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The official bulletin of the International Society for Bayesian Analysis

#### A MESSAGE FROM THE PRESIDENT

- Fabrizio Ruggeri - *ISBA President*, 2012

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I came back last week from ISBA 2012 in Kyoto (and ISBIS 2012 in Bangkok) and I am now resting in the Italian Alps, getting ready for a week in a small island in Southern Italy. Life is made of excitement and rest, and other... Regarding excitement, ISBA 2012 has been a great source! We probably had the largest ISBA World meeting ever (although still far from some Valencia meetings), with excellent organization and scientific program. Many people have been involved in ISBA 2012 but I would like to thank especially three: Hajime Wago and Yasuhiro Omori for the organization and Igor Pruenster for the scientific program. They deserve our appreciation also for the efforts put in securing funds from sponsors (see the list on ISBA 2012 website) and other societies (like SBSS), which, jointly with the IS-BA general and devoted (Lifetime, Pilar Iglesias) funds, provided a significant financial contribution for 150 young participants.

ISBA 2012 started with four videotaped "ISBA lectures on Bayesian foundations", given by van der Vaart, West, Robert and Berry. You will find the videos pretty soon on the ISBA website: we have already many videos and we plan to add our own as well (and contributions are welcome!). We had also plenary talks by Higuchi, Holmes, Walker, Doucet and Gelfand, many invited and contributed sessions and, last but not least, the poster sessions in the usual "Bayesian style". Savage, Lindley and Mitchell awards were given at the final dinner. A very well attended meeting of young Bayesians (followed by

many self-organized "social events") was organized to discuss the new j-ISBA ("junior") section. Friends, colleagues and participants gathered to honor George Casella, who had passed away few days before.

Our Japanese colleagues also organized magnificent welcome and farewell dinners, and various traditional events (like tea ceremony and kimono dressing). The "infamous" Bayesian cabaret and an after party meeting on the top of the main hotel concluded the dinner, whereas a visit of major historical buildings in Kyoto was organized for the day after the conference ended. The short summary cannot give you the idea of the lively atmosphere and the outstanding scientific quality of ISBA 2012, but, if you have not experienced it in Kyoto, you will have an opportunity in two years time in Cancun, Mexico, for ISBA 2014 (and, if you have, I am sure you will try to ... Continued on page 2. come again!).

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**MESSAGE FROM THE PRESIDENT,** *Continued from page* 1....

Personally, as I said in Kyoto, I am very proud of being the ISBA President for what we have achieved in Kyoto and what we have done and planned to do in our society. And here I give you an update on ISBA activities.

Two new sections (Finance and Business, Industrial Statistics) have been approved and they started a membership drive; proposals for two other sections (Biostatistics and Pharma, Environmental Sciences) will be shortly submitted to the ISBA Board for their approval, as well as the one for j-ISBA. Sections on astrophysics/cosmology and statistical computing are currently under discussion. The new sections are mostly devoted to foster cooperation between Bayesians and scientists in other fields and practitioners, which is one of the main goals of ISBA.

New bylaws for local chapters have been prepared and, once approved by the Board, they will favor the creation of new chapters and major diffusion of ISBA and Bayesian ideas worldwide.

Our journal, Bayesian Analysis (BA), is moving to the same system used by IMS for its journals. BA will have more visibility and paper submission and handling will be easier. BA will remain free to both readers and authors but the latter will be invited to contribute, on a voluntary basis, to defray the costs of publication. I would like also more young people (from j-ISBA) being involved in the Bulletin and I am planning to work with the new Editor and the j-ISBA officers on this. Regarding new Editors, the ISBA Board just appointed Marina Vannucci as Editorin-Chief of Bayesian Analysis and Jarad Niemi as Webmaster, replacing next year Herbie Lee and Chris Hans, respectively, who have been so beneficial for the journal and the website and deserve our thanks.

In the future you will hear a lot about courses (before/after meetings, by themselves, webinars [possibly also in Spanish and other languages], organized by ISBA or its sections or chapters). We just created a committee in charge of them. They will be helpful in spreading the use of sound Bayesian methods and, at the same time, they should provide funds to ISBA to support its activities. ISBA members will have discounted rates

for courses and regular meetings. After the recent meetings organized by the Chilean and Brazilian chapters, it is now the turn of the Indian, South African and Australasian ones in the next months. A North American meeting is under discussion for next year (it should be devoted to the celebration of the 250th anniversary of the publication of Bayes's paper, like a session at the European Meeting of Statisticians in Hungary). Other ISBA sessions are planned at the Stochastic Processes and Applications and ENAR conferences (both in the USA) and at the International Chinese Statistical Association meeting in Hong Kong. The "old" sections (Bayesian nonparametrics and Objective Bayes) will have their meetings in the Netherlands and USA, respectively. The new sections (Finance and Business, Industrial Statistics) should have meetings as well. Other endorsed meetings, like Bayesian Inference in Stochastic Processes in Milano (Italy), will be held. The Latin American summer school should start in 2013 in Costa Rica and then move near Cancun (before ISBA 2014) and then in 2015 in Medellin, Colombia, jointly with COBAL. As I mentioned in the previous issue of the Bulletin, ISBA will be a partner of JSM next year and our members will be entitled to a discounted registration fee.

