Submission to the Inquiry into the Administration and Reporting of NAPLAN Testing

by Dr Mark Drummond
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Abstract

Government and media reporting of NAPLAN results has been extremely reckless, misleading and unfair to the majority of Australian schools and students – especially public schools and their students – because of grossly inaccurate ICSEA (Index of Community Socio-Educational Advantage) scores that have been generated in a badly flawed attempt to compare the NAPLAN results of different schools. The vast majority of ICSEA scores generated to date – like the very similar SES (Socioeconomic Status) scores used to determine Commonwealth Government funding levels received by non-government schools – are extremely inaccurate, misleading and unfair because only about 3 per cent of data feeding in to ICSEA scores (as with SES scores) is meaningful and valid data based on the actual families of the actual students at the actual schools. The other 97 per cent or so of data is meaningless "noise", based on families and households with no substantive connection at all to the schools whose ICSEA scores are being determined, which almost completely drowns out the "signal" in the valid 3 per cent or so of data, such that ICSEA scores are vastly lower than they should be for most non-government schools, significantly higher than they should be for most government schools, and approaching validity only in rare cases where, by fluke, the meaningless 97% or so of data "noise" more or less matches the 3% or so of meaningful "signal" data – a situation only likely to occur with some low fee non-government schools and relatively advantaged public schools where the "noise" from more educationally advantaged higher fee private school households may more or less balance or cancel out the noise from less educationally advantaged households. But whereas the damage done by significantly flawed SES scores is mainly limited to the infuriatingly excessive funding levels many non-government schools receive over and above what they'd receive if SES scores were competently determined using data on the actual families of the actual students at the actual schools, and the cumulative impact over time of such financial misappropriation and damaging precedent, without lining the cannons up directly on public schools as such, the government's reckless production of NAPLAN results in conjunction with significantly flawed ICSEA scores has enabled careless elements of the media to point and fire the cannons directly at virtually the entire public education system, in what can well be judged as one of the most treacherous, reckless and cruel acts of technical incompetence in the history of Australian public affairs. The Commonwealth Parliament therefore has an urgent duty to conscientiously review and overhaul ICSEA and SES scores they are responsible for without delay.

Introduction

This submission has seven main sections which broadly address the terms of reference for this inquiry, and focus especially on "the quality and value of information about individual

schools to parents, principals and the general community", and associated concerns in relation to technical competence and, above all, fairness. The first section examines previous attempts to draw attention to the extremely severe flaws in SES scores, used for Commonwealth Government funding of non-government schools, which now arise again with ICSEA (Index of Community Socio-Educational Advantage) scores that very closely resemble SES scores. The second section specifically describes previous attempts to explain how it is that only about 3 per cent of data feeding in to SES scores is based on data from the actual families or households of the actual students at the actual schools for which the SES scores are being determined, and the extremely high "noise to signal ratio" that makes SES and ICSEA scores grossly inaccurate and unfit for the very purposes they are specifically used for. The third section calls into question the practice of transforming SES and ICSEA type data to a bell curved normal distribution, in view of the fact that substantive SES and ICSEA data is only meaningful as untransformed actual data from which real differences and ratios can be calculated, and addresses the misleading impact of the decision to set ICSEA scores to a mean of 1000 and a standard deviation of 100. The fourth section then describes how the government already uses data matching between the Australian Taxation Office and Centrelink that could very easily be extended to provide accurate SES and ICSEA scores with minimal intrusion against privacy over and above what the vast majority of families with school children already experience. The fifth section calls into question virtually all of the claims made in the My School *Fact Sheet About ICSEA* (see Appendix G below) and *Technical Paper: Index of Community Socio-Educational Advantage (ICSEA)* (see at http://www.myschool.edu.au/Resources/pdf/My%20School%20ICSEA%20TECHNICAL%20PAPER%2020091020.pdf), and singles out the Technical Paper's valid claim that ICSEA scores are very much the same as the SES (Socioeconomic Status) scores used to determine the funding levels non-government schools receive from the Commonwealth Government. The sixth section explores what validly constructed ICSEA (and SES) scores would look like in view of hard Australian Bureau of Statistics (ABS) Census data and other data available from the ABS, and provides an indicative attempt to illustrate the huge gap between current ICSEA scores and valid scores. The seventh section then explains how even the currently flawed ICSEA scores *could* actually provide a technically competent basis for comparisons across State and Territory schools systems as wholes, and, better still, across ABS Statistical Divisions and Statistical Subdivisions, so that places like the ACT can be compared to regions within NSW, Victoria and elsewhere in Australia that share the ACT's above average level of socio-educational advantage.

Previous Attempts to Describe the Incompetence and Unfairness of SES Scores

Previous efforts to articulate the incompetence and unfairness of SES Scores are presented in Appendices A-F as below, providing Senate Inquiry submissions and other commentaries and documents dated 2003, 2004, 2008 and 2009. The main points to note from these previous efforts are the fact that only about 3 per cent of the data used to calculate the SES (Socioeconomic Status) scores used to determine funding levels non-government schools receive from the Commonwealth Government are meaningful and valid data based on the actual families or households of the actual students attending the actual schools whose SES scores are being determined, and (2) this extremely serious SES data validity problem also applies to the calculation of ICSEA scores. For some schools the percentage of valid and meaningful data for SES and ICSEA scores will be higher than 3 per cent, and for others it will be lower, but this percentage is unlikely to ever reach 10% except perhaps in small towns served by just one school. The next section specifically addresses this "only about 3 per cent of data is valid and meaningful" problem which exposes SES and ICSEA scores as entirely invalid for the specific purposes for which they are used.

Explanation of the Core Problem: the High "Noise to Signal Ratio" that Renders SES and ICSEA Scores Grossly Invalid and Unfair Because Only About 3 Per Cent of Data is Based on Actual Families or Households of Actual Students Attending Actual Schools

The estimated percentage of valid and meaningful data feeding into SES score calculations, of about 3 per cent on average, was first derived in June 2004 as a figure of about an 8 per cent, as shown on page A-4 of the June 2004 Senate Inquiry submission at Appendix A, and then refined to the 3 per cent figure in the August 2004 Senate Inquiry supplementary submission shown in Appendix B. The huge "noise to signal" ratio that follows directly from this "only about 3 per cent of data is valid and meaningful" problem, of about 97 to 3, or 30 to 1 or so, is then explained in Appendices E and F especially.

The Commonwealth Government would have access to data that could be used to generate significant refinements of the 3 per cent estimate derived in Appendix B for the typical and average percentage of valid and meaningful data feeding into school SES scores, and could therefore provide estimates of the percentages of meaningful data feeding into the SES and ICSEA scores of all schools across the country.

If M% of data feeding in to SES and ICSEA scores is meaningful "signal" data, based on the actual families or households of the actual students at the actual schools, then (100 – M)% is meaningless "noise" data" based on households without children attending the actual schools, and the noise to signal ratio can be calculated using the following formula:

$$\text{SES/ICSEA Score Noise to Signal Ratio} = \text{SINSR} = \frac{(100 - M)}{M}$$

So if M% = 3%, then $\text{SINSR} = \frac{(100 - 3)}{3} = 32$

And if M% = 10%, then $\text{SINSR} = \frac{(100 - 10)}{10} = 9$

and so on.

Technical Invalidity of Normal Transformation of SES Data that are Positively Skewed and Misleading Effects of the Imposed Mean of 1000 and Standard Deviation of 100

Income and educational levels and other variables measuring socio-economic status or socio-educational advantage are nearly always positively skewed (i.e. skewed to the right) – like house prices – to a very significant extent, and are therefore not well described at all by symmetrical "bell curve" normal distributions, as could be proven using chi-squared or other statistical goodness of fit tests commonly used in robust statistical analyses. So the entire process of transforming SES and ICSEA data on to a bell curve for high stakes school funding (SES) or school comparison (ICSEA) purposes is technically dubious in the extreme, being about as absurd as it would be if my wife and I received Centrelink parenting payments (or Family Tax Benefit Part A or B) for our children based on a statistically manipulated proxy in the form of the average income level of people living in the same census collection direct as we do after this average income level is transformed on to a bell curved normally distribution, rather than *our own* specific household income levels as, thankfully, is the case in reality.

With ICSEA scores set to a mean of 1000 and a standard deviation of 100, nearly all schools have ICSEA scores between 700 and 1300, so with 1300 being less than twice 700, these scores give the highly misleading impression that the average socio-educational advantage level of students at a school with an ICSEA score of 1300 is less than twice that of students at a school with an ICSEA score of 700, whereas it is clearly the case that children at the most advantaged selective public and high fee private schools are in the order of 10 to 100 or even 1000 times more advantaged than those at the least advantaged schools, in terms of income and educational levels (percentage of students with university educated parents, for example) and other variables feeding in to ICSEA scores.

The arbitrary decision on what the ICSEA mean and standard deviation should be – 1000 and 100 respectively to date – is one in which politics can very easily override technical competence. If the ICSEA mean and standard deviation were set at 1000 and 200 respectively, instead of 1000 and 100 as is currently the case, then the 1300 to 700 or so difference between the most and least advantaged schools as above would become a 1600 to 400 or so difference, which is definitely becoming closer to the truth in terms of highlighting the stark divide between the most and least advantaged schools in the country. But even with means and standard deviations better selected to overcome this 1300 to 700 "understatement of difference between most and least advantaged schools" problem here, normally transformed data will never enable meaningful comparisons between schools in terms of substantive differences and ratios in cases where the underlying data is not itself bell curved, as is clearly the case with SES and ICSEA scores.

An Easy Pathway to SES and ICSEA Scores which are Not Normally Transformed and have a Zero or Close to Zero Noise to Signal Ratio but Still Only Provide Proxy Measures of Student Ability Levels Required to Validly Compare NAPLAN Results of Different Schools

The Commonwealth Government already uses data matching between the Australian Taxation Office (ATO) and Centrelink and other government agencies for the purposes of assessing Centrelink payments, taxation returns, HECS debts and so on, and interrelationships among these various payments and debts, so such data matching is already occurring for the vast majority of parents with children attending primary and secondary schools in Australia – essentially all except those deemed too wealthy to receive any Centrelink benefits. Such data matching could therefore very easily be extended to provide accurate SES and ICSEA scores for schools based on the actual families or households of the actual students attending the actual schools, with minimal intrusion against individual and family privacy over and above what the vast majority of families with school children already experience as it is already, as further explained in Appendix A on pages A-10 and A-11 under the heading of *Privacy Argument Myth*, and on pages A-29 to A-31 under the heading of *Achieving More Accurate SES Indices*.

Data matching as above could easily enable the percentage of meaningful SES data to reach M% = 100%, for income at least, to reduce the noise to signal ratio to zero for income and perhaps other variables similarly accessible for actual families or households of actual students at actual schools. But even if ICSEA scores achieved validity to their highest potential based on M% = 100%, they'd still even then only provide a proxy measure of ability. The only way ability levels of students could be directly and properly assessed would be through the use of IQ type ability tests, where another opportunity for controversy and politics to trump over technical competence could arise in the decision on what test to use, who decides on the test, and so on.

