remember from the last Valencia meeting, ISBA plans to organize its future World Meetings once every four years, alternating with the Valencia meetings. Thus, the next ISBA World Meeting will be held in the

year 2000 in Greece. A lot of preliminary work has already been done by the Local Committee, chaired by George Kokolakis (Nat. Tech. Univ. of Athens). They have found a truly excellent location for our meeting. The meeting will be held in Heraklion on the beautiful island of Crete, where we have reserved rooms in two superb hotels, the Aldemar Royal Mare Village and the Aldemar Knossos Royal Village. They are both located next to the beach and each one has more than 350 rooms in bungalow units. The Knossos Royal Village has an excellent conference center consisting of two very large conference rooms each one of which can accept more than 400 participants. More information about the venue can be found in the following web-site:

<http://www.vacation.forthnet.gr>

Choose 'hotels' or search for 'aldemar'. But what you will see there does not do justice to what you will get (for a change)!

Of course, our ISBA 2000 meeting will also distinguish itself through its scientific content, and not only through its exotic location. This will be guaranteed by the Scientific Committee, chaired by Mike West (Duke University). This committee is responsible for all academic aspects of the meeting. As the meeting will be co-sponsored by Eurostat, the Statistical Office of the European Communities, who have pledged substantial financial support, this Scientific Committee consists of members proposed by ISBA and members proposed by Eurostat.

Partly because of the more complicated financial and fiscal structure that the funding by Eurostat implies, a separate Financial Committee is responsible for the budget, financial coordination with Eurostat, grant funding, authorization of expenses and payments, setting of fees, and related matters. This committee is co-chaired by Alicia Carriquiry and Steve Fienberg.

Provisional timing for the meeting is during the first half of June 2000. As this meeting will be co-sponsored by Eurostat, approximately half of the program will be focussed on Policy-Relevant Statistics, but interpreted in a broad sense. Thus, this could include topics of a wide variety, like environmental statistics, medical statistics, econometrics, transportation, large databases, sampling, data confidentiality, informatics etc.

We are convinced that the success of this meeting is really crucial for the future impact that ISBA can have on the profession. We shall do our best to organize a great meeting, but we can not do it without you. So help us

make this into a truly memorable occasion and come to ISBA 2000!

New ISBA Membership Fee Rules

The membership fee for calendar year, Jan. 1 to Dec. 31, 1999 is U.S. \$25.00. ISBA also has reduced rates for certain individuals. This reduced rate has been fixed at \$10 for 1999. People who can apply for that include students (full proof of status; maximum of 4 years in a row) and permanent residents of selected countries. A country qualifies for the reduced rate in 1999 if its GNP per capita based on the World Bank Data for 1996 is no greater than \$6,000. For example, this includes the countries where our three current Chapters reside (Chile, India and South Africa).

ISBA Provisional Policy for Chapters

1) Only members of ISBA can be members of an ISBA chapter. Chapters decide how much, if any, in addition to their regular membership chapter members should pay to the chapter. These additional fees are only justified by additional services. ISBA members are considered the same for ISBA, whether or not they also belong to a chapter. If an ISBA membership is terminated then so is the chapter membership.

2) Establishing or renewing a membership in a chapter is to be done at the same time, and using the same form (if possible), as establishing or renewing a membership in ISBA. The Treasurer informs chapter representatives each year about ISBA members who want to also belong to the chapter. Chapter local dues, however, are directly sent to the chapter and ISBA dues are sent to ISBA.

3) Chapters will present an annual report to the Treasurer and the Board about the way the local money is spent. Failure to do so may result in removal of the chapter.

First Grossman Fellowship Awarded

The Ph.D. Program of the Graduate School of Business, University of Chicago is pleased to announce the awarding of the first annual Sanford J. Grossman Fellowship in Honor of Arnold Zellner to two outstanding advanced Ph.D. students in Finance, Gregor Andrade and Erik Stafford.

Sanford J. Grossman, who earned his Ph.D. in Economics from the University of Chicago in 1975, created the fund in 1997 with a major gift to the GSB intended "to provide fellowship support to accomplished Ph.D. students." The

fellowship is to be awarded annually to an outstanding advanced Ph.D. student chosen by the Associate Dean for Ph.D. Studies.

Sanford Grossman is the Steinberg Trustee Professor of Finance at the University of Pennsylvania's Wharton School of Business, director of Financial Strategies, Inc., and president of Grossman Asset Management. Arnold Zellner is the H. G. B. Alexander Distinguished Service Professor of Economics and Statistics Emeritus of the Graduate School of Business. He is the Director of the H. G. B. Alexander Research Foundation and co-editor of the Journal of Econometrics.

Andrade and Stafford, the co-recipients of the first Grossman Fellowship, entered the program in 1994 and have distinguished themselves in their studies so far, including successfully proposing their dissertations in November 1998. Andrade's dissertation is entitled "Two Essays in Mergers and Acquisitions". Stafford's is entitled "Managing Financial Policy: Evidence from the Financing of Extraordinary Investments". The fellowship prize will be used by them to further their research as they complete their dissertations.