As you can see, plenty of activities are planned ahead (and you can find more, and more details, at www.bayesian.org). Some are free and others have reduced fees for ISBA members. We are planning to have each year more activities of interest for Bayesians worldwide, attracting new members and retaining the old ones. This year the number of members increased so much that we are now very close to 1,000 (and we are well above the previous maximum!). Since we have many costs (travel support for young people, website, Bayesian Analysis, clerical assistance), financial contributions would be appreciated, starting from the renewal of your membership in due time, the application for a new one or the donation to one of our funds.

Last year, ISBA President Michael Jordan wrote his first column on "What are the open problems in Bayesian statistics?" This year I would like to write one of the next columns on how very simple Bayesian methods can help in solving real problems. We are often looking for sophisticated models solving complex problems but I saw, working with people in industry, that sometime a very simple method can solve a "big" problem

for the company. If we want to increase the influence of the Bayesian community and its ideas in the society, I believe we should work also at this level, only apparently "minor". I would like to receive short notes by September, 10th, at fabrizio@mi.imati.cnr.it, with a description of the problem, the method used and the reaction of the scientists or practitioners you have been working with. ▲

### A Message from the Editor

 Manuel Mendoza mendoza@itam.mx

This issue of the Bulletin is been published a few days later than originally planned. The reason is that we decided to wait until some news on the results of the ISBA 2012 World Meeting become available. Thus, now you will be able to read the reports by our President and the Program Council regarding this successful conference. Also, in this issue Isadora and Antonio,

Co-Editors of the Students' Corner Section, continue the work with the panel of experts and we present a special report on the use of Bayesian methods to forecast the outcome of the recent Presidential election in Mexico.

In addition to this, you will find many other pieces of useful information concerning our Society. I hope you will find this bulletin interesting. As always, I want to encourage all members of ISBA to contribute to the Bulletin with their suggestions, manuscripts and announcements. Please do not hesitate to contact me or any member of the Editorial Board.

#### FROM THE PROGRAM COUNCIL



# ISBA 2012

- Vanja Dukic, Igor Pruenster & Alex Schmidt -

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The ISBA 2012 World Meeting – the premier conference of the International Society for Baye-

sian Analysis (ISBA) - was held in Kyoto, Japan, from June 25 to June 29, 2012. The program is at: http://www2.e.u-tokyo.ac.jp/~isba2012/.

The ISBA Program Council thanks all of you who attended - it was a great meeting, marked by a record of 550 attendees. There were a total of 4 ISBA tutorial lectures on Bayesian foundations, 5 keynote lectures, 21 invited sessions, 34 special topic sessions, one Savage award session, and 235 posters.

The ISBA lectures on Bayesian foundations will soon be available to everyone on the ISBA website.

We extend our sincere thanks to all our Japanese hosts, especially to Hajime Wago and Yasuhiro Omori, for a superbly organized meeting, and to all our sponsors: ASA-SBSS, Google, Microsoft Research, NSF, Pascal 2, Collegio Carlo Alberto, Japanese Ministry of Education, Science, Sports, Culture and Technology, Japan Society for the Promotion of Science - and of course to ISBA

itself (ISBA General, Lifetime Membership, and Pilar Iglesias Funds). Thanks to their generous support we were able to raise over \$80,000 and help support over 150 junior researchers.

Finally, we couldn't have been this successful without all the hard work of our ISBA Executive Board and Program Committee. All deserve a great big THANK YOU.

On behalf of ISBA Program Council,

Vanja, Igor and Alex. ▲

# BAYESIAN ANALYSIS - A MESSAGE FROM THE EDITOR

### UPDATE FROM BA

- Herbie Lee -Editor-in-Chief

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The June issue of Bayesian Analysis features a paper on spatial quantile regression by Kristian Lum and Alan Gelfand, which provides a new model for spatial data with covariates. Additional perspective appears in discussions by Rajarshi Guhaniyogi and Sudipto Banerjee, by Nan Lin and Chao Chang, and by Marco Ferreira. This issue also contains other fine articles in nonparametric and parametric modeling.

### **ISBA - SECTIONS**

# NONPARAMETRIC BAYES **SECTION**

- Stephen G. Walker -Chair

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A quick message: The Bayesian nonparametric section now has a flourishing web page at http://bayesian.org/sections/BNP. It has been set up by Michele Guindani who is also maintaining the site.

Feel free to send him your suggestions for im-

provements and/or information to be put there. Such as Bayesian nonparametric conferences; sessions; talks; videos and so on. Email: mguindani@gmail.com.