In summary, current ICSEA scores suffer from three huge and compounding deficiencies: (1) the huge noise to signal ratio; (2) the far from valid transformation to a normal distribution which they result from; and (3) the fact that even if deficiencies (1) and (2) here were overcome, ICSEA scores would still only provide rough proxy estimates of the substantive ability levels of students as needed to meaningfully compare the NAPLAN results of different schools.

Misinformation in the My School *Fact Sheet About ICSEA* and the ICSEA *Technical Paper*, and the Technical Paper's Valid Claim that ICSEA Scores are Much the Same as SES Scores Used for Non-Government School Funding Determinations

As previous sections above and appendices below have described, ICSEA scores are grossly inaccurate and unfit for the purpose for which they're currently being used, such that the one page My School *Fact Sheet About ICSEA* shown in Appendix G below and the nine page *Technical Paper: Index of Community Socio-Educational Advantage (ICSEA)* shown at http://www.myschool.edu.au/Resources/pdf/My%20School%20ICSEA%20TECHNICAL%20PAPER%2020091020.pdf are full of claims that are technically inaccurate and misleading. One claim in the Technical Paper that is accurate, however, is the claim made on page 7 that ICSEA scores have a lot in common with SES scores used to determine non-government school funding levels, as assumed above here, as follows:

> ## Limitations of ICSEA
>
> ICSEA makes use of the same fundamental approach that the Commonwealth has long used to allocate funds to non-government schools, namely to use CCD information on each student as a means of generating an index that best captures contextual characteristics of the school. It differs in that variables were selected that maximise its capacity to predict performance on NAPLAN tests. In other words, it is not a measure of socio-economic status per se, but rather of the socio-educational character of the students within a school.
>
> However, as in the case of the Commonwealth index, it has the limitation that in a small proportion of cases, ICSEA may provide an inappropriate measure of the socio-educational level of the school. This can occur in instances where there is a mismatch between students' actual levels and that of the CCD values associated with their addresses. An example would be remote schools where the ICSEA values are inflated by the presence in CCDs of farmers who send their children to city boarding schools.
>
> To address this limitation, ICSEA values for a small proportion of schools were adjusted for the *My School* website where additional evidence was available to indicate that the CCD values do not properly reflect the student demographics of the school. An expert panel was convened to review the changes and ensure consistency in the criteria used to make them. There will continue to be a need for a formal review process to make ongoing adjustments where there is evidence that ICSEA does not properly reflect the actual circumstances of students in a given school.

The claim in the middle paragraph above that "in a small proportion of cases, ICSEA may provide an inappropriate measure of the socio-educational level of the school ... in instances where there is a mismatch between students' actual levels and that of the CCD values associated with their addresses" is essentially the exact opposite of the truth. In truth, the "only 3 per cent of data is valid and meaningful" problem with ICSEA scores (like SES scores) means that ICSEA scores will only be accurate in those very rare cases where, by fluke, the

97% or so of meaningless noise data feeding into ICSEA scores more or less exactly matches the 3% or so of meaningful signal data, as may well be the case with some low fee non-government schools and relatively advantaged public schools where the "noise" from more educationally advantaged higher fee private school households may more or less balance or cancel out the noise from less educationally advantaged households.

The ICSEA Technical Paper at http://www.myschool.edu.au/Resources/pdf/My%20School%20ICSEA%20TECHNICAL%20PAPER%2020091020.pdf is also extremely misleading on page 1 in its support of ICSEA scores as "proxy measures that are highly correlated with student performance", as follows, in view of the huge limitations of ICSEA and SES scores described herein:

> The best way to compare the academic performance of schools is to find groups of schools with students of similar abilities on commencing school. Unfortunately, no such measures of starting abilities are currently available nationally, so instead, attention focused on finding proxy measures that are highly correlated with student performance.

The reference to "proxy measures that are highly correlated with student performance" on page 1 of the ICSEA Technical Paper as above is particularly misleading. The truth is something like:

> Proxy measures are found that correlate quite well with student performance on NAPLAN, so if these proxy measures accurately represented the socio-educational advantage level of students at a given school, the proxy measures would provide a sound basis for comparing schools at similar levels of socio-educational advantage.

But as the previous sections herein have explained, proxy measures based on data of which only about 3 per cent is valid and meaningful, and the other 97 per cent unconnected to the school and hence utterly meaningless, isn't going to come close to providing an accurate representation of the true level of socio-educational advantage of a given school, let alone *ability* levels of the school's students so as to facilitate valid, meaningful and fair between-school comparisons of educational value added by schools – IQ or other scholastic ability type tests of students would be needed to facilitate such valid comparisons, though, as above, even with such tests, the question of who decides what IQ or ability type test should be used could become another politically charged controversy which students and their schools and parents or guardians would probably prefer to avoid.

What Accurate ICSEA (and SES) Scores Would Look Like

Accurate ICSEA and SES scores would be consistent with the hard and reliable ABS Census data shown in Appendices A, C and D – see especially Tables 1 and 2 on pages A-13 and A-14 of Appendix A, and Appendices C and D in full, for quick indicators confirming that if SES and ICSEA scores were calculated using meaningful and valid data, SES and ICSEA scores of non-government schools would generally be about 1.2 to 2 times greater than those of public schools on average, whereas SES and ICSEA scores calculated to date, as a result of the huge noise to signal ratio that invalidates them, indicate that non-government school students are essentially no more educationally advantaged than their government school counterparts, as shown in Appendix H for ACT schools, for example. Full lists of ICSEA score for all ACT primary and secondary schools were published in the Canberra Times newspaper on both Friday 29 January 2010 (page 4) and Saturday 30 January 2010 (Forum

section, page 11). Appendix H shows the list published in the Canberra Times on 30 January 2010.

With ICSEA scores and SES scores alike, at a wealthy and highly advantaged private school where the "true ICSEA" was say 2000, the true average ICSEA of people living in the same areas as these families was 1100, say, as in the ACT to good approximation, and the whole of Australia average is 1000, the final ICSEA score ends up being calculated essentially as follows under the current ICSEA calculation process, assuming the 3% and 97% figures as above:

Indicative ICSEA score of an advantaged non-government school = 3% of 2000 plus 97% of 1100 = 1127.

So for the purposes of NAPLAN leagues tables and funding purposes, non-government schools generally receive the benefit of ICSEA and SES scores which drastically underestimate their true level of SES advantage, hence enabling them to (1) be compared with schools which are only deemed similar to them because of the enormously flawed ICSEA scores, (2) avoid standing out as much as they should, and (3) avoid comparisons with other super heavyweight educationally advantaged high fee private schools, noting that selective public schools also host significant concentrations of extreme educational advantage – especially in terms of scholastic ability levels.

For a public school where the true ICSEA was say 1050, with students derived from the same geographic catchment area as that described above, with an overall ICSEA average of 1100, the situation is more or less the opposite to that depicted for the expensive private school, hence further exacerbating the hostility of this whole system to public schools, such that the ICSEA calculation would be:

Indicative ICSEA score of a typical government school = 3% of 1050 plus 97% of 1100 = 1098.5.

If the above illustration was more or less accurate, it would indicate that the "only 3 per cent of data is valid and meaningful" flaw invalidating SES and ICSEA scores – characterised as a huge noise to signal ratio problem as above – clouds the differences between schools to the extent where ICSEA scores indicate a small difference between 1127 to 1098.5 or so, whereas the true difference should be huge – closer to 2000 to 1050 in the hypothetical example here. The true situation will clearly vary from location to location, and from school to school, but is bound to be more or less as illustrated here.

If meaningful ICSEA scores were used for all schools across the country, like the hypothetical 2000 and 1050 figures in the above illustration, rather than the clouded 1127 and 1098.5 figures dominated by meaningless and distracting "noise", then the school rankings in the leagues tables that have appeared in newspapers in recent months, comparing supposedly (but nowhere near really) comparable schools, would drastically change, such that (1) public schools would generally rank much higher than has eventuated to date, (2) wealthy private schools would generally fall a good way down these tables, and (3) a small proportion of Catholic and government schools of modest socio-educational advantage would possibly stay more or less where they are in rare cases where plus and minus corrections more or less cancelling out, by fluke, as described earlier on page 5. The 97% weighting of the meaningless 1100 figure in the above example completely distorts things in a colossally biasing manner, hugely to the detriment of public schools and in favour of rich private schools. The My School data release process in conjunction with superficial and often

reckless media reporting has been stunningly hostile and unfair to the vast majority of public schools which would show up vastly better in these leagues tables if competent and fair ICSEA scores were used, or if competent and fair school comparisons were otherwise achieved through the use of hard data on the ability levels of the actual students attending each actual school across the country.

The Commonwealth Government clearly has access to the data required to accurately quantify the flaws I've attempted to illustrate in this submission without the required data, and should be pressed to attempt such quantification as part of a long overdue review of SES scores and the more recently developed ICSEA scores that represent some of the most technically incompetent and inequitable processes of public administration in Australia's history.

Competent Comparisons Based on States, Territories and Administrative Regions Which Internalise ICSEA Limitations that Invalidate School Level Comparisons

Whereas ICSEA scores in their current form provide a manifestly inadequate basis for comparing the socio-educational advantage levels of individual schools, reasonably meaningful and valid comparisons of NAPLAN results *can*, however, be made at the level of State and Territory schools systems as wholes, and, better still, Australian Bureau of Statistics (ABS) Statistical Divisions and Statistical Subdivisions, so that places like the ACT can be compared to regions within NSW and Victoria that share the ACT's above average level of socio-educational advantage, whereas the ACT is never adequately served by educational comparisons with the six States and the Northern Territory, all of which have a vastly lower socioeconomic status than the ACT. At the level of States and Territories, the 3 per cent or so of signal data is aggregated and averaged out across the many schools that make up the State, Territory, or ABS Statistical Division or Statistical Subdivision, such that the data noise can largely balance out and cancels out, and the noise to signal ratio flaws can be largely internalised and overcome, leaving the aggregated signal data to provide a somewhat meaningful sample data estimate of the ICSEA level of the State, Territory or region in question.

According to the July 2009 edition of the ABS *Australian Standard Geographical Classification (ASGC)* (ABS Catalogue No. 1216.0), Australia was divided into 61 Statistical Divisions (SDs) and 206 Statistical Subdivisions (SSDs) as at 1 July 2009, as follows in Table 2 from page 3 of this ABS document: (see next page)

TABLE 2, SUMMARY OF ASGC SPATIAL UNITS AS AT 1 JULY 2009(a)

Spatial Unit	*NSW*	*Vic.*	*Qld.*	*SA*	*WA*	*Tas.*	*NT*	*ACT*	*OT*	*Aust.*
S/T	1	1	1	1	1	1	1	1	1	9
SD	12	11	13	7	9	4	2	2	1	61
SSD	50	45	36	20	28	8	10	8	1	206
SLA	199	209	475	127	154	43	65	114	3	1 389
LGA(b)	152	79	74	70	139	29	16	_	_	559
S Dist.(c)	12	7	10	_	4	2	_	1	_	36
MSR	2	2	2	2	2	1	1	1	1	14
SR	22	14	13	6	7	1	1	1	1	66
SRS	25	14	27	6	7	3	2	1	1	86

(a) Does not include Off-Shore Areas & Migratory.
(b) Unincorporated Areas are not included.
(c) Counted in predominant state or territory.
Note: _ nil or rounded to zero (including null cells).

