Impact of Double-Blind Reviewing on SIGMOD Publication Rates

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Background

Starting with the 2001 SIGMOD conference, the SIGMOD Chair, in consultation with the SIGMOD Advisory Committee, imposed a double blind rule on all future SIGMOD conferences. While there are many reasons why double-blind reviewing might be a good idea, the one most frequently cited is that it is fairer to more junior researchers. It is not, however, without its problems, including anecdotal reports of papers being rejected because their authors failed to cite their own papers as related work in order to not violate the anonymity rules and a complication of the job of the program chair who must interpret and enforce the double-blind rules. One very qualified individual turned down an offer to be PC chair of an upcoming SIGMOD conference because he did not want to have to deal with the headaches of double-blind reviewing.

Now that we have had five years of double-blind SIGMOD conferences (2001-2005) we thought it might be useful to determine whether the use of double blind reviewing has had a significant impact on the rate at which more "senior" researchers have their papers accepted. Since DBLP data is not yet available for SIGMOD 2006 it was not included.

Methodology

Our first step was to define a study group to evaluate the impact of double blind refereeing. As our study group we selected those individuals who have published 20 or more papers in SIGMOD and VLDB conferences. There are 28 such individuals; we filtered out three of these researchers who have not published papers in either of the past two SIGMODs or VLDBs. We will term the remaining 25 researchers "prolific". We factored out demo proposals, panel descriptions, tutorials, and most industrial papers by counting only papers that were 5 pages or longer. We have also studied the results with a slightly more or less inclusive definition of prolific researchers and found the results to be essentially unchanged.

As the basis for comparison we used DBLP publication data from the SIGMOD 1994-2000 conferences and the 1994-2005 VLDB conferences, all of which were not double blind. We decided not to use data from earlier SIGMOD or VLDB conferences in an attempt to minimize the impact that longitudinal variations in productivity would have on our results.

Results

Table 1 summarizes the data we used for our analysis. Here, double blind conferences (SIGMOD 2001 – 2005) are shown in bold and red. The three sets of columns indicate the average number of papers per prolific researcher, the total fraction of papers with at least one prolific researcher as an author, and the total number of papers in both VLDB and SIGMOD for each year.

Tables 1 clearly indicates several phenomena. Like everyone else, our "prolific researchers" have their good years and bad years when it comes to getting their papers accepted. VLDB 2005 was a particularly bad year while SIGMOD 2000 (non-double blind) and 2004 (double blind) were very good years.

The fraction of papers by prolific researchers indicate the same trends as above. Some years (such as VLDB 2005) were not as bad for our prolific researchers as when viewed as the percentage of papers represented in each conference because the total number of papers accepted has risen (VLDB 2005 had more than 100 papers, including the industrial track, while SIGMOD 1999 had less than 50.) This also probably explains the rising trend in number of accepted papers for prolific researchers in VLDB prior to 2005.

The averages of these various statistics are shown in Tables 2 and 3; overall, imposing double blind refereeing has not had significant impact on the publication rate for this group of researchers.

Year	Papers/Famous Person		Total Papers		Fraction Famous Papers	
	SIGMOD	VLDB	SIGMOD	VLDB	SIGMOD	VLDB
1994	0.81	0.73	42	65	0.48	0.28
1995	0.54	0.73	36	59	0.37	0.31
1996	0.88	1.07	47	49	0.47	0.55
1997	0.92	0.85	42	55	0.55	0.38
1998	0.73	0.69	42	52	0.43	0.33
1999	0.88	0.81	42	58	0.53	0.35
2000	1.00	0.88	48	58	0.52	0.38
2001	**0.77**	0.81	**44**	66	**0.44**	0.31
2002	**0.81**	1.15	**50**	91	**0.40**	0.32
2003	**0.85**	1.15	**53**	84	**0.40**	0.34
2004	**1.34**	1.53	**69**	102	**0.49**	0.38
2005	**0.81**	0.92	**66**	103	**0.31**	0.22

Table 1: Publication Statistics by Year Per Conference. Double blind conferences are highlighted in bold and in red. Papers/prolific researcher indicates the average number of papers accepted into the conference per prolific researcher. Fraction prolific represents the total fraction of accepted papers that had at least one prolific researcher as an author.