At any one time there are five official positions; chair, chair-elect, treasurer, secretary and program chair. So if you feel the urge to serve please contact the current secretary for details of when positions come up for election.

Thanks.

Stephen.  $\triangle$ 



# SECTION ON FINANCE AND BUSINESS

- Mike West -Founding Chair mw@stat.duke.edu

The establishment of the ISBA Section on Finance and Business (ISBA/FaB) reflects the growth and vitality of Bayesian methods in applications across a broad spectrum of commercial, financial and economic areas. The historical fertility of the interplay between basic methodological research and challenging real-world applications in these fields has had a profound effect on the modern state and image of Bayesian statistics and decision analysis. The creation of ISBA-FaB reflects the view that we will see very major, continued growth in the interest and importance of Bayesian thinking in the increasingly complex, stochastic and data-rich worlds of business and finance.

ISBA/FaB aims to:

- promote research in Bayesian methods in finance and business, by organising conferences, workshops, and sessions in other meetings;
- promote education in Bayesian methods in finance and business by developing shortcourses for students and practitioners; and
- promote academic-industry interactions and outreach to the finance and business professions.

In particular, the Section aims to focus a good deal on initiating and running short-courses - stand-alone short-courses as well as continuinged courses linked to meetings, and to push hard on this as an opportunity to expand effective interfaces between the academic and industrial Bayesian worlds.

The founding officers of ISBA/FaB are:

- Fei Liu (treasurer),
- Paul Damien (secretary),
- Herman van Dijk (program chair), and
- Mike West (chair).

We invite and encourage all ISBA members to contact any of us to discuss ideas for FaB activities of any kind (consistent with the above aims and bylaws), and especially related to short-courses, workshops and conferences linked to other groups in any areas of business and finance, and other forms of outreach.

The ISBA/FaB bylaws are linked to the new FaB Section web page at the ISBA site. All ISBA members are invited and encouraged to join the Section- you can do this by logging into your ISBA membership account and simply adding the Section membership (either annual or life), or directly via the Section page. Please tell your friends and colleagues, and help us to launch IS-BA/FaB with a substantial initial membership by the end of our first year. FaB times are ahead!

With best regards,

Mike.



# SECTION ON INDUSTRIAL **STATISTICS**

The ISBA Board of Directors is pleased to announce the new ISBA Section on Industrial Statistics, which joins the Bayesian Nonparametrics, Finance and Business, and Objective Bayes sections! The primary purpose of the ISBA Section on Industrial Statistics (ISBA/IS) is to promote research in Bayesian methods in industrial statistics by organizing conferences, workshops, and sessions in other meetings. Other purposes of the Section include promoting use of Bayesian methods among industrial statisticians and practitioners by developing short courses and increasing ISBA membership among industrial statisticians. The initial officers of the section are:

- Section chair: Refik Soyer (Term: July 2012-December 2014)
- Program chair: Antonio Pievatolo (Term: July 2012-December 2013)
- Secretary: Simon Wilson (Term: July 2012-

December 2014)

• Treasurer: Tevfik Aktekin (Term: July 2012-December 2013)

The Chair-Elect will be elected in conjunction with elections this fall. To become a founding member of the IS section or add a membership in any other section (memberships in sections are open to all current ISBA members) please login with your ISBA user name or email and visit the Section Membership Page. Annual dues in the IS section are \$10, with Lifetime memberships available for \$200.

# FORTHCOMING J-ISBA SECTION

- Francesca leva -

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Great turnout greeted the start up of the new ISBA section for junior researchers at the last IS-BA meeting in Kyoto! Those of you who attended the meeting on Wednesday 27th gave lots of excellent inputs. It is now official, the new section for junior Bayesian statisticians (j-ISBA) will be presented for approval as a new ISBA section as soon as the 30 signatures on the petition will be gained (so let's sign it at www.bayesian.org and let the Section to start!).

Initially, j-ISBA will focus out efforts on networking, professional development workshops and webinars on academic and industrial skills. Furthermore, j-ISBA sponsored sessions and satellite meetings are in the works for ISBA 2014. There and in each ISBA event at local and not local level, we will try to support and promote the organization of initiatives like pre-courses and round tables on hot topics of interest, invited session organized by and devoted to junior researchers, social events that allow junior researchers to meet each other, to exchange ideas and to connect with the Bayesian community at large.

Francesca.



#### **BAYESIAN STATISTICS and ELECTIONS**

# A Bayesian Quick Count

- Manuel Mendoza -

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### - Introduction

A few days ago, on July 1st, the Mexican people decided who will be the President of the country for the next six years. With a voter roll including almost 80 millons of citizens, 143,129 polling stations were installed all over the country. There, more than 50 millions Mexicans cast their votes, leading to a participation rate of 63%.