Concluding Remarks

This submission has shown that (1) ICSEA scores produced to date fail to provide a valid and meaningful basis for comparing Australian schools generally and their NAPLAN results in particular, (2) public schools have been treated extremely unfairly by the government release of NAPLAN and ICSEA data and media reportage that has played out to date, and (3) public schools would be shown in a vastly better light in leagues tables if sound ICSEA scores based on actual students at actual schools were used rather than the largely meaningless ICSEA scores generated to date which suffer from a huge noise to signal ratio which the Commonwealth Government should investigate and overcome – for ICSEA and SES scores alike – without further delay and damage to Australia's schools, school students and education systems.

The Appendix list follows on the next page.

Appendices to follow:

A. Extracts from Submission to the Senate Inquiry into Commonwealth Funding for Schools, dated 21 June 2004 (full version at http://www.aph.gov.au/Senate/committee/eet_ctte/schoolfunding/submissions/sub007.pdf), including Appendices 1 (titled 'Towards Accurate SES Scores – Comparing the Socio-Economic Status of Families with Children at Government, Catholic and "Other" Non-Government Schools', dated January 2004) and 2 (titled 'Comparison of the socio-economic status of families with children in government, catholic and "other" (i.e. non-catholic non-government) schools', dated November 2003) of this Submission

B. Extracts from Supplementary Submission to the Senate Inquiry into Commonwealth Funding for Schools, dated 4 August 2004, titled *Further Illustration of Deficiencies in the Process Used to Determine SES Scores for Non-Government Schools – Based on 2001 ABS Census Data* (see online at http://www.aph.gov.au/SENATE/committee/eet_ctte/completed_inquiries/2002-04/schoolfunding/submissions/sub07c.pdf)

C. Median Family Incomes [$ per year] by Type of School and by Political Unit (2001 Census), dated June 2004

D. Percentage of Australia school students with at least one parent with a Bachelor Degree or Higher, by School Type and Political Unit (according to 2001 ABS Census data), dated July 2004

E. Comments on 3 September 2008 *New Matilda* article by Chris Bonnor titled 'Funding Public Schools in the Clever Country'

F. Article by John August titled 'Public Funding of Non-Government Schools' in the Spring 2009 Edition of the *Australian Humanist* Journal

G. *My School FACT SHEET: About ICSEA*, dated January 2010

H. ICSEA Scores for ACT Primary and Secondary Schools as Published in the Canberra Times on 30 January 2010

Appendix A
Extracts of Submission to the Senate Inquiry into Commonwealth Funding for Schools Dated 21 June 2004 (full version at http://www.aph.gov.au/Senate/committee/eet_ctte/schoolfunding/submissions/sub007.pdf)

The Secretary,
Senate Employment, Workplace Relations
and Education References Committee
Suite SG.52, Parliament House CANBERRA ACT 2600
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e-mail: eet.sen@aph.gov.au

Dear Maam/Sir,

I hereby offer a submission to your Inquiry into Commonwealth funding for schools.

Following, under a series of sub-headings, are several suggestions, points and illustrations which I hope will be of value to your Inquiry here and its critique of the SES-based non-government school funding system employed by the present Commonwealth government. I hope that these points and illustrations will dispel several significant myths and deceptions that have been allowed to distort the policy and funding processes in recent years.

This submission contains a lot of numerical data, and whilst I have made a big effort to "compare like with like" and present coherent data wherever possible, I acknowledge imperfections in the numerical values presented, although I am certain that such imperfections in no way invalidate the substantive numerical claims made herein.

In what follows, the terms "public school", "government school" and "state school" all mean the same thing. The terms "private school" and "non-government school" likewise mean the same thing.

Two quite lengthy Appendices are provided at the end here (on pages 22 to 53 [of the original, pages A-12 to A-34 here]), but the bulk of these are fairly easy to read Tables that can be glanced over quickly. ...

...

The Socioeconomic Status (SES) of Non-Government School Students is Generally Significantly Higher than that of Government School Students

It is often claimed, especially by people seeking increasing levels of government funding for non-government schools, that children in non-government schools come from families that are no wealthier than children in government schools. Whilst exceptional "against the trend" cases can of course be identified, the papers included in Appendices 1 and 2 here (beginning

on page 22 [of the original, page A-12 here]) show that children in non-government schools are typically, and on average, from ***much*** wealthier and higher SES backgrounds than their public school counterparts.

Levels of Commonwealth funding awarded to non-government schools are presently determined on the basis of SES scores which, in turn, are based on three demographic dimensions: family income, family occupation and parental education level.

... the SES levels of students in the various school sectors remains highly relevant to education and school funding policies, so I will now present the results of analyses I have carried out in the past year or so which clarify the typical and average SES levels of students attending government and non-government schools.

In terms of parental income, occupation and educational backgrounds, students attending non-government schools, typically and on average, are of significantly higher SES than students attending government schools. This pattern is made plain in Appendices 1 and 2 here. Whilst the two papers in Appendices 1 and 2 span 33 pages [of the original, 24 page here]), these largely comprise tables in which a clear pattern soon becomes clear even on just a quick reading. **I strongly urge this Inquiry to take note of these Appendices and the figures presented therein, which are directly based upon reliable 2001 Census data.** I can provide the Inquiry with further details of all analyses I've carried out if the Committee requires the same.

Under the federal government's present system, the 100 or so most expensive private schools in Australia (which charged annual tuition fees of $10,000 or more per student per year in 2003) have SES scores which average about 119. But real 2001 Census data presented in Appendix 1 shows that competently developed SES scores probably ought to be up around the 200 mark for these 100 or so most expensive private schools in Australia – which clearly serve students and families whose wealth and SES levels generally are very significantly greater than those of their public school counterparts.

Table 1 of Appendix 1 (see page 23 [of the original, page A-13 here]) shows that non-catholic non-government school families have SES levels that are typically and on average some 60% higher than those of government school families. Catholic school families similarly have SES levels that are typically and on average some 30% higher than those of government school families. It hence follows that non-government school families on the whole (that is, catholic and non-catholic non-government school families in combination) have SES levels that are typically and on average some 40% higher than those of government school families.

...

SES Scores are Absurd and Extremely Inaccurate and Unrepresentative of Actual Schools Because of the Absurd Methods of Establishing SES Scores

So why is it that the 100 or so most expensive private schools in Australia (which charged annual tuition fees of $10,000 or more per student in 2003) have SES scores which average about 119, when they should really be closer to 200 or so in order to accurately reflect the true situation?

One would naturally assume that SES scores of schools, if they were competent and equitable, would reflect the actual SES levels of the actual families of the actual students at the actual schools, ***but this is not even close to being the real case. This*** is the crux of the problem with

the SES scores that are presently used to determine non-government school funding levels, as will now be explained.

Data for the 2001 Census was taken from some 37,209 Census Collection Districts (CDs) Australia wide, but not all of these CDs would ever factor in to SES scores of non-government schools, because:

- a significant fraction of these 37,209 CDs would be absent of families with children – only 36,091 of these 37,209 CDs, for example, contained families with dependent children;
- not all families with children host children old enough to be in school;
- a significant minority of CDs containing school children would only contain families in which all children attended government schools.

So the CDs which determine the SES scores for non-government schools, under the Commonwealth government's present SES system, are just that subset of all CDs which include at least one family with one or more children at a non-government school. My examination of 2001 Census data (which has been precise in some ways but less so in others, depending on the quality of data I've been able to obtain) indicates that approximately 80% of all CDs would have contained at least one family with at least one child in a non-government school – so this would be approximately 30,000 CDs (approximately 80% of 37,209). ***Officers within DEST could no doubt confirm or improve upon this estimation.***

Now in the 2001 Census it was found that there were approximately 3.04 million students in all schools Australia-wide, who came from approximately 1.75 million families. So the 37,209 CDs from the 2001 Census would contain an average of approximately 47 families per CCD with one or more school children (1.75 million divided by 37,209 being 47). But, taking into account the fact that not all CDs contained families with children in schools, my estimate is that, among CDs with at least one family with at least one child in school, there'd have been an average of approximately 50 families per CD with one or more school children, in 2001.

Now approximately 1.15 million of these 1.75 million families had a child or children in government schools only, and the remaining 594,000 or so families had at least one child in a non-government school. And of these 594,000 or so families, approximately 229,000 had one or more children attending a non-catholic non-government school.

The above facts, figures and estimates suggest that approximately 594,000 non-government school families in non-government schools children were spread among 30,000 or so CDs at the time of the 2001 Census. So CDs hosting non-government school families would host an average of approximately 20 non-government school families per CD (594,000 divided by 30,000 being 19.8) – and probably about 30 government school families per CD (to make up the total of 50 families per CD on average as derived on the previous page [in the original, two paragraphs up here]).

Furthermore, in 2001 (and still now in 2004) there were approximately 3000 non-government schools and some 70000 government schools in Australia. So if these 3000 or so non-government schools were attended by students (from some 594,000 families) within some 30,000 CDs, it is clear that non-government school catchment zones are much larger areas than CDs; there is an average of about 10 CDs for every non-government school. Furthermore, there is clearly considerable overlap among the catchment areas of different non-government schools. So most CDs with non-government school families would actually host families with children in ***several different*** non-government schools. Especially in

wealthier suburbs of larger cities, it is likely that there'd be CDs with families with children attending one or more catholic non-government schools and other families with children attending one or more non-catholic non-government schools. Furthermore, many families would have one or more younger children in a non-government primary school, with one or more elder siblings attending a ***separate*** non-government secondary school. And there are often separate schools for boys and girls. So taking such factors into account, my estimate is that, among CDs with one or more non-government school families, ***actual individual non-government schools*** would host an average of about 4 families per CD, with there being on average about 46 families in these CDs with children attending schools ***other than*** these actual individual non-government schools. ***Officers within DEST should again be able to confirm or improve upon this estimation of 4 families per CD on average.***

So, in a typical average non-government school X, say, my estimation is that CDs containing families with one or more children attending X would, typically and on average, host about 4 families with children actually attending X, a further 16 families attending non-government schools ***other than*** X, and a further 30 families attending government schools only. So the CD level aggregate SES data used in determining non-government school funding levels would typically be contributed to in approximately the following weightings: families with kids attending X would contribute about 8% to CD aggregate SES scores (8% being 4 as a percentage of 50); families with kids attending non-government schools ***other than*** X would contribute about 32% to such CD aggregate SES scores (16 as a percentage of 50); and families attending government schools only would contribute about 60% to such CD aggregate SES scores (30 as a percentage of 50).**

The SES score of school X is an aggregate average of the SES scores assigned to each student at X, but the problem is that the scores assigned to each student are CD averages rather than specific data on the actual families of actual children attending school X – ***this, again, is the crux of the problem, and the reason why SES scores are often so ridiculous – especially for wealthy high fee private schools.*** Most CDs whose SES data contribute to X's overall SES score would only host between one and 10 or so students from X itself, so students from X itself would typically only contribute between 2% (1 out of 50 families, as a percentage) and 20% (10 out of 50) or so towards the SES scores for the individual CDs which, in combination, determine X's overall SES score, and hence its Commonwealth funding levels.