	SIGMOD	VLDB	Total
01-05	**0.91**	1.11	1.01
94-00	0.82	0.82	0.82
Total	0.86	0.94	0.92

Table 2: Average of number of papers by prolific researchers in double blind and non-double blind conferences. Here, SIGMOD was double blind from 2001-2005, and was not double blind from 1994-2000. VLDB has never been double blind.

	SIGMOD	VLDB	Total
01-05	**0.41**	0.31	0.36
94-00	0.48	0.37	0.42
Total	0.45	0.35	0.40

Table 3: Average fraction of papers by prolific researchers in double blind and non-double blind conferences.

Figures 1, 2, and 3 show graphs of the numbers in Table 1.

Summary

Based on the results in Table 1, it is apparent that double-blind reviewing has had essentially no impact on the publication rates of more senior researchers in the database field. There are two possible takeaways. One is that imposing double-blind reviewing on authors of SIGMOD papers has had no effect while requiring a significant effort for both authors and program chairs. The other is that junior researchers submitting papers to VLDB conferences are not being significantly impacted by its use of a non-double blind review process (since publication rates have been held approximately constant and senior researchers share of papers has not risen).

Though there may be other compelling reasons for maintaining a double-blind reviewing process, such as maintaining a perception of fairness, our analysis shows that the commonly cited benefit of an *actual* increase in fairness does not, in reality, seem to exist.

Finally, we realize that a better way of gauging the impact of double-blind reviewing would be determine the actual acceptance rates for our set of "prolific researchers". Unfortunately, this data is not readily available and "prolific researchers" we contacted could not even generate their own actual acceptance rates.