This was the third Presidential election organized by the Instituto Federal Electoral (IFE), (www2.ife.org.mx/) an autonomous body with a Board of Directors (Consejeros) appointed by the House of Representatives (Cámara de Diputados) among a list of candidates that must show independence from any Political Party and any government office, thus called 'Consejeros Ciudadanos'.

After 70 years of a ruling party (Partido Revolucionario Institucional, PRI for short) which used to (supposedly) win all Presidential elections with more than 90% of the votes, in the mid 90's, the preassure created by the opposition parties and many civil organizations led to a series of legal reforms which introduced the IFE as the independent agency in charge of organizing the elections.

Remarkably, as a result of the first Presidential election organized by the IFE, in 2000, the office was won by an opposition candidate. The same party won six years later, in 2006, when an amazingly closed election took place. The final difference between the right wing candidate (the winner) and the (leftist) candidate in the second position was only 0.56%.

In 2000, and maybe three years before, when an intermediate election renewed the house of Representatives, Statistics appeared in Mexico as a powerful tool in the electoral arena. Nowadays, a huge number of electoral preferences surveys are published over a period of several months prior to the election. As in other countries, with a well stablished democratic tradition, television and radio stations, newspapers, civil organizations and political parties, hire private firms to conduct these studies. In addition, the day of the election, once all polling stations are closed, a number of Exit Polls and Quick Counts offer estimated results of the election, again paid for a variety of sponsors.

As a consequence of the the long period of time where there was no real electoral competition, an atmosphere of great distrust still remains among parties, journalists, some civil organizations and sectors of the citizenship. Thus, one of the main concerns of the IFE has been not only to organize the elections but to increase the sense of confidence and transparency on the whole electoral process.

Thus, in addition to the usual activities related to the election organization which include handling the National Voter Register, recruit and instruct nearly one million citizens to participate as electoral authorities in the polling stations, auditing the financial reports of the parties and many others, the IFE also invites a small group of specialists to design and operate the IFE Quick Count. By the way, these specialists are first nominated and once all parties agreed that they are not only certified scientists but also independent citizens, they are appointed to the so called Quick Count Technical Committee.

#### - The IFE Quick Count

Once a polling station is closed (they must close at 6pm local time if there are no people waiting to cast their vote), votes are counted by the citizens in charge of the station, the results are recorded in a certificate and a copy of this document is posted on the wall outside the station. Then, the President of the polling station takes the certificate, as well as the ballots used to vote, to the corresponding electoral constituency office.

Federal elections in Mexico always take place in Sunday. The following Wednesday officials on each constituency (there are 300 of them over the country) accumulate the votes received from their polling stations and, by next Sunday, they inform the IFE about the election results. Finally, the IFE makes public the final, national results.

Thus, seven days must elapse after the election day to get official results of the process. In order to prevent unjustified victory claims from the candidates in the election, the IFE can order a quick count.

After trying several strategies, nowadays the IFE does not hire any firm to produce the quick count. Most private quick counts involve a sample with no more than 1500 polling stations. The basic reasons are cost and logistic. Sending operative personnel (usually hired and trained just a few weeks in advance) to more than one thousand different locations in a country like Mexico, where the access to some remote areas can be complicated, is not an easy task. In the same direction, it might be difficult to guarantee timely communication chanels available to transmit the information from every polling station in the sample. All this problems can be solved, of course, by a private firm but the costs raise very rapidly.

On the other hand, six months before any election the IFE hires nearly 30,000 young people, most of them high school students. They are trained to be IFE Instructors or 'Capacitadores Electorales' (CAE's they are called) or Supervisors. A small set of polling stations in the same constituency is asigned to each CAE (usually between two and seven, depending upon the geographical conditions of the location). Once the citizens that will work as electoral authorities on each polling station are chosen, the CAE's teach them all the relevant procedures (how to install the polling station, how to identify the voters, how to count the votes and how to fill in the final certificate, among others). Moreover, during the election day each CAE visits several times all the polling stations under her/his responsability to make sure that they are properly installed, that no big problems arise and finally, that they close. After each round, the CAE sends a report to the IFE through a specific communications and informatics national network. By the way, most of the CAE's send the report using a cell phone, others make arrangements in advance to use a residential telephone; in some rural areas they use radio communication and, in more isolated areas, they are provided with satellite phones.

With this formidable infrastructure working during the election day, the extra task of recording and sending the results of the votation from a sample of polling stations is perfectly feasible with a relatively small marginal cost. In fact, it makes possible to fix a sample size several times larger than the size a private firm can handle, with the obvious consequences in terms of precision. Of course, an additional training is required and some independent systems must be developed, in particular to guarantee that only the authorized personnel will have access to the information and that the data is received free of errors.