So, typically and on average, SES scores for non-government schools are based on SES data of government school families in a 60% or so weighting. So, given that government school families are typically of much lower SES than non-government school families, this 60% weighting reduces SES scores for non-government schools to numbers that are significantly lower than what is competent and what would arise if SES scores for non-government schools were based only on non-government school families. This systematic under-estimation is most pronounced in schools serving families who are of the highest SES levels – that is, very expensive private schools. In such expensive private schools, the SES levels of the actual families of the actual kids in these actual schools are typically and on average much higher than those of families even at other non-government schools (especially systemic catholic schools). So for such schools, SES scores are brought down to an immense extent – to well below competent and realistic levels – by virtue of the fact that the SES scores for such schools are based predominantly (i.e. with about a 92% numerical weighting – i.e. 32% plus 60%, as per ** two paragraphs above) on the data for generally much lower SES families whose children attend government schools or lower SES non-government schools (such as lower fee systemic catholic schools).

Hopefully the above explanation will make it crystal clear that criticisms against the SES model have in virtually all cases been based on utterly clear foundations. The SES system is a "basket case" and a national embarrassment which has the potential to seriously damage Australia's reputation in education policy, equity and public administration generally, unless the system is replaced by a significantly improved system as a matter of urgency. This explanation here also explains why it is that the model is most deficient in its application to the wealthiest private schools.

A Stunning Specific Illustration of the SES Model's Major Flaw – CD 8014903

To obtain a close look at the problems with the SES system at the level of individual Census Collection districts (CDs), I have obtained specific data on the 45 CDs that fell within the South Canberra Statistical Sub-Division (SSD). Census Collection District (CD) numbered 8014903 is one of these 45 CDs located within the South Canberra SSD. South Canberra is by far the wealthiest part of the ACT, but not nearly as wealthy as the wealthiest parts of Melbourne (around Toorak and South Yarra) and Sydney (around Vaucluse and the wealthiest North Shore suburbs).

Australian Bureau of Statistics (ABS) supplied 2001 Census data shows that, at the time of the 2001 Census, there were 56 families in this CD # 8014903, with 44 of these families having children in government schools only, whilst 3 families had their children in catholic schools only, and a further 9 had their children in non-catholic non-government schools only. So there were 12 families in total with one or more children in non-government schools. It should also be noted that there are several non-government schools physically located within the geographical bounds of the South Canberra SSD.

As can be seen in the Table that follows below (on the page after next), the median weekly income of the 44 families with children in government schools was in the $400 to $500 per week range. For all 56 families with school children in this CD, the median weekly income was in the $500 to $600 range. For families with children in non-government schools, however, this median weekly income figure was approximately $2000 – at least four times greater than the figure for government school families, and over three times greater than the "all families" median weekly income figure. ***I urge the Inquiry to recognise the extreme significance of these results – they suggest that the SES scores for non-government school families in this CD are three or more times lower than they ought to be – i.e. an error of over 200%!! ... if civil engineers were this inaccurate we'd run the serious risk of having bridges collapsing all around us ...*** As stated above, I have only obtained specific CD data here for a single SSD comprising just 45 CDs, and even within this tiny sample I've been able to identify this stunning proof of the outrageous inaccuracy of the SES score determination process. The point here is this: non-government schools with children whose families live in this particular CD are treated, for funding purposes, as though ***their students*** have family income levels in the $500 to $600 per week range, whereas in fact among non-government school families the apt weekly income figure ought to be approximately $2000 per week. Furthermore, 6 of the 12 non-government school families had incomes in the $2000 or more per week range, so the ***mean*** weekly incomes of these families might well have been $3000 per week or more. We can't be sure of this, but this uncertainty exposes yet another flaw with the SES funding model in that SES scores are based on Census data which is manifestly inadequate in describing very high SES families – specifically, families with weekly family incomes well in excess of $2000 per week. And whilst families with weekly incomes of $2000 or more only make up 8.06% of all families with children in government schools only, this 8.06% figure becomes 26.36% for families with children in non-catholic non-government

schools. It is almost certain that among expensive private schools (those charging tuition fees of say $8000 per student per year or more), this 26.36% would easily exceed 50%, and might well be above 80% for the 40 or so most expensive private schools in the country which charge fees in excess of $14,000 per student per year. For Census data on family income to be suitable for the determination of non-government school SES scores, such data would need to be significantly further sub-divided within the $2000+ weekly income range here, though problems with small sample numbers would then come into play. Indeed, the numbers provided by the ABS as reproduced in the Table below (the page after next [in the original, next page here]) are accompanied by a qualification that cautions against the over-reliance of small numbers. It can be seen that there is a suspiciously high number of 3 entries here. I have been advised that some of these "3" entries might actually be 1s, 2s, 3s or 4s, and that some zero entires might actually be 1s – they are apparently written as 0 or 3 for privacy reasons, to avoid the possibility of identifying single individual families within small geographical areas. One would need to obtain from the ABS itself the real numbers here, if they differ from what I have been supplied with.
As has been discussed previously in this submission, CDs are likely to only have an average of about 4 families with children attending any one given non-government school, so very few CDs are likely to have more than 10 or so families whose children attend the same non-government school, so small sample size statistical uncertainty is liable to quite significantly distort Census data on families with children at non-government schools – at least at the CD level.

This matter of small sample statistical uncertainty and adjustment raises additional questions about the fitness of Census data for the purpose of determining how billions of dollars in Commonwealth funding is divided up among non-government schools!!

As stated in the box appearing directly below the Table that follows here (on the next page), the household income score for families with dependent children in this CD (#8014903) was just 91.43, whereas it is plainly the case that a score close to 200 would be needed to competently and even-handedly reflect the non-government school families in this CD, based on the data as supplied by the ABS.

Of the 45 CDs within the South Canberra SSD, 3 of these CDs contained no families with children in schools. The 42 CDs which did contain families with children in schools had between 81 and 3 of such families with one or more school children. In 25 of these 42 CDs there were 40 or more families with school children. And the median number of families with school children in these 42 CDs was 47, with the mean being 43. Furthermore, in 2 of these 42 CDs, all families had children in government schools only. So, according to the 2001 Census data as supplied by the ABS, 40 of the 45 CDs in the South Canberra SSD had one or more families with one or more children attending a non-government school. And 34 of the 45 had one or more families with one or more children attending a ***non-catholic*** non-government school.

So even in this brief examination within one of the 207 SSDs employed in the 2001 Census, one CD in particular has been found in which the average weekly income level of ***all families*** with school children is ***vastly*** lower than the corresponding average among just non-government school families. But whilst CD #8014903 overwhelmingly exposes how aggregate "all families with school children" CD data significantly misrepresents the SES levels of particular non-government school families, this same deficiency is evident across most of the CDs within the South Canberra SSD, and indeed throughout the ACT and in all other states and territories as well and across the whole of Australia. Of the 1795 families in South Canberra SSD with school children, 604 (or 33.6%) have weekly incomes of $2000 or

more, but among of the 905 of these families with kids in government schools only, just 246 (or 27.2%) have weekly incomes of $2000 or more, whereas among of the 890 of these families with at least one child in a government school, 358 (or 40.2%) have weekly incomes of $2000 or more. [this line of discussion continues lowermost on the next page (in the original, lowermost below on this page here)]

ABS 2001 Census of Population and Housing
ASGC Main Structure and FINF Family Income
by Summation Options and Type of Educational Institution of children

	Families				
Census Collection District (CD) number8014903	Children in Government Schools only	Children in Catholic Schools only	Children in Other Non Govt. Schools only	**TOTALS for all schools which SES scores are based on**	All Non-Govt Schools
Not applicable	0	0	0	0	0
Partial incomes stated	0	0	3	3	3
$160-$199	4	0	0	4	0
$200-$299	5	0	0	5	0
$300-$399	12	0	0	12	0
$400-$499	3	0	0	3	0
$500-$599	3	0	0	3	0
$600-$699	4	0	0	4	0
$700-$799	3	0	0	3	0
$800-$999	3	0	0	3	0
$1,200-$1,499	0	0	3	3	3
$1,500-$1,999	0	0	0	0	0
$2,000 or more	7	3	3	13	6
TOTALS	**44**	**3**	**9**	**56**	**12**
PERCENTAGES	**78.6**	**5.4**	**16.1**	**100.0**	**21.4**
Number Partial Incomes Stated	**0**	**0**	**3**	**3**	**3**
% Partial Incomes Stated	**0.0**	**0.0**	**33.3**	**5.4**	**25.0**
Number $2,000 or more	**7**	**3**	**3**	**13**	**6**
% $2,000 or more	**15.9**	**100.0**	**33.3**	**23.2**	**50.0**
Number $1,200 or more	**7**	**3**	**6**	**16**	**9**
% $1,200 or more	**15.9**	**100.0**	**66.7**	**28.6**	**75.0**
Number $160-$999	**37**	**0**	**0**	**37**	**0**
% $160-$1000	**84.1**	**0.0**	**0.0**	**66.1**	**0.0**
Median (approx.)	**$433**	**> $2,000**	**$1,350**	**$533**	**$2,000**

Now above Table again but as percentages within each column category (next page)

Points to note: The entry of 3 circled above is curious - the median of $1,350 also circled assumes that these 3 families have an effective income of less than somewhere in the $1,200 to $1,499 class - it is highly likely that these three families are family trust fund families with effective incomes or subject to some other favourable but difficult to detect circumstances such that the median score of $1,350 here probably should be over $2,000 ... something for a Latham government to sort out if Mr Latham stays strong on his TTR (Tax the Rich) Policy which I've kept newspaper clippings on somewhere ...

The **gigantic** significance of the above is that it shows that the 21% or families in this CD with kids at non-govt schools are "miles wealthier" on average than their public school counterpart families, and the SES score for this CD of 91.43 - which would help schools like Boys and Girls Grammar attract higher federal funding - whilst reflective of the CD as a whole, **ABSURDLY misrepresents** the non-govt school families in this CD the schools for which the SES model is applied to.

The Table below shows the consistency of the pattern here ranging from CD #8014903 through the South Canberra SSD, then to the whole of the ACT and Australia as a whole.

Census Unit	Percentage of families with children in govt schools only with weekly incomes of $2000 or more	Percentage of families with at least one child in non-govt schools with weekly incomes of $2000 or more	Percentage of all families with children in schools with weekly incomes of $2000 or more
CD #8014903	15.9	50.0	23.2
South Canberra SSD	27.2	40.2	33.6
Whole of ACT	18.9	32.3	24.2
Whole of Australia	8.0	19.1	11.8

So whilst South Canberra CD includes only 0.12% of all Australian CDs, the Table above and the Tables in the Appendices indicate clearly that there must be hundreds and perhaps thousands of CDs around Australia that, like CD # 8014903 here, expose the stunning incompetence and inaccuracy of SES scores ***for particular individual non-government schools*** – which are based on the SES scores for CDs which are in turn based on data for ***all*** families with school kids in each CD, rather than just those families with kids at the particular school whose SES score is being determined.