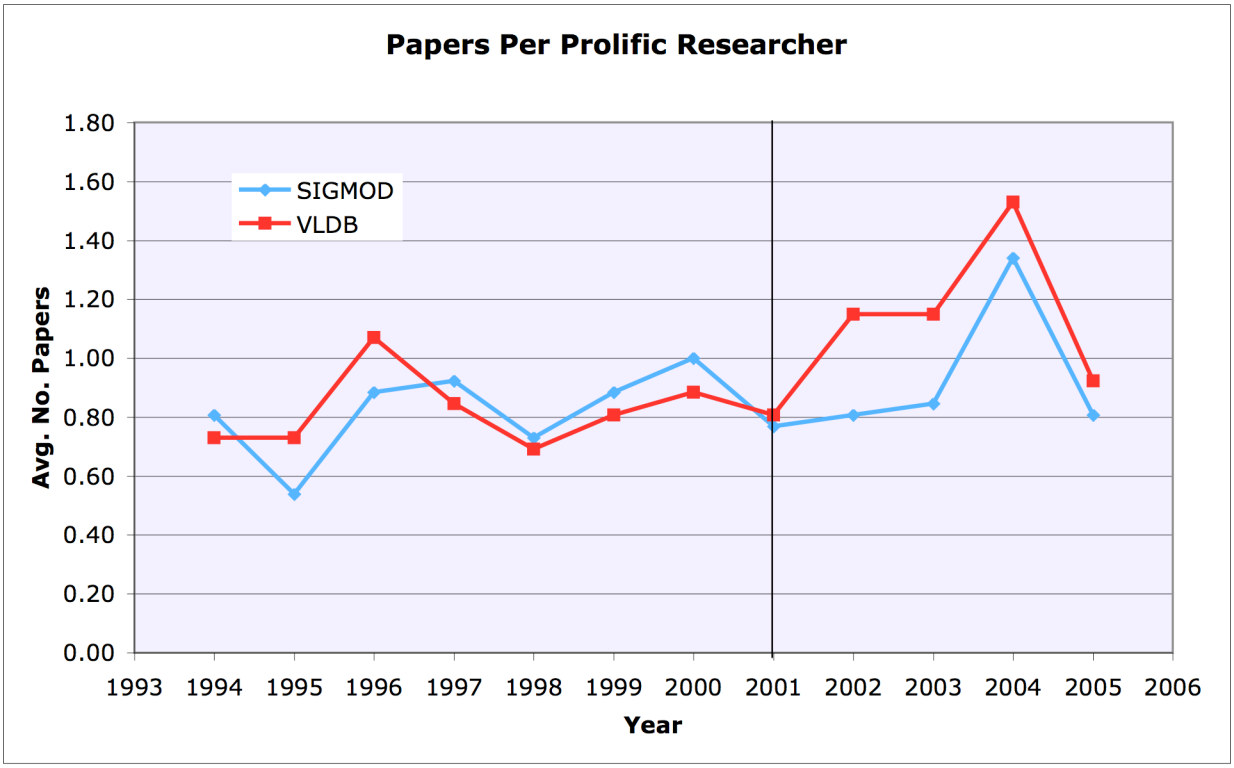

Figure 1: Graph showing average # papers per prolific researcher per conference by year