This is reason why the IFE has chosen to have an in-house quick count. The role of the Technical Committee is then to produce the sample design, to fix the sample size, to verify the systems that will be used to get the information from the polling stations and, obviuosly, to propose and operate the statistical methods that produce the inferences. As for the sample, the Committe has chosen a simple stratified design where each one of the 300 constituencies is considered with its urban and not urban component. Since not all constituencies have both types of region, the total number of strata in 2012 was 483. The sample size was 7597 (polling stations) thus involving approximately one third of all CAE's. Also, and given the social and political relevance of the project, since 2000, the Committe has used, simultaneously, several methods to estimate the final results, and their convergence is used as a cross-validation mechanism. Interestingly, the official documents used by the IFE to inform the citizens about this matter, explictly refers to the '...well-known Classical, Robust and Bayesian methods..'. Hopefully, they will be well-known at some point in the future.

#### - The Bayesian Quick Count

I have been invited twice (2006 and 2012) to be member of the Technical Committe of the IFE quick count and in both ocassions I asked my colleague, Luis E. Nieto, to join me in the Bayesian analysis of the sample. After discussing several alternatives, at the end we chose a very simple model whose details will be reported elsewhere. Here, instead, I would like to briefly review some aspects that suggest that the Bayesian approach is particularly suitable for this specific type of application.

A quick count must produce its results as soon as possible. As already said, the polling stations are closed at 6pm local time. However, there are three different time zones in Mexico and thus, the last polling station closes at 8pm local time Mexico City. Once a polling station is closed, the citizens in charge must count the votes in a pu-

blic act. Only when the votes of the different simultaneous elections have been counted (every time we have a President election we also have elections for the Senate and the House of Representatives), these citizens can produce the corresponding certificate. This process takes, on average, approximately three hours. This is the time that the CAE in charge of getting the information must wait before sending his report to the IFE. On the other hand, the regulation which allows the IFE to produce a quick count, explicitly states that the results must be announced no later than midnight. So, there is a real possibility of reaching the deadline for the statistical analysis with only a fraction of the planned sample.

In order to deal with this situation, the IFE information system starts at 6pm and, every 5 minutes, collects all the information sent by the CAE's. Thus, it produces a sequence of accumulative files where the Committe can see how the sample is being received. These files are used to calculate the available percentage of the sample, but also can be examined to verify how this information is distributed over the country, in particular to identify regions where the sample is being collected at a rather slow pace.

In addition, this partial samples might be analized with the estimation methods to track the trend of the results. Obviously, the methods assume a complete probabilistic sample and these early analyses ignore the potential bias associated to the arrival pattern of the information. In any case, if, finally, the (almost) complete sample is obtained, it might be possible to get a report on the evolution of the inferences over the night. More important, the results of the different methods can be compared over time to evaluate the agreement among them. At this point, appears an advantage of the Bayesian analysis. If a stratum is not included in the available (partial) sample, other methods need to adjust the estimation procedure by assuming a different stratification. In contrast, the Bayesian analysis keeps the original stratification and uses, for the missing strata, the prior distribution.

As for the prior, there are many sources of information. Preferences surveys and analysts opinions, among others. However, the IFE being the electoral authority, it would be politically unacceptable to use initial information for its quick count suggesting that one candidate is, a priori, more likely to win the election. As an ethically neutral alternative, if  $\theta_1, \ldots, \theta_k$  are the proportions of votes in favour of the relevant candida-

tes, the prior distribution can be taken as uniform over the simplex  $\theta_1 + \ldots + \theta_k \leq 1$ .

Another interesting issue has to do with the communication of the results. Once the Committee produces its inferences, these results are delivered to the President of the IFE who a few minutes later gives a message and announces the results in a national TV broadcast. After some years where both, the citizenship and the politicians, were expecting a pointwise estimate as the "true" value, nowadays they are willing to accept an interval estimate along with a "confidence" level. In fact, the usual question is: Do the intervals overlap? If they do, almost everybody forgets the confidence (probability) level and con-

clude that the results are *too close to call*. This is a sort of "tradition" that needs to change. Some colleagues report interval estimates for the difference of the parameters of interest in a more realistic approach.

Both in 2006 and 2012, entrenched in our Bayesian fortress, we have reported interval estimates as well, but only after presenting summaries of the joint posterior distribution that provides sense to the intervals. In particular, graphical representations of the bivariate posterior for every pair  $(\theta_i, \theta_j)$ ;  $i \neq j$  proved useful specially with non statisticians. A couple of examples of this kind of graphic, taken from the 2006 election, appear below.

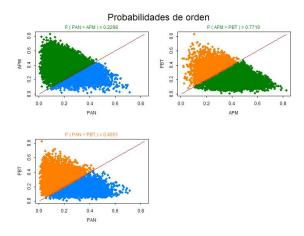


Figure 1. Bivariate posterior distributions a few minutes after starting the process.

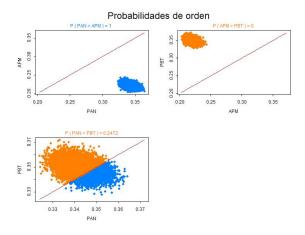


Figure 2. Bivariate posterior distributions one hour before delivering final results.