Schools Whose SES Scores Fail Even the Common Sense Test

If SES scores were competent, wealthier and higher fee schools would obviously have higher SES scores than relatively poorer and lower fee schools. But the Table below shows that this isn't close to the case with the SES scores which the present system uses. No honest and competent person could possibly accept as valid SES scores of 111 for Geelong Grammar (with Year 12 tuition fees of approximately $16000 per student in 2003) and 112 for Trinity Grammar School (with Year 12 tuition fees of over $14,000 per student in 2003) if every single non-government school in the ACT has SES scores of 112 or more!! Think about it: whilst Canberra's overall SES levels exceed those of any other state or territory at the state/territory aggregate average level, there are clearly much greater concentrations of extreme wealth in exclusive suburbs of Sydney and Melbourne than there are in Canberra – and it is well known that many of the wealthiest people in Melbourne and Sydney send their kids to schools like Geelong Grammar in Victoria and Trinity Grammar in Sydney.

The Table below shows that the federal government's present system considers Canberra Montessori School (SES = 123, fees = $3360) and Good News Lutheran Primary School in QLD (SES = 117, fees = $1960) to be of higher SES than "superheavyweight" rich schools such as Geelong Grammar (SES = 111, fees approx. $16,000) and Haileybury College in Melbourne (SES = 108, Year 12 tuition fees in excess of $14,000 per student in 2003). I trust that the Committee recognises that these examples, and the entire Table below, provide staggering exposures of the stunning absurdity, incompetence and negligence of the present SES funding system.

School	SES	Cat	S/T	Fees	Year	% AGSRC funding	Funding per secondary student (FPSS)	Fees + FPSS	Comments
Canberra Montessori School	123	10	ACT	$3,360	2003	22.5	$1,677	$5,037	ages 3-6 or to y6
Mount St Benedict College (Pennant Hills)	121	10	NSW	$3,100	??	25.0	$1,864	$4,964	
St Pius X College	121	9	NSW	$3,020	2003	25.0	$1,864	$4,884	Chatswood
Orana School	119	10	ACT	$3,880	2003	27.5	$2,051	$5,931	y11-12, Steiner
Marist College Canberra	119	10	ACT	$3,744	2003	27.5	$2,051	$5,795	over phone 28AUG03
Oakhill College	119	9	NSW	$3,528	2003	27.5	$2,051	$5,579	Castle Hill
Brisbane Independent School	118	9	QLD	$3,640	2003	28.7	$2,145	$5,785	pre-7
Good News Lutheran Primary School	117	9	QLD	$1,960	2003	30.0	$2,238	$4,198	y1-7
The King's School	116	1	NSW	$15,771	2003	31.2	$2,331	$18,102	y11-12 **(John Anderson's old school)**
St Catherine's School	116	3	NSW	$13,053	2003	31.2	$2,331	$15,384	y12
The Church of England Collegiate School of St Peter	116	1	SA	$11,500	2003	31.2	$2,331	$13,831	y11-12, quoted range $11,000 to $12,000, aka St. Peter's College
St Edmund's College	116	10	ACT	$3,900	2003	31.2	$2,331	$6,231	over phone 28AUG03
Daramalan College	116	10	ACT	$3,480	2003	31.2	$2,331	$5,811	over phone 28AUG03
Brindabella Christian College	116	11	ACT	$3,330	2003	31.2	$2,331	$5,661	y10, pre-10, Lyneham
Emmaus Christian School	116	11	ACT	$2,380	2003	31.2	$2,331	$4,711	pre-9 then 10 in 2004, Dickson
Caulfield Grammar School	115	1	VIC	$13,545	2003	32.5	$2,425	$15,970	y12
Kingswood College	115	2	VIC	$10,674	2003	32.5	$2,425	$13,099	y12
Trinity Christian School	115	8	ACT	$2,920	2003	32.5	$2,425	$5,345	$2920 is min - max is $4520, y10, will go to y11 in 2004, Wanniassa
Burgmann Anglican School	115	10	ACT	$2,650	2003	32.5	$2,425	$5,075	y6-7
Presbyterian Ladies' College	114	1	VIC	$14,960	2003	33.7	$2,518	$17,478	y12
Ivanhoe Girls' Grammar School	114	1	VIC	$10,599	2003	33.7	$2,518	$13,117	y11-12
Prince Alfred College	114	1	SA	$10,000	2003	33.7	$2,518	$12,518	approx $9800 in 2001
St Joseph's College	113	6	NSW	$13,950	2003	35.0	$2,612	$16,562	y7-12 Hunters Hill
Presbyterian Ladies College	113	2	NSW	$13,644	2003	35.0	$2,612	$16,256	y12, cf WA, VIC
Stella Maris College	113	10	NSW	$3,198	??	35.0	$2,612	$5,810	Northern beaches
Sutherland Shire Christian School	113	10	NSW	$2,340	??	35.0	$2,612	$4,952	
Trinity Grammar School	112	1	NSW	$14,325	2003	36.2	$2,705	$17,030	y12
Ivanhoe Grammar School	112	1	VIC	$13,221	2003	36.2	$2,705	$15,926	y12
Tudor House	112	1	NSW	$11,652	2003	36.2	$2,705	$14,357	y6
Newcastle Grammar School	112	3	NSW	$10,429	2003	36.2	$2,705	$13,134	
St Clare's College	112	9	NSW	$3,975	2003	36.2	$2,705	$6,680	y11-12 Waverley
Samford Valley Steiner School	112	10	QLD	$2,523	2003	36.2	$2,705	$5,228	k-7
Prince of Peace Lutheran Primary School	112	9	QLD	$1,300	2003	36.2	$2,705	$4,005	
Geelong Grammar School 'Corio'	111	1	VIC	$16,000	2003	37.5	$2,799	$18,799	approx.
The McDonald College	111	5	NSW	$14,200	2003	37.5	$2,799	$16,999	y12 Strathfield
Toorak College	111	1	VIC	$13,281	2003	37.5	$2,799	$16,080	y12
All Hallows School	111	10	QLD	$3,208	2002	37.5	$2,799	$6,007	y12
Mentone Grammar School	110	1	VIC	$12,844	2003	38.7	$2,892	$15,736	y12
Meriden School	110	2	NSW	$12,558	2003	38.7	$2,892	$15,450	Strathfield-Auburn y12
MLC School	110	3	NSW	$11,200	2001	38.7	$2,892	$14,092	
Frensham School	109	1	NSW	$14,200	???	40.0	$2,986	$17,186	Mittagong
Mentone Girls' Grammar	109	1	VIC	$14,200	2003	40.0	$2,986	$17,186	y12
Geelong College	109	1	VIC	$13,216	2003	40.0	$2,986	$16,202	y9-12
Snowy Mountains Grammar School	109	7	NSW	$11,700	??	40.0	$2,986	$14,686	
Westminster School	109	3	SA	$10,400	2003	40.0	$2,986	$13,386	all sec, quoted range $10,000 to $10,800
The Illawarra Grammar School	109	3	NSW	$10,200	2003	40.0	$2,986	$13,186	
Haileybury College	108	1	VIC	$14,745	2003	41.2	$3,079	$17,824	y9-12
St Paul's International College	107	NS3	NSW	$13,200	??	42.5	$3,172	$16,372	Moss Vale
Woodleigh School	107	3	VIC	$11,756	2003	42.5	$3,172	$14,928	y7-12
St Josephs School	106	1	NSW	$12,950	???	43.7	$3,266	$16,216	
St Margaret's School	105	2	VIC	$11,154	2003	45.0	$3,359	$14,513	seniors
The Southport School	105	2	QLD	$10,502		45.0	$3,359	$13,861	y12
New England Girls School	105	3	NSW	$10,016	2003	45.0	$3,359	$13,375	
Kinross Wolaroi School	104	3	NSW	$10,389	2003	46.2	$3,453	$13,842	y11-12
The Scots School	104	3	NSW	$10,371	2003	46.2	$3,453	$13,824	Bathurst
All Saints College	104	6	NSW	$10,090	??	46.2	$3,453	$13,543	Bathurst
St Stanislaus College	103	10	NSW	$11,700	??	47.5	$3,546	$15,246	Bathurst
Lowther Hall Anglican Grammar School	103	3	VIC	$11,323	2003	47.5	$3,546	$14,869	y12

The Table that now follows contains those schools from the Table above which most starkly expose the gross inaccuracy of SES scores. What we see here are eight schools which have relatively high SES scores (117 or higher) despite the fact that all of these schools charged annual tuition fees of less than $4000 in 2003. We then see 28 schools which have relatively low SES scores (112 or lower) despite the fact that all of these schools charged annual tuition fees of more than $10,000 in 2003. Again, I trust that the Inquiry here recognises how entirely absurd these SES scores are, and, hence, how billions of taxpayer dollars have been misallocated as a result of the incompetence of these SES scores and the SES system generally.

School	SES	Cat	S/T	Fees	Year	% AGSRC funding	Funding per secondary student (FPSS)	Fees + FPSS	Comments
Canberra Montessori School	123	10	ACT	$3,360	2003	22.5	$1,677	$5,037	ages 3-6 or to y6
Mount St Benedict College (Pennant Hills)	121	10	NSW	$3,100	??	25.0	$1,864	$4,964	
St Pius X College	121	9	NSW	$3,020	2003	25.0	$1,864	$4,884	Chatswood
Orana School	119	10	ACT	$3,880	2003	27.5	$2,051	$5,931	y11-12, Steiner
Marist College Canberra	119	10	ACT	$3,744	2003	27.5	$2,051	$5,795	over phone 28AUG03
Oakhill College	119	9	NSW	$3,528	2003	27.5	$2,051	$5,579	Castle Hill
Brisbane Independent School	118	9	QLD	$3,640	2003	28.7	$2,145	$5,785	pre-7
Good News Lutheran Primary School	117	9	QLD	$1,960	2003	30.0	$2,238	$4,198	y1-7
Trinity Grammar School	112	1	NSW	$14,325	2003	36.2	$2,705	$17,030	y12
Ivanhoe Grammar School	112	1	VIC	$13,221	2003	36.2	$2,705	$15,926	y12
Tudor House	112	1	NSW	$11,652	2003	36.2	$2,705	$14,357	y6
Newcastle Grammar School	112	3	NSW	$10,429	2003	36.2	$2,705	$13,134	
Geelong Grammar School 'Corio'	111	1	VIC	$16,000	2003	37.5	$2,799	$18,799	approx. **(Alexander Downer's old school)**
The McDonald College	111	5	NSW	$14,200	2003	37.5	$2,799	$16,999	y12 Strathfield
Toorak College	111	1	VIC	$13,281	2003	37.5	$2,799	$16,080	y12
Mentone Grammar School	110	1	VIC	$12,844	2003	38.7	$2,892	$15,736	y12
Meriden School	110	2	NSW	$12,558	2003	38.7	$2,892	$15,450	Strathfield-Auburn y12
MLC School	110	3	NSW	$11,200	2001	38.7	$2,892	$14,092	
Frensham School	109	1	NSW	$14,200	???	40.0	$2,986	$17,186	Mittagong
Mentone Girls' Grammar	109	1	VIC	$14,200	2003	40.0	$2,986	$17,186	y12
Geelong College	109	1	VIC	$13,216	2003	40.0	$2,986	$16,202	y9-12
Snowy Mountains Grammar School	109	7	NSW	$11,700	??	40.0	$2,986	$14,686	
Westminster School	109	3	SA	$10,400	2003	40.0	$2,986	$13,386	all sec, quoted range $10,000 to $10,800
The Illawarra Grammar School	109	3	NSW	$10,200	2003	40.0	$2,986	$13,186	
Haileybury College	108	1	VIC	$14,745	2003	41.2	$3,079	$17,824	y9-12
St Paul's International College	107	NS3	NSW	$13,200	??	42.5	$3,172	$16,372	Moss Vale
Woodleigh School	107	3	VIC	$11,756	2003	42.5	$3,172	$14,928	y7-12
St Josephs School	106	1	NSW	$12,950	???	43.7	$3,266	$16,216	
St Margaret's School	105	2	VIC	$11,154	2003	45.0	$3,359	$14,513	seniors
The Southport School	105	2	QLD	$10,502		45.0	$3,359	$13,861	y12
New England Girls School	105	3	NSW	$10,016	2003	45.0	$3,359	$13,375	
Kinross Wolaroi School	104	3	NSW	$10,389	2003	46.2	$3,453	$13,842	y11-12
The Scots School	104	3	NSW	$10,371	2003	46.2	$3,453	$13,824	Bathurst
All Saints College	104	6	NSW	$10,090	??	46.2	$3,453	$13,543	Bathurst
St Stanislaus College	103	10	NSW	$11,700	??	47.5	$3,546	$15,246	Bathurst
Lowther Hall Anglican Grammar School	103	3	VIC	$11,323	2003	47.5	$3,546	$14,869	y12