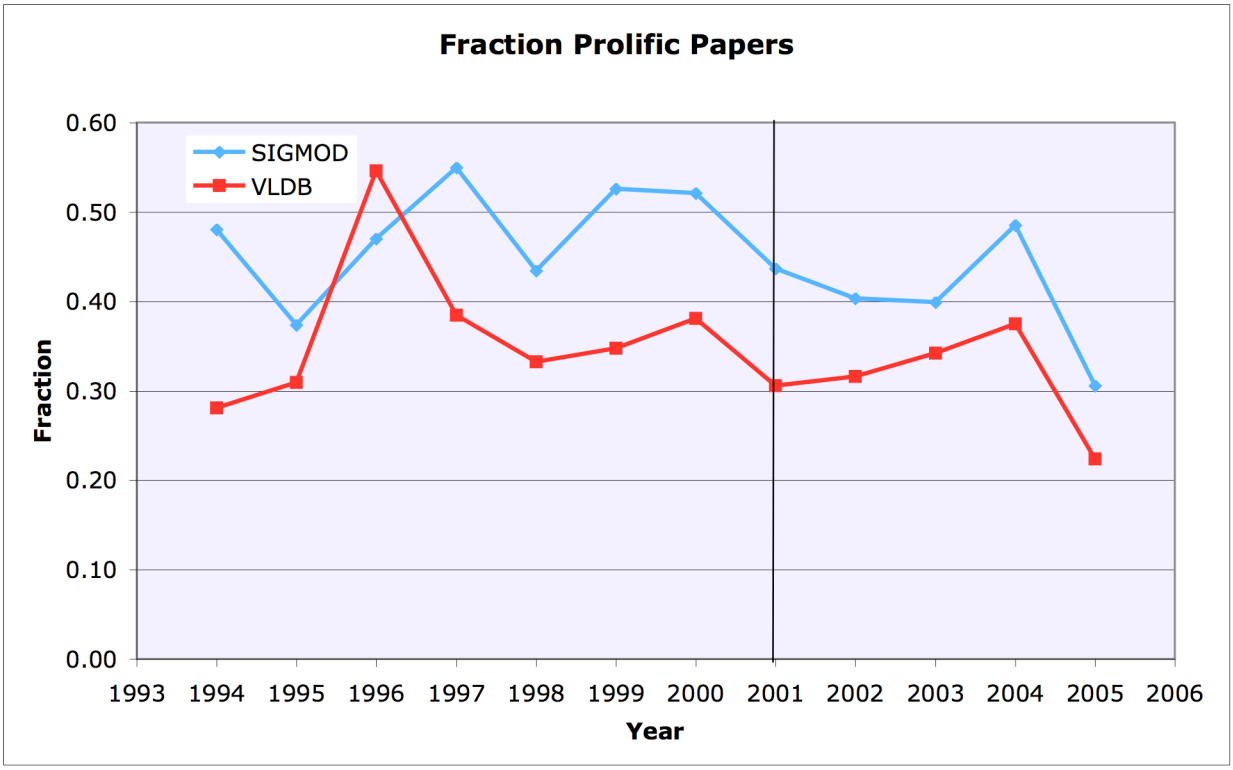

Figure 2: Graph show fraction of papers by prolific researchers per conference per year

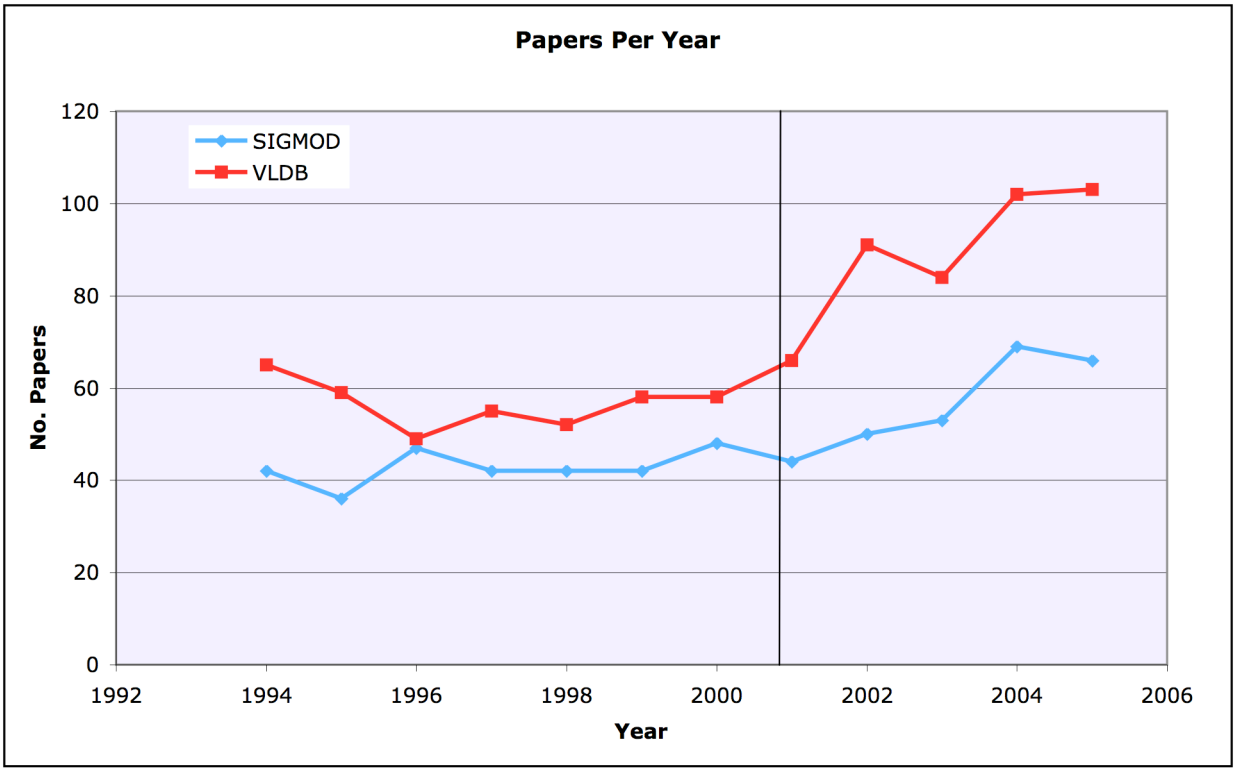

Figure 3: Graph showing total number of papers per conference per year