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These graphics are obtained via simulation from the joint posterior, include the line  $\theta_i = \theta_j$  and whenever a simulated point satisfies  $\theta_i > \theta_j$  it plotted with colour of the i-th party whereas the colour of the j-th party is used otherwise. In addition, the value of the posterior probability  $P(\theta_i > \theta_j | D)$  is presented on top of the graphic.

In Figures 1 and 2 we can see how, when we only have a small part of the sample, there is no clear dominance of any party. However, three hours later is clear that the green party is gone and the competition reduces to the blue and yellow parties. We produced one graphic of this type every five minutes and, in that ocassion,

one hour after the graphic in Figure 2, it was clear that the winner was the blue candidate. The final difference was only 0.56%.

#### - Final Remarks

Producing a Bayesian quick count for a Presidential election in Mexico has been a rewarding experience. Not only we got the feeling of making a (small) contribution to our democracy, but it also gave us the chance to explore several simple ideas which proved useful to deal with this specific application of the Bayesian paradigm.

### STUDENTS' CORNER

- Isadora Antoniano & Antonio Ortiz -

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This is the time, in many places, for the end of the undergraduate academic year. We hope you're all enjoying it. For the most of us, this is a special time of the year. If you are involved in teaching activities, you are affected directly: we wish you strength and patience to face it. Even you have no teaching activities, your supervisor probably does, so you are affected indirectly by getting less attention from him/her (we assume this is a disadvantage, although some of you might disagree).

This time of year, is also a big conference season. This means some of you might be busy with the preparation of talks or posters. For those giving a talk, we wish relevant questions from your audiences, and the best of luck with the computer, memory stick, projector, and perhaps even with the air conditioning of the venue. For those presenting a poster, we wish you the best of luck for printing and transportation, choosing the spot for the poster display and we hope, of course, you will receive many relevant comments. To all, we wish a lovely summer (or not, if you're on the opposite hemisphere).

For everyone attending the ISBA 2012 Conference in Kyoto, we wish you a great time in this great country. We hope you achieve an incredible

experience, in both statistical and social/ touristic terms.

Please remember to email us your thesis abstracts and any suggestion to improve this section. We would be very pleased to hear from you.

And now, to the Q&A section, with a question that may comes into any researcher's mind, during or after the PhD.

# Q & A

In terms of publications and from your own experience, what are the pros and cons of books vs. journal articles?

# Peter Green P.J.Green@bristol.ac.uk

I guess it's a little difficult to say anything very original in response to this question. I'm assuming that it is about your choice between books and journals as an author - there are complementary mirror-image issues in thinking about where to focus your effort as a reader.

I would really discourage a younger researcher from thinking about authoring a book too early in their career – it takes a lot of time and effort at a stage in your life when your mind is at its most creative for original research, and the need to promote your ideas and establish your reputation is most acute. Also, I think that unless you are embedded in a research area for some years and have accumulated a broad understanding of all the important themes and ideas, you are likely to find the process of exploring all the literature and marshalling your interpretations of it quite onerous. In many ways, however, a book is easier to write, as you can just let the ideas flow, and not be constantly looking over your shoulder at the page limits and style requirements of a journal. And a successful book, especially, say, the first monograph in a recently identified area, can generate a lot of attention, citations and kudos. That kind of kudos, however, can be of a rather generalised profile-in-the-community kind and may not translate into the narrower kind of recognition needed to satisfy tenure committees and appointing panels.

A different kind of book vs. journal question an author often faces is about publishing in volumes of collected papers, possibly based around the proceedings of a conference, rather than in a regular refereed journal. In these days when we come across most of the articles we read online on ArXiv or personal websites before formal publication, this distinction is diminishing, but there still remains a perception that the refereed journal article has been certified as superior in value. This can be very unfair-some journal referees and editors make mistakes, and some editors of collected papers do an excellent and conscientious job of ensuring quality – but again the refereed journal article counts more in career terms. Furthermore, even in the case of established and widely-respected institutions such as the Valencia proceedings, articles printed there are much less accessible in online search and delivery, postpublication, than articles in online journals.

We have become searchers not browsers in our approach to published work – make sure that searchers will find your research!

# Paul Gustafson gustaf@stat.ubc.ca

From the point of view of intellectual satisfaction and contribution to the field, I think authoring or co-authoring a book can be a great thing. Of course, there is the question of *when* to write a book. In my own case, I didn't feel ready for this until a couple of years after receiving tenure. Setting aside the question of how books versus

journal articles are perceived in promotion cases, I just wouldn't have felt ready to attempt a book earlier. In my first years post Ph.D., I still felt I was absorbing a lot of new stuff, and wasn't yet ready to step back and take the broader view that a book necessitates.

