

The Bayesian Songbook

edited by

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June 14, 2001

Abstract

At the biennial international meetings on Bayesian statistics in Valencia, Spain and other beachfront locations as now selected by the International Society for Bayesian Analysis (ISBA), one of the most popular features (after the sun and the free wine) is the “cabaret” performance, which traditionally takes place on the last night following the conference dinner. Acts over the years have included jugglers, magicians, jokesters, and even the occasional male striptease (the now-infamous “Full Monty Carlo”). Still, the cornerstone of the cabaret has always been the singing of new and often humorous Bayes-related lyrics to popular songs, a practice dating to the landmark work of Box (1979; reprinted herein). This collection presents many (though certainly not all) of the songs that have been performed at Bayesian cabarets over the years, as well as the original scripts of the popular skits by O’Hagan et al. (1987, 1991, 1994, 1998). We hope it inspires future generations of Bayesian singers, songwriters, actors, and, yes, even male strippers.

Vandal Who Had Sinned

Words: B. Carlin

Music: Elton John (“Candle in the Wind”)

First performance: Valencia 6

Intro: (piano lick)

V1: Goodbye Thomas Bayes, though I never knew you at all,
You had the grace to hold yourself, and the mental wherewithal,
[And] thanks to Richard Price, you were guaranteed your fame,
We now have your method, and the rule that bears your name,

Chorus 1: Yet it seems to me they treated you like a vandal who had sinned,
Drowning out your simple wisdom with their raucous din,
And I would have liked to’ve known you, but from my time you’re hid,
Your candle burned out long before your theorem ever did.

V2: The ministry was tough, the toughest trade you ever plied,
A godly man from Tunbridge Wells; a mathematician on the side,
Not til Bruno D., Savage, Lindley and the rest
Finally built on what you did, was your impact rightly stressed,

Chorus 2: And it seems to me they treated you like a vandal who had sinned,
Not conforming to your system true and genuine,
And I would have liked to’ve known you, but this did God forbid,
Your candle burned out long before your theorem ever did.

V3: Goodbye Thomas Bayes, though I never knew you at all,
When accounting for uncertainty, yours is the finest protocol,
Goodbye Thomas Bayes, from the young man in a crowded lecture hall,
Who sees you as more than intellectual,
more than just our “Father on the Wall”

Chorus 1: (repeat)

Ending: Your candle burned out long before your theorem ever did!

A Message from Hilbert Space

By Tony O'Hagan, John Deely, Peter Freeman, Simon French, and Michael Goldstein

First performance: Valencia 3

Abstract

At Valencia 3, while we relaxed after a splendid conference dinner, a ghostly voice was suddenly heard over the PA system.

Hello ... hello, operator ... Operator ... is my call to Earth ready? ... What do you mean 'what call'? This is the Reverend Thomas Bayes ... Bayes ... B-A-Y-E-S ... I asked you to put a call through to my disciple on Earth ... What? ... I'm through now? ... Oh, bless you!

Hello, Dennis ... Are you there, Dennis? Is the microphone on? ... Can you speak up? ... That's better. So what's new. How is my theorem going? ... Well? Oh, good.

Now just hold on a minute, Dennis. I'm not quite sure about some of those words you're using. Bayes-ian-ity? Is that a disease? ... And about those other words. Who is this prior? And why is he wearing a likely hood? ... I see, and you multiply those two together and you get what? ... The post- ... Dennis, the Committee up here have agreed — no more jokes about that!

So where are you *this* month, Dennis? ... Spain? ... A Spanish Bayesian? Make sure you check his references ... That fellow can't even walk on a table, let alone water.

Oh, you're at a conference ... A whole conference, all about my theorem? Listen, Dennis, it's just a theorem. The left hand side equals the right hand side.

What are the lectures like? ... They're exchangeable? ... Oh ... oh Bruno just explained exchangeability to me. It seems a neat idea ... And yet the first talk took 45 minutes, all about exchangeability? Who is this guy? ... A magician? ... From California? ... Is that part of his act?

What was the next talk, then? ... Dick Barlow. Oh, just a minute, Dennis, Bruno's speaking again. ... He says he tried to talk to Dick the other day but it was a bad line. He couldn't understand anything he was saying.

What's that, Dennis? ... Morrie's gaining weight? I thought he was just going grey.

Tell me that again, Dennis ... You say there's a lot of talk about what? ... Software and hardware. You know we don't wear anything up here ... No, it was not me at the sex show! ... And what were you doing there?

So what do you do with the hardware and software ... You run it simultaneously on

436 parallel-processing micro-VAXes — and it still takes four and a half days to solve a six-dimensional problem? Dennis, Dennis, up here in Hilbert space we find infinite-dimensional problems easy. All you need is divine Grace.

So what is this numerical integration good for? ... About five million dollars.

Oh, Dennis, I bumped into Jimmy Savage the other day. Small world.

Well, what have you been doing, Dennis? ... Hardy-Weinberg ... That could be quite significant. Oh, sorry! Wash my mouth out.

Oh, just a minute, Dennis, Bruno's saying something. ... Oh, he's having a prevision ... It's alright, he's feeling better now.

You say you have big datasets to analyse ... Oh, but 90% of the numbers are missing. So what do you do about that? ... Of course! You make them up.

Well, how would you sum up the conference, Dennis? ... Palm trees ... and more palm trees ... and palm trees ... with penguins? Is the heat getting to you?

So, my theorem's going really well, and the world is full of Bayesians. How many, would you say? Millions? ... Thousands? ... [*Disappointed.*] Oh, I see. About 180 ... [*Even more disappointed.*] and one of those is George Barnard.

Anyway, if some people are not Bayesians, what do you call them? ... Frequentists? ... Well, I wouldn't know the word. There are none of *them* up here.

'Bye, Dennis!