Averages ...	SES	Cat	S/T	Fees	Year	% AGSRC funding	Funding per secondary student (FPSS)	Fees + FPSS	Comments
... among those schools above with SES of 117 or more and annual tuition fees of less than $4,000	**119.63**	**9.5**	**N/A**	**$3,279**	**2003**	**26.68**	**1992.75**	**$5,272**	**N/A**
... among those schools above with SES of 112 or less and annual tuition fees of more than $10,000	**108.07**	**2.7**	**N/A**	**$12,208**	**2003**	**41.14**	**3072.38**	**$15,280**	**N/A**

...

Privacy Argument Myth

Advocates, defenders and apologists of the present SES system claim that one of the system's advantages is its lack of intrusiveness and its respect for the privacy of families. But over 90% of Australian families with children already have their income tax and Centrelink family payment details subject to data cross-matching between Centrelink and the Australian Tax Office (ATO). The only families not already subject to such Centrelink-ATO data cross-matching are the 10% or so of families on the very highest income levels who have no entitlement to such Centrelink family payments on account of the means testing associated with such benefits.

The SES system can only possibly be competent and equitable if SES scores are based on the specific income and other details of the actual families of the actual children who attend actual non-government schools. Forcing all non-government school families to provide their income and other personal details, as a condition for government funding of their non-government schools, would be no more intrusive than the conditions presently applicable to the vast majority (90% or so) of Australian families who already routinely need to provide income and other personal details in order to receive Centrelink payments. It disgusts me that some wealthy private school lobbyists continually seek to be "above" the laws and reasonable disclosure requirements that the bulk of society are subject to.

Further evidence that most families are already subject to Centrelink and ATO data cross-matching is provided on pages 42 and 43 [of the original, pages A-29 to A-31 here]) in Appendix 2 under the sub-heading 'Achieving More Accurate SES Indices'.

...

Finally, I'd be pleased to attend any public hearing the Committee conducts as part of this Inquiry, in order to clarify or expand upon any parts of my submission here, or to address other questions that I might be well placed to respond to in view of the analyses I've recently completed in respect of the current SES system and its flaws.

APPENDICES 1 and 2 follow below.

Regards,

Mark Drummond
...

APPENDICES TO INQUIRY SUBMISSION DATED 14 JUNE 2004
Papers to follow here are:

- **Appendix 1 (pages 22-36 [of the original, pages A-12 to A-25 here]): Towards Accurate SES Scores – Comparing the Socio-Economic Status of Families with Children at Government, Catholic and "Other" Non-Government Schools**, by me (Mark D) dated January 2004

- **Appendix 2 (pages 37 to 53 [of the original, pages A-26 to A-34 here]): Comparison of the socio-economic status of families with children in government, catholic and "other" (i.e. non-catholic non-government) schools (in progress working paper),** by me (Mark D) dated 22 November 2003

Appendix 1

Towards Accurate SES Scores – Comparing the Socio-Economic Status of Families with Children at Government, Catholic and "Other" Non-Government Schools

by Mark Drummond
(University of Canberra and Canberra Institute of Technology)
January 2004 [1]

Introduction

To help inform the debate on apt levels of government funding for non-government schools in Australia, this paper presents substantive comparisons of the socio-economic status (SES) of families of students attending government, catholic and "other" (i.e. non-catholic) non-government schools. Data from the 2001 Census, supplied by the Australian Bureau of Statistics between October 2003 and January 2004, have been used to facilitate these comparisons.

The 2001 Census collected data, for families and households, on the types of schools which school students attended, and on numerous substantive indicators of socio-economic status (SES), including:

- family income levels;
- family structures and parental employment status;
- family housing tenure;
- housing loan levels for families with housing loans;
- the highest level of schooling (up until Year 12 or equivalent) completed by individuals; and
- the highest post-school qualifications achieved by people.

The Census data has school types broken down as Government (Govt.), Catholic (Cath.) and "Other", such that:

- Government schools include all government schools, including selective public schools;
- Catholic schools includes both systemic and non-systemic catholic schools; and
- "Other" schools includes all non-catholic non-government schools.

Through cross-matching of these 2001 Census data, the Australian Bureau of Statistics (ABS) can provide specialised tables which compare families with children in government, catholic and "other" schools in terms of socio-economic indicators such as those listed above. Tables 1 and 2 below summarise these comparisons. Table 1 provides actual measures and percentages derived from specialised tables supplied by the ABS, whereas Table 2 provides measures normalised relative to "government schools only" (i.e. "Govt. only") average figures which are set at 100.0 for all measures considered. In all tables shown, row numbers are provided for ease of reference.

Comparative Tables

Table 1: SES Levels of Families with Children at Government, Catholic and "Other" Schools – in Terms of Family Income, Structure and Employment Status, Housing Tenure and Home Loan Levels, and Parental Education Levels

Row No.	Measure, as at 2001 Census time, for Families with Children in Schools of Types Shown in the Columns to the Right Here (% = percentage, ave. = average)	Govt. only	Govt. & Cath. only	Govt., Cath. & Other	Cath. only	Cath. & Other only	Other only	Govt. & Other only	Ave. for all schools
1	**FAMILY INCOME MEASURES**								
2	Median family income per week ($)	894	1,124	1,465	1,181	1,567	1,398	1,462	996
3	Median family income per year ($)	46,668	58,627	76,425	61,634	81,758	72,925	76,271	51,956
4	% of families with nil or negative ave. weekly incomes	0.50	0.43	1.16	0.42	0.86	0.91	0.58	0.53
5	% of families with ave. incomes of $119 per week (i.e. $6,209 per year) or less	0.86	0.70	1.74	0.72	1.37	1.33	0.88	0.88
6	% of families with ave. incomes of $499 per week (i.e. $26,036 per year) or less	23.08	12.66	7.34	12.59	8.55	11.78	9.20	19.39
7	% of families with ave. incomes of $999 per week (i.e. $52,125 per year) or less	56.84	42.61	31.08	39.63	25.78	33.17	30.04	50.23
8	% of families with ave. incomes of $500 per week (i.e. $26,089 per year) or more	76.92	87.34	92.66	87.41	91.45	88.22	90.80	80.61
9	% of families with ave. incomes of $1000 per week (i.e. $52,177 per year) or more	43.16	57.39	68.92	60.37	74.22	66.83	69.96	49.77
10	% of families with ave. incomes of $1200 per week (i.e. $62,613 per year) or more	32.70	45.48	61.78	48.96	65.18	57.54	60.82	39.25
11	% of families with ave. incomes of $1500 per week (i.e. $78,266 per year) or more	20.27	30.25	48.46	33.49	52.95	46.12	48.44	26.30
12	% of families with ave. incomes of $2000 per week (i.e. $104,354 per year) or more	8.04	12.61	25.10	14.88	31.07	26.36	27.10	11.76
13	**FAMILY STATUS AND EMPLOYMENT MEASURES**								
14	% of two parent families with children in which both parents are employed full time	15.15	21.76	22.39	21.71	27.19	23.97	22.79	17.65
15	% of two parent families with children in which neither parent is employed	7.73	5.01	5.89	4.36	2.59	3.94	3.89	6.55
16	% of families with just one parent	26.59	16.77	12.63	16.93	12.42	16.83	13.64	23.21
17	% of one parent families in which parent not employed	13.81	6.59	5.56	5.91	4.83	6.03	5.17	11.14
18	**HOUSING TENURE MEASURES**								
19	% of families living in homes they fully own	24.46	31.63	38.67	34.33	40.47	38.02	37.02	28.21
20	% of families living in homes they are purchasing (i.e. which they own but haven't fully paid the loan off yet)	41.49	48.75	48.07	47.18	45.48	42.60	47.46	42.98
21	% of families living in homes they are renting	30.92	16.58	10.48	15.44	11.28	16.45	13.05	25.73
22	**HOUSING LOAN MEASURES**								
23	Median family housing loans per month ($)	843	916	1,071	956	1,131	1,050	1,018	890
24	Median family housing loans per year ($)	10,121	10,990	12,847	11,475	13,571	12,604	12,214	10,678
25	% of families with housing loans of $999 per month (i.e. $11,988 per year) or less	64.27	57.51	45.42	53.81	41.54	46.75	48.78	59.71
26	% of families with housing loans of $1000 per month (i.e. $12,000 per year) or more	35.73	42.49	54.58	46.19	58.46	53.25	51.22	40.29
27	% of families with housing loans of $2000 per month (i.e. $24,000 per year) or more	5.66	7.44	16.95	8.74	18.65	16.49	14.00	7.70
28	% of families with housing loans of $4000 per month (i.e. $48,000 per year) or more	0.86	1.09	3.05	1.28	3.32	3.23	2.36	1.24
29	**PARENTAL SCHOOL EDUCATION MEASURES**								
30	% of families in which no parent had gone to school	1.01	1.01	0.78	0.75	0.44	0.41	0.50	0.88
31	% of families in which no parent had completed beyond Year 8 at school (including families in which no parent had gone to school)	6.09	4.65	3.03	4.40	2.34	2.55	2.42	5.25
32	% of families in which at least one parent has completed Year 12 or equivalent	36.48	42.22	61.27	47.18	63.59	61.79	62.12	42.13
33	**PARENTAL POST SCHOOL QUALIFICATION MEASURES**								
34	% of families in which at least one parent has completed a Trade Certificate or higher	25.27	29.59	45.94	31.90	45.60	45.99	46.97	29.33
35	% of families in which at least one parent has completed a Bachelor Degree or higher	7.63	8.96	19.14	10.22	20.53	21.32	22.10	9.94
36	% of families in which at least one parent has completed a Postgraduate Degree	0.72	0.57	0.92	0.66	1.67	2.29	1.93	0.90