I did start on my (short!) book (*Measurement Error and Misclassification in Statistics and Epidemiology: Impacts and Bayesian Adjustments*, 2004, Chapman and Hall) a couple of years after receiving tenure. I was drawn to do this by the appeal of more freedom to tell my story than is afforded by the strict page limits, and often strict referee opinions, of journals. I also was secure in the knowledge that my academic department valued book authorship and acknowledged the opportunity cost of writing a few less journal articles. In fact, it was one of my senior colleagues who planted the idea of a book in my mind (if you're reading, thanks Jim Z.!)

Looking back, I enjoyed the process of weaving together old and recent ideas, of mine and others, into a coherent whole. The process certainly is different from writing journal articles, with less worry about how each little detail might be received, but more worry about whether the thing will 'hang together' in the end. I also found that in the process of trying to think broadly, new research ideas came to mind. In fact, one of my favourite journal articles was born during an extended break from book writing; the idea was so exciting to me that I couldn't leave it until the book was finished. I would also like to think that a book can galvanize a corner of the research world in a way that a series of journal articles cannot, so this leads to a feeling of being of service to the community. Overall, my experience was very positive. So, if you think you have a book in you, I am happy to recommend that you try to get it

By the way, for a long while I was happy to have just done this once. But recently I've gotten the bug again, so I'll put in a shameless plug. Look for *Bayesian Inference in Partially Identified Models: Exploring the Limits of Limited Data*, coming out in the not too distant future I (and my editor) hope!

# Alejandro Jara and Fernando Quintana

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It seems the question is posed in such a way as to create a dichotomy. Although that does not

need to be always the case, we assume so here. In almost every situation a journal article is worth far more than a book chapter in an edited volume, whether the book is refereed or not. In general, the revision process in an edited volume is less rigorous than refereeing in a top tier journal and the resulting publication will typically count for less. Some exceptions are the edited proceedings of certain conferences, when the quality of the journal is low, or when the book is going to be a best seller and the contribution will be noted, which usually depends on the other authors involved in the project and the topic.

For someone in early career stages, we think journal articles is clearly the way to go, simply because of the need of building up a CV (and for which journal articles are the main ingredient). In this sense, and considering the production level typically required to get a tenured position, writing a book chapter may not be the best time investment. But once you have established yourself as an independent researcher, writing a book chapter or a complete monograph may be a very good option to communicate your work to a larger audience.

# Christian P. Robert xian@ceremade.dauphine.fr

While I started on my first book during my postdoctoral years in Purdue and Cornell [a basic probability book made out of class notes written with Arup Bose, which died against the breakers of some referees' criticisms], my overall opinion on this is that books are never valued by hiring and promotion committees for what they are worth! It is a universal constant I met in the US, the UK and France alike that books are not helping much for promotion or hiring, at least at an early stage of one's career. Later, books become a more acknowledge part of senior academics' vitae. So, unless one has a PhD thesis that is ready to be turned into a readable book without having any impact on one's publication list, and even if one has enough material and a broad enough message at one's disposal, my advice is to go solely and persistently for journal articles. Besides the above mentioned attitude of recruiting and promotion committees, I believe this has several positive aspects: it forces the young researcher to maintain his/her focus on specialised topics in which she/he can achieve rapid prominence, rather than having to spend [quality research] time on replacing the background and building reference. It provides an evaluation by peers of the quality of her/his work, while reviews of books are generally on the light side. It is the starting point for building a network of collaborations, few people are interested in writing books with strangers (when knowing it is already quite a hardship with close friends!). It is also the entry to workshops and international conferences, where a new book very rarely attracts invitations.

Writing a book is of course exciting and somewhat more deeply rewarding, but it is awfully time-consuming and requires a high level of organization young faculty members rarely possess when starting a teaching job at a new university (with possibly family changes as well!). I was quite lucky when writing The Bayesian Choice and Monte Carlo Statistical Methods to mostly be on leave from teaching, as it would have otherwise be impossible! That we are not making sufficient progress on our revision of Bayesian Core, started two years ago, is a good enough proof that even with tight planning, great ideas, enthusiasm, and available material, completing a book may get into trouble for mere organisational issues...

# Stephen Walker

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I've never written a grown up book on my own. I have sort of done one jointly, with three others, but even if I multiplied the royalties by four, it would still not make me rich.

A book should consolidate research, mostly I feel for new researchers to have an easy access to a particular topic. Though the thought of writing a book appeals greatly to me; something that would genuinely be my own ideas and research without being bashed about by opinionated and aggressive referees.

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## **NEWS FROM THE WORLD**

## **Announcements**

### 2014 ISBA World Meeting

Planning has already begun for the 12th ISBA World Meeting, to be held in July 2014 in Cancun, México. See next issues of ISBA Bulletin for the first announcement and more information.

# Special issue on Bayesian Probability and Statistics in Management Research: A New Horizon. The Journal of Management

A wide range of disciplines have considered the use of Bayesian methods a modern-day "revolution", yet the organizational literature has not evaluated or participated in this revolution. This call for papers solicits contributions that will assist researchers in understanding and implementing methods of Bayesian estimation, inference, and scientific reasoning across a broad range of areas.