Bayes' Tomb

Tony O'Hagan, University of Sheffield

The Reverend Thomas Bayes is buried in Bunhill Fields in the City of London. The tomb was found and restored in the 1960s, using money contributed by Bayesians worldwide. I believe that the original restoration was organised by Dennis Lindley. In 1986 I arranged for the tomb to be cleaned, and this was paid for by money that was raised for the Bayesian Study Year which was held at Warwick University in 1985-86. I have just arranged for it to be cleaned again. Half of the money was contributed by the Royal Statistical Society, out of the proceeds of the 4th International Conference on Practical Bayesian Statistics, held in Nottingham in 1997; the other half came from funds I had at the University of Nottingham. This seems a good time to tell members of this Society a little about the tomb and the recent cleaning.

The tomb and its surroundings

Bayes is buried in a family tomb, and several other members of the Bayes and Cotton families are named in the inscriptions. Bunhill Fields was used at the time as a burial ground for nonconformists. Such people could not be buried in the 'proper' Church of England graveyards, and I suspect that Bunhill Fields would have been outside the city itself then (although I am

no historian). The ground ceased to be used for burial soon after, and is now a public park, preserved and owned by the Corporation of London.

There are several other notable historical figures who have tombs or monuments in Bunhill Fields. One is Richard Price, Bayes' friend who presented his momentous paper to the Royal Society in 1763. There is a booklet published by the Corporation of London concerning the site and its antiquities, and there are some paragraphs about Bayes in it. It is available from the attendant's hut in the park (although that is generally closed) or from the Corporation.

Bunhill Fields lies on the West side of City Road, about 200 metres South of its junction with Old Street. The nearest underground station is Old Street. Just across the City Road from the park is Wesley's chapel. Wesley was of course a nonconformist preacher in the eighteenth century, and the chapel has been nicely restored.

On the other side of the park is another entrance, onto Bunhill Row, and from here the Royal Statistical Society's offices are just two minutes' walk. Bayes' tomb is near to this entrance. It is inside an iron railing with a locked gate, but you can read some of the inscriptions if your eyes are good!

Recent happenings

I pass by the tomb regularly, when visiting the RSS or other nearby places, so I noticed recently that it was in need of cleaning again. Moss and lichen and other muck dropped from the tree overhead tend to obscure and erode the inscriptions over time. So I had planned to arrange another cleaning, but had not got round to it when I received a call from an American TV producer by the name of Stephen Reverand. He was going to make a film about probability stressing the new applications of Bayesian methods and wanted to know about Bayes. When I said where the tomb was, but that it was rather in need of cleaning and I had planned to arrange that, he thought it would be great to film some footage about Bayes in Bunhill Fields while the cleaning was being done.

That film was shown late in 1998 in the USA on the Learning Channel (which I believe is part of the Discovery Channel). I do not know if it was shown in the UK or elsewhere. I have a video tape kindly supplied by the Cronkite-Ward Company and was very impressed with it. Unlike the British TV programme featuring several notable members of the Society a couple of years ago, it is sensible and informative. It obviously needs to

address a lay audience, but does so without gross distortion. It is slick without becoming glib. The programme is entitled "Understanding: The Odds in Life".

In addition to being cleaned, the inscriptions on the tomb were repainted. The work was done by a highly respected restorer of ancient monuments who was also working at the time on the Albert Memorial; the Corporation of London take their responsibilities seriously.

The future

It has been suggested to me that there should be a more official and systematic way to ensure that the tomb is kept in good condition. No doubt there are many who could not care less, Bayesians and non-Bayesians alike, about its fate. I confess that I am not one to dwell in the past either, but people need symbols to identify with and, in my mind at least, Bayes' tomb is a symbol for the Bayesian community. Perhaps even those who do not call themselves Bayesians, or think the distinction unnecessary or childish, might like to think that the memory of a pioneer of probability theory is kept alive in this tangible way.

If a more permanent arrangement is to be established it needs an organisation to administer it and a source of funds. It has been suggested that the funding should come from the Royal Statistical Society (in recognition of Bayes being part of the British statistical heritage) and the International Society for Bayesian Analysis (as the obvious special interest group). It might perhaps be administered by ISBA, or a more formal legal trust fund might be set up with trustees coming from the funding bodies.

What do the members of this Society think?

Feedback Concerning the E.T. Jaynes Obituary

Concerns have been raised about the accuracy of some of the statements made in the E.T. Jaynes obituary written by Professor Larry Bretthorst and published in the ISBA Newsletter, Vol. 5, No. 2, September, 1998. We are publishing here correspondence on this.

To the editor:

We wish to note corrections to several statements in the obituary of Ed Jaynes that appeared in the ISBA Newsletter of August, 1998. These corrections were brought to our attention by others, and have been corroborated.

After the summer of 1946, Ed Jaynes enrolled at the University of California at Berkeley as a graduate student in Physics, where he took a course in quantum mechanics from J. Robert Oppenheimer. In 1947 Oppenheimer went to the Institute for Advanced Study in Princeton, New Jersey, as Director, taking with him three students who were then working with him. While Jaynes, who was then only a first year student, was not one of Oppenheimer's students, he was evidently quite excited by the course he had taken from Oppenheimer, and he moved to Princeton University to study in the Department of Physics there. None of the three students who accompanied Oppenheimer ever changed advisors, all got their degrees the following year, and all went directly to faculty jobs. Jaynes returned to Stanford in 1950 as an Instructor, not as an Associate Professor, and was never granted tenure there.