Table 2: SES Levels of Families with Children at Government, Catholic and "Other" Schools – in Terms of Family Income, Structure and Employment Status, Housing Tenure and Home Loan Levels, and Parental Education Levels – Relative to Government School Average = 100.0

Row No.	Measure, as at 2001 Census time, for Families with Children in Schools of Types Shown in the Columns to the Right Here (% = percentage, ave. = average)	Govt. only	Govt. & Cath. only	Govt., Cath. & Other	Cath. only	Cath. & Other only	Other only	Govt. & Other only	Ave. for all schools
1	**FAMILY INCOME MEASURES**								
2	Median family income per week ($)	100.0	125.6	163.8	132.1	175.2	156.3	163.4	111.3
3	Median family income per year ($)	100.0	125.6	163.8	132.1	175.2	156.3	163.4	111.3
4	% of families with nil or negative ave. weekly incomes	100.0	87.1	233.3	85.6	173.5	182.7	116.1	106.1
5	% of families with ave. incomes of $119 per week (i.e. $6,209 per year) or less	100.0	81.6	201.4	83.9	158.3	154.3	101.6	102.4
6	% of families with ave. incomes of $499 per week (i.e. $26,036 per year) or less	100.0	54.9	31.8	54.6	37.1	51.0	39.9	84.0
7	% of families with ave. incomes of $999 per week (i.e. $52,125 per year) or less	100.0	75.0	54.7	69.7	45.4	58.3	52.8	88.4
8	% of families with ave. incomes of $500 per week (i.e. $26,089 per year) or more	100.0	113.5	120.5	113.6	118.9	114.7	118.0	104.8
9	% of families with ave. incomes of $1000 per week (i.e. $52,177 per year) or more	100.0	133.0	159.7	139.9	172.0	154.9	162.1	115.3
10	% of families with ave. incomes of $1200 per week (i.e. $62,613 per year) or more	100.0	139.1	188.9	149.7	199.3	176.0	186.0	120.1
11	% of families with ave. incomes of $1500 per week (i.e. $78,266 per year) or more	100.0	149.2	239.1	165.2	261.3	227.6	239.0	129.8
12	% of families with ave. incomes of $2000 per week (i.e. $104,354 per year) or more	100.0	157.0	312.3	185.2	386.7	328.1	337.3	146.4
13	**FAMILY STATUS AND EMPLOYMENT MEASURES**								
14	% of two parent families with children in which both parents are employed full time	100.0	143.7	147.8	143.3	179.5	158.2	150.5	116.5
15	% of two parent families with children in which neither parent is employed	100.0	64.8	76.2	56.4	33.5	51.0	50.3	84.7
16	% of families with just one parent	100.0	63.1	47.5	63.7	46.7	63.3	51.3	87.3
17	% of one parent families in which parent not employed	100.0	47.7	40.2	42.8	35.0	43.6	37.4	80.7
18	**HOUSING TENURE MEASURES**								
19	% of families living in homes they fully own	100.0	129.3	158.1	140.3	165.4	155.4	151.3	115.3
20	% of families living in homes they are purchasing (i.e. which they own but haven't fully paid the loan off yet)	100.0	117.5	115.9	113.7	109.6	102.7	114.4	103.6
21	% of families living in homes they are renting	100.0	53.6	33.9	49.9	36.5	53.2	42.2	83.2
22	**HOUSING LOAN MEASURES**								
23	Median family housing loans per month ($)	100.0	108.6	126.9	113.4	134.1	124.5	120.7	105.5
24	Median family housing loans per year ($)	100.0	108.6	126.9	113.4	134.1	124.5	120.7	105.5
25	% of families with housing loans of $999 per month (i.e. $11,988 per year) or less	100.0	89.5	70.7	83.7	64.6	72.7	75.9	92.9
26	% of families with housing loans of $1000 per month (i.e. $12,000 per year) or more	100.0	118.9	152.8	129.3	163.6	149.0	143.4	112.8
27	% of families with housing loans of $2000 per month (i.e. $24,000 per year) or more	100.0	131.4	299.5	154.3	329.6	291.3	247.4	136.0
28	% of families with housing loans of $4000 per month (i.e. $48,000 per year) or more	100.0	126.8	354.5	149.2	385.4	375.4	274.3	144.4
29	**PARENTAL SCHOOL EDUCATION MEASURES**								
30	% of families in which no parent had gone to school	100.0	99.4	76.9	73.5	43.3	40.3	49.6	87.1
31	% of families in which no parent had completed beyond Year 8 at school (including families in which no parent had gone to school)	100.0	76.3	49.8	72.3	38.4	41.9	39.8	86.1
32	% of families in which at least one parent has completed Year 12 or equivalent	100.0	115.7	167.9	129.3	174.3	169.4	170.3	115.5
33	**PARENTAL POST SCHOOL QUALIFICATION MEASURES**								
34	% of families in which at least one parent has completed a Trade Certificate or higher	100.0	117.1	181.8	126.2	180.4	182.0	185.9	116.0
35	% of families in which at least one parent has completed a Bachelor Degree or higher	100.0	117.5	251.0	134.0	269.1	279.6	289.8	130.3
36	% of families in which at least one parent has completed a Postgraduate Degree	100.0	78.3	127.2	91.6	231.8	316.6	266.8	124.6

Approximately 95% of all families have their children in just one school type – i.e. government schools only (approximately 66.4% of all families with one or more school children), catholic schools only (approximately 18.2%), and "other" non-government schools only (approximately 10.2%). Of the remaining 5% of families, about 2.6% have one or more children in government and catholic schools, 2.1% have children in government and "other" schools, 0.4% have children in catholic and "other" schools, and just 0.04% have children in government, catholic and "other" schools.

Whilst most rows of Tables 1 and 2 provide measures reflecting higher levels of SES, rows 4 to 7 (inclusive), 15 to 17, 21, 25, 30 and 31 contain measures generally reflecting lower levels of SES. For example, row 16 provides the percentages of families which are one parent families.

The general pattern here is that "government school only" families are seen to have ***by far*** the lowest values of measures reflecting high SES (see row 1, for example, where the "Govt. only" figure" is easily the lowest in the row), and ***by far*** the highest values of measures reflecting "low SES" (see row 16, for example, where the "Govt. only" figure" is easily the highest in the row). At the other extreme, all four columns containing "Other" schools generally show by far the highest values of measures reflecting high SES (see row 1, for example), and the lowest values reflecting "low SES" (row 31, for example). There are two conspicuous – and perhaps highly significant – exceptions to this general pattern, however, in rows 4 and 5. These two rows show that the proportion of "other" school families with extremely low incomes ($119 per week or less) is significantly higher than for government and catholic school families, which in turn suggests that "other school families" most frequently benefit from family trusts, other tax minimisation schemes, or some other favourable circumstances which government and catholic school families less frequently benefit from.

In order to simplify and clarify the comparison here, Tables 3 and 4 repeat Tables 1 and 2, but only contain the columns for "Govt. only", "Cath. only", "Other only" and "Ave. for all schools". Tables 3 and 4 do, however, contain an additional column titled "Estimate for Top 50% of Other schools", which offers tentative estimates of each measure here for the "top half" of "other" category schools – that is, the 50% of "other" category non-government schools which are of ***highest*** SES. It is assumed here that the "bottom half" of "other" schools – that is, the 50% of "other" category schools of ***lowest*** SES – have average measures here in all cases equating to the corresponding "Cath. only" measures. So, in order to preserve the "Other only" figures, entries in the "Estimate for Top 50% ..." column in all cases need to be such that the "Other only" figure is the exact midpoint between the corresponding "Cath. Only" (= "bottom half of other") and "Estimate for Top 50% ..." (= "top half of other") figures. For example, in row 2 of Table 3, the "Other only" figure of $1,398 is exactly mid-way between the Cath. Only figure of $1,181 and the "Estimate for Top 50% …" figure of $1,614 (noting rounding off to the nearest whole number).

Tables 3 and 4 now follow.

Table 3: SES Levels of Families with Children at Just Government, Just Catholic and Just "Other" Schools – in Terms of Family Income, Structure and Employment Status, Housing Tenure and Home Loan Levels, and Parental Education Levels

Row No.	Measure, as at 2001 Census time, for Families with Children in Schools of Types Shown in the Columns to the Right Here (% = percentage, ave. = average)	Govt. only	Cath. only	Other only	Ave. for all schools	Estimate for Top 50% of Other schools
1	**FAMILY INCOME MEASURES**					
2	Median family income per week ($)	894	1,181	1,398	996	1,614
3	Median family income per year ($)	46,668	61,634	72,925	51,956	84,216
4	% of families with nil or negative ave. weekly incomes	0.50	0.42	0.91	0.53	1.39
5	% of families with ave. incomes of $119 per week (i.e. $6,209 per year) or less	0.86	0.72	1.33	0.88	1.94
6	% of families with ave. incomes of $499 per week (i.e. $26,036 per year) or less	23.08	12.59	11.78	19.39	10.96
7	% of families with ave. incomes of $999 per week (i.e. $52,125 per year) or less	56.84	39.63	33.17	50.23	26.71
8	% of families with ave. incomes of $500 per week (i.e. $26,089 per year) or more	76.92	87.41	88.22	80.61	89.04
9	% of families with ave. incomes of $1000 per week (i.e. $52,177 per year) or more	43.16	60.37	66.83	49.77	73.29
10	% of families with ave. incomes of $1200 per week (i.e. $62,613 per year) or more	32.70	48.96	57.54	39.25	66.13
11	% of families with ave. incomes of $1500 per week (i.e. $78,266 per year) or more	20.27	33.49	46.12	26.30	58.76
12	% of families with ave. incomes of $2000 per week (i.e. $104,354 per year) or more	8.04	14.88	26.36	11.76	37.84
13	**FAMILY STATUS AND EMPLOYMENT MEASURES**					
14	% of two parent families with children in which both parents are employed full time	15.15	21.71	23.97	17.65	26.22
15	% of two parent families with children in which neither parent is employed	7.73	4.36	3.94	6.55	3.53
16	% of families with just one parent	26.59	16.93	16.83	23.21	16.74
17	% of one parent families in which parent not employed	13.81	5.91	6.03	11.14	6.14
18	**HOUSING TENURE MEASURES**					
19	% of families living in homes they fully own	24.46	34.33	38.02	28.21	41.70
20	% of families living in homes they are purchasing (i.e. which they own but haven't fully paid the loan off yet)	41.49	47.18	42.60	42.98	38.03
21	% of families living in homes they are renting	30.92	15.44	16.45	25.73	17.45
22	**HOUSING LOAN MEASURES**					
23	Median family housing loans per month ($)	843	956	1,050	890	1,144
24	Median family housing loans per year ($)	10,121	11,475	12,604	10,678	13,734
25	% of families with housing loans of $999 per month (i.e. $11,988 per year) or less	64.27	53.81	46.75	59.71	39.69
26	% of families with housing loans of $1000 per month (i.e. $12,000 per year) or more	35.73	46.19	53.25	40.29	60.31
27	% of families with housing loans of $2000 per month (i.e. $24,000 per year) or more	5.66	8.74	16.49	7.70	24.24
28	% of families with housing loans of $4000 per month (i.e. $48,000 per year) or more	0.86	1.28	3.23	1.24	5.18
29	**PARENTAL SCHOOL EDUCATION MEASURES**					
30	% of families in which no parent had gone to school	1.01	0.75	0.41	0.88	0.07
31	% of families in which no parent had completed beyond Year 8 at school (including families in which no parent had gone to school)	6.09	4.40	2.55	5.25	0.70
32	% of families in which at least one parent has completed Year 12 or equivalent	36.48	47.18	61.79	42.13	76.40
33	**PARENTAL POST SCHOOL QUALIFICATION MEASURES**					
34	% of families in which at least one parent has completed a Trade Certificate or higher	25.27	31.90	45.99	29.33	60.08
35	% of families in which at least one parent has completed a Bachelor Degree or higher	7.63	10.22	21.32	9.94	32.43
36	% of families in which at least one parent has completed a Postgraduate Degree	0.72	0.66	2.29	0.90	3.91