Papers are due December 15, 2013, allowing researchers time to develop their thinking and skills in relevant areas (detailed in the call for papers). We encourage multidisciplinary collaborations and submissions from many fields, such as Mathematical Statistics and Probability, History and Philosophy of Science, Science and Technology Studies, and Sociology of Scientific Knowledge. See http://www.sagepub.com/ upm-data/48271\_Special\_Issue\_Call\_for\_ Papers\_\_\_Bayesian\_Methods.pdf for an overview of the Special Issue and references. You can also contact Michael Zyphur and Fred Oswald (mzyphur@unimelb.edu.au) (foswald@rice.edu) to discuss possible paper topics and to volunteer as a scholar interested in reviewing these contributions.

# Meetings and conferences

# International Conference on Mathematical Finance, Miami, Florida. 22-24 March 2013.

Developments in the theory, application and practice of mathematical Finance/Financial Engineering/Computational and Quantitative Finance continue at a rapid pace. This conference is intended to expand the knowledge of theory,

application of mathematical finance as well as to enhance the interchange of understandings between academics and practitioners of mathematical finance in its variety of spins and flavors as it applies to application of mathematics, numerical methods and statistics to financial issues.

The conference is expected to include experts from both academia and industry talking on subjects relevant to models as well as solutions to existing and developing models. The conference is expected to consist predominantly of multiple sessions with peer reviewed paper presentations, with discussants and question and answer opened to the floor. There will also be presentations by invited speakers and panel discussion which will also be opened to the floor. Working sessions may be arranged. Additional information can be found at <a href="http://www.bradley.edu/academic/continue/professionals/imfc/index.dot">http://www.bradley.edu/academic/continue/professionals/imfc/index.dot</a>.

# **ESOBE 2012 (European Seminar of Bayesian Econometrics)**, Vienna, Austria, November 1-2, 2012.

The ESOBE meetings, launched in 2010, aim at bringing together researchers and professionals interested in the application of Bayesian inference in areas such as finance, economics, business, and marketing. They are also intended as a discussion forum for new and recent research methods that are capable to face the challenges associated with the application of Bayesian methods to increasingly complex models and high-dimensional data environments. The Scientific Committee (Sylvia Frühwirth-Schnatter, Gary Koop, and Herman van Dijk) invites submission for contributed talks, junior scientist presentations, and poster presentations before August 1, 2012. Young researchers may apply for travel grants. For more details and online submission see http://esobe2012.wu.ac.at/

# **Bayes on the Beach 2012**, Sunshine Coast, Queensland. 6 - 8 November, 2012.

The 9th International Workshop for the Australasian chapter of the International Society for Bayesian Analysis (ISBA) and the annual meeting of the Bayesian section of the Statistical Society of Australia, Inc. (SSAI). You are warmly invited to a meeting of people involved or interested in Bayesian research and applications.

Bayes on the Beach will be held on the Sunshine Coast (venue to be announced) during November 6-8, 2012. The conference provides a forum for discussion on developments and applications of Bayesian statistics, and includes seminars, a poster session, tutorials and workshops. There is also the possibility of 1 day short courses on Monday the 5th and Friday the 9th of November.

International keynote speaker. Robert Wolpert is Professor of Statistical Science at Duke University Department of Statistical Science, Durham NC, USA.

Australian keynote speaker. Matt Wand is Distinguished Professor of Statistics in the School of Mathematical Sciences, University of Technology, Sydney.

Conference registration opens September 2012. More details to follow. Please see our website for up-to-date information (http://bragqut.wordpress.com/beachbayes2012/).

ISBA Regional Meeting and International Workshop/Conference on Bayesian Theory and Applications (IWCBTA), Varanasi, India. 6 - 13 January, 2013.

The DST Centre for Interdisciplinary Mathe-

matical Sciences, Banaras Hindu University, is organizing an ISBA Regional Meeting and International Workshop/Conference on Bayesian Theory and Applications (IWCBTA) during January 6-10, 2013. Details regarding the events are available on the conference website: http://www.bhu.ac.in/isba. The proposed events are co-sponsored by the International Society for Bayesian Analysis, the Indian Bayesian Society and the Indian Chapter of International Society for Bayesian Analysis.

**9th Conference on Bayesian Nonparametrics**, Amsterdam, Holland. 10 - 14 June, 2013.

The Bayesian nonparametrics (BNP) conference is a bi-annual international meeting bringing together leading experts and talented young researchers working on applications and theory of nonparametric Bayesian statistics. It is an official section meeting of the Bayesian nonparametrics section of the International Society for Bayesian Analysis (ISBA) and is co-sponsored by the Institute of Mathematical Statistics (IMS).

Additional information can be found at http://www.bnp9.win.tue.nl/.

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