Susie Bayarri, ISBA President
Steven Fienberg, ISBA Past President
John Geweke, ISBA President-elect
November, 1998

To the editor:

Many of the factual errors in the Jaynes obituary are adequately noted by the Editors, leading to the unpleasant but unavoidable conclusion that Jaynes fell prey to his own fantasies in writing his personal history. He is not the first to have done so. But the obit also contained some personal derogatory statements about noted physicists, which cannot be allowed to escape notice, as well as incorrect and misleading statements about physics itself. To the extent that an obituary is also a eulogy, it properly calls attention to the achievements of the departed, but it should trifle with neither history nor science, nor undeservedly with the character of others. The obituary cited Jaynes's own writings in calling the late J. Robert Oppenheimer's understanding of physics mystical, emotionally derived, and anti-scientific. As a physicist who, in common with virtually all physicists who knew the man, deeply admires Oppenheimer, for his broad-based scholarship, for the depth and breadth of his understanding of physics, for his accomplishments, and yes, for his character, I cannot let this gratuitous vilification of a great scientist stand. It is both mean-spirited and factually wrong.

The obituary also proclaimed that Jaynes probably generated more debate about the foundations of quantum mechanics than any other physicist of the twentieth century, that both Einstein and Schrodinger "deplored" Oppenheimer's and Bohr's views on the subject, and that Jaynes's own deviant views about quantum electrodynamics may yet turn out to be right. Not one of those statements is close to true---let me deal briefly with each of them.

First, Jaynes's neoclassical formulation of quantum electrodynamics is simply wrong, was never developed into a real theory, was never taken seriously by any physicist I know, and has been known to be wrong for many years. It is in utter disagreement with experiment. Quantum electrodynamics is one of the most successful theories in the history of physics---for a single example, it is possible to compute the magnetic moment of the electron from first principles, including the electrodynamic effects, and the result agrees with experiment to better than ten decimal places, the accuracy of the experiment. To say that the verdict isn't in, as did the obituary, is absurd. It is improper to misinform the statisticians who read the ISBA Newsletter about the current state of a science.

As for generating debate about the epistemological foundations of quantum mechanics, I have never heard the name of Jaynes mentioned by active physicists in this context, nor does his name appear in the books written on this truly deep subject. He never produced an alternate theory, and had little, if any, impact on those who did. Again, it is improper to misinform the readers about a scientific subject.

Neither Einstein nor Schrodinger "deplored" Oppenheimer's views, which closely tracked those of Bohr, also universally admired, and also bad-mouthed in the obituary. (I knew both Einstein and Bohr, and of course Oppenheimer, but never met Schrodinger.) There has long been malaise among physicists about the interpretation of certain predictions of quantum mechanics, predictions that are consistently confirmed by experiments. Nature, the final arbiter, is not at all confused---the problem is in our own imperfect heads. But malaise is not the same as doubt, and quantum mechanics is simply correct in its description of nature, however bizarre some of the implications may seem. This is not to say that it will not eventually be replaced by an even better theory---of course it will. The philosophy of science has always lagged behind science itself, sometimes for more than a generation, and name calling does not nourish progress.

To put it bluntly, Jaynes was a fringe player on the great questions in physics, and his eulogist followed Jaynes's own fictionalized biography in vastly exaggerating his importance, while quoting his gratuitous denigration of some of the great physicists of the past. We should not tolerate even the former sins, but it was the last that provoked this response.

Hal Lewis
University of California - Santa Barbara
November, 1998

To the editor:

After the Jaynes obituary was published in the ISBA newsletter, a number of factual errors were brought to my attention. These errors all concerned the period of time in Ed's life when he was in graduate school and when he returned to Stanford after finishing his degree. I have corrected these errors in the version of the manuscript that I have on my web site (<http://www.bayes.wustl.edu>), and in the version of the manuscript that will be published in "Maximum Entropy and Bayesian Methods," Kluwer Academic Publishers, 1999.

Some of the errors were incidental to the obituary and I simply removed the errors from the text. Consequently, in the revised text I make no mention of the number of students who followed Oppenheimer to Princeton, nor do I mention what happens to those students when they finished their degree. It seems on the third error, the position offered Ed when he returned to Stanford, that Ed was inadvertently promoted by Joel Snow when he said that "Jaynes became an assistant professor" and I inadvertently promoted Ed a second time when I substituted the word associate for assistant. This problem was fixed by simply saying that Ed returned to Stanford after finishing his degree. Last, at least one person insisted that Jaynes was never a student of Oppenheimer. In this case, I have simply expanded the quote from Jaynes and let Jaynes state in his own words exactly what his relationship was with Oppenheimer. I will leave it to the readers to decide if Jaynes was Oppenheimer's student or not.

Larry Bretthorst
Washington University
January, 1999