Table 4: SES Levels of Families with Children at Just Government, Just Catholic and Just "Other" Schools – in Terms of Family Income, Structure and Employment Status, Housing Tenure and Home Loan Levels, and Parental Education Levels – Relative to Government School Average = 100.0

Row No.	Measure, as at 2001 Census time, for Families with Children in Schools of Types Shown in the Columns to the Right Here (% = percentage, ave. = average)	Govt. only	Cath. only	Other only	Ave. for all schools	Estimate for Top 50% of Other schools
1	**FAMILY INCOME MEASURES**					
2	Median family income per week ($)	100.0	132.1	156.3	111.3	180.5
3	Median family income per year ($)	100.0	132.1	156.3	111.3	180.5
4	% of families with nil or negative ave. weekly incomes	100.0	85.6	182.7	106.1	279.8
5	% of families with ave. incomes of $119 per week (i.e. $6,209 per year) or less	100.0	83.9	154.3	102.4	224.7
6	% of families with ave. incomes of $499 per week (i.e. $26,036 per year) or less	100.0	54.6	51.0	84.0	47.5
7	% of families with ave. incomes of $999 per week (i.e. $52,125 per year) or less	100.0	69.7	58.3	88.4	47.0
8	% of families with ave. incomes of $500 per week (i.e. $26,089 per year) or more	100.0	113.6	114.7	104.8	115.8
9	% of families with ave. incomes of $1000 per week (i.e. $52,177 per year) or more	100.0	139.9	154.9	115.3	169.8
10	% of families with ave. incomes of $1200 per week (i.e. $62,613 per year) or more	100.0	149.7	176.0	120.1	202.3
11	% of families with ave. incomes of $1500 per week (i.e. $78,266 per year) or more	100.0	165.2	227.6	129.8	289.9
12	% of families with ave. incomes of $2000 per week (i.e. $104,354 per year) or more	100.0	185.2	328.1	146.4	470.9
13	**FAMILY STATUS AND EMPLOYMENT MEASURES**					
14	% of two parent families with children in which both parents are employed full time	100.0	143.3	158.2	116.5	173.1
15	% of two parent families with children in which neither parent is employed	100.0	56.4	51.0	84.7	45.6
16	% of families with just one parent	100.0	63.7	63.3	87.3	63.0
17	% of one parent families in which parent not employed	100.0	42.8	43.6	80.7	44.5
18	**HOUSING TENURE MEASURES**					
19	% of families living in homes they fully own	100.0	140.3	155.4	115.3	170.5
20	% of families living in homes they are purchasing (i.e. which they own but haven't fully paid the loan off yet)	100.0	113.7	102.7	103.6	91.7
21	% of families living in homes they are renting	100.0	49.9	53.2	83.2	56.4
22	**HOUSING LOAN MEASURES**					
23	Median family housing loans per month ($)	100.0	113.4	124.5	105.5	135.7
24	Median family housing loans per year ($)	100.0	113.4	124.5	105.5	135.7
25	% of families with housing loans of $999 per month (i.e. $11,988 per year) or less	100.0	83.7	72.7	92.9	61.8
26	% of families with housing loans of $1000 per month (i.e. $12,000 per year) or more	100.0	129.3	149.0	112.8	168.8
27	% of families with housing loans of $2000 per month (i.e. $24,000 per year) or more	100.0	154.3	291.3	136.0	428.3
28	% of families with housing loans of $4000 per month (i.e. $48,000 per year) or more	100.0	149.2	375.4	144.4	601.5
29	**PARENTAL SCHOOL EDUCATION MEASURES**					
30	% of families in which no parent had gone to school	100.0	73.5	40.3	87.1	7.1
31	% of families in which no parent had completed beyond Year 8 at school (including families in which no parent had gone to school)	100.0	72.3	41.9	86.1	11.5
32	% of families in which at least one parent has completed Year 12 or equivalent	100.0	129.3	169.4	115.5	209.4
33	**PARENTAL POST SCHOOL QUALIFICATION MEASURES**					
34	% of families in which at least one parent has completed a Trade Certificate or higher	100.0	126.2	182.0	116.0	237.7
35	% of families in which at least one parent has completed a Bachelor Degree or higher	100.0	134.0	279.6	130.3	425.2
36	% of families in which at least one parent has completed a Postgraduate Degree	100.0	91.6	316.6	124.6	541.6

Discussion

As was discussed previously, the general pattern here is that "government school only" families have ***by far*** the lowest values of measures reflecting high SES (see rows 1-2 and 9-12 of the tables for example), and ***by far*** the highest values of measures reflecting "low SES" (see rows 4-7, 15-17, 21, 25, 30 and 31).

Table 4 is probably the easiest table to clearly interpret, of the four tables presented above, and its contents will now be discussed for each category of measure presented. In respect of all measures here, the main comparison is that between the figures derived directly from 2001 Census data in the "Govt. only", "Cath. Only" and "Other only" columns, keeping in mind that the figures in the rightmost "Estimate for Top 50% of Other schools" columns (in Tables 3 and 4) are unsubstantiated estimates (though bound to be sound estimates for ***some*** percentage of "other" schools, if not necessarily the "top 50%" exactly, for each of the measures in each row of the tables).

Table 4 shows that "other" school families typically, and on average, have far higher incomes than catholic school families, who in turn have significantly higher incomes than government school families – with rows 4 and 5 providing the single curious exceptions, as discussed previously.

The clear overall pattern for family incomes is repeated for the family status and employment measures. Row 14 of all four tables presented thus far show that "other" school families have the highest proportion of two parent families in which both parents work full time, closely followed by catholic school families, with government school families again by far the lowest on this measure. Rows 15-17 also show that the proportions of government school families which are single parent families, or are families without an employed parent, are approximately twice that of catholic and other school families.

The housing tenure pattern is remarkably similar to that for family status and employment. The row 19 figures for home ownership are almost identical to those in row 14, whilst row 21 very closely aligns with rows 15-17. Housing loan figures are similar again – see especially rows 23, 24 and 26-28.

Measures relating to parental educational qualifications again follow the general trend here. Row 30 shows that the percentage of families in which no parent had gone to school is by far the highest among government school families, and by far the lowest among "other" school families, with catholic school families again occupying an intermediate position. An almost identical pattern is observed in row 31 for the percentage of families in which no parent had completed beyond Year 8 at school (including families in which no parent had gone to school). But for measures reflecting higher SES levels, as presented in rows 32 and 34-36, the "other" school figures are by far the highest, and the government school figures by far the lowest, except for row 36 – which shows that the percentage of families in which at least one parent has a postgraduate degree is slightly higher among government school families than for catholic school families.

To better clarify the distinction between the higher SES measures and lower SES measures presented in the preceding tables, Table 4 is re-produced in two separate tables as follows – Table 4L for the lower SES measures presented in rows 4-7, 15-17, 21, 25, 30 and 31, and Table 4H for the higher SES measures presented in other rows:

Table 4L: SES Levels of Families with Children at Just Government, Just Catholic and Just "Other" Schools – in Terms of Family Income, Structure and Employment Status, Housing Tenure and Home Loan Levels, and Parental Education Levels – Measures Indicating Lower SES Levels – Relative to Government School Average = 100.0

Row No.	Measure, as at 2001 Census time, for Families with Children in Schools of Types Shown in the Columns to the Right Here (% = percentage, ave. = average)	Govt. only	Cath. only	Other only	Ave. for all schools	Estimate for Top 50% of Other schools
1	**FAMILY INCOME MEASURES**					
4	% of families with nil or negative ave. weekly incomes	100.0	85.6	182.7	106.1	279.8
5	% of families with ave. incomes of $119 per week (i.e. $6,209 per year) or less	100.0	83.9	154.3	102.4	224.7
6	% of families with ave. incomes of $499 per week (i.e. $26,036 per year) or less	100.0	54.6	51.0	84.0	47.5
7	% of families with ave. incomes of $999 per week (i.e. $52,125 per year) or less	100.0	69.7	58.3	88.4	47.0
13	**FAMILY STATUS AND EMPLOYMENT MEASURES**					
15	% of two parent families with children in which neither parent is employed	100.0	56.4	51.0	84.7	45.6
16	% of families with just one parent	100.0	63.7	63.3	87.3	63.0
17	% of one parent families in which parent not employed	100.0	42.8	43.6	80.7	44.5
18	**HOUSING TENURE MEASURES**					
21	% of families living in homes they are renting	100.0	49.9	53.2	83.2	56.4
22	**HOUSING LOAN MEASURES**					
25	% of families with housing loans of $999 per month (i.e. $11,988 per year) or less	100.0	83.7	72.7	92.9	61.8
29	**PARENTAL SCHOOL EDUCATION MEASURES**					
30	% of families in which no parent had gone to school	100.0	73.5	40.3	87.1	7.1
31	% of families in which no parent had completed beyond Year 8 at school (including families in which no parent had gone to school)	100.0	72.3	41.9	86.1	11.5

With all 11 measures presented in Table 4L above, government school figures comfortably exceed the corresponding catholic school figure. Government school figures also generally very comfortably exceed "other" school figures, with the measures in rows 4 and 5 being the only exceptions here, as has already been noted.

The difference between the catholic and "other" school measures is often quite minimal here, though it is noteworthy that among the nine measures presented in rows 6-7, 15-17, 21, 25 and 30-31, the "other" schools figure is lower than the catholic school figure in seven of these nine measures – including the two family income measures (rows 6 and 7), the home loan measure (row 25) and the parental school education measures (rows 30 and 31).

Table 4H now presents the rows from Table 4 which are indicative of higher SES levels.

Table 4H: SES Levels of Families with Children at Just Government, Just Catholic and Just "Other" Schools – in Terms of Family Income, Structure and Employment Status, Housing Tenure and Home Loan Levels, and Parental Education Levels – Measures Indicating Higher SES Levels – Relative to Government School Average = 100.0

Row No.	Measure, as at 2001 Census time, for Families with Children in Schools of Types Shown in the Columns to the Right Here (% = percentage, ave. = average)	Govt. only	Cath. only	Other only	Ave. for all schools	Estimate for Top 50% of Other schools
1	**FAMILY INCOME MEASURES**					
2	Median family income per week ($)	100.0	132.1	156.3	111.3	180.5
3	Median family income per year ($)	100.0	132.1	156.3	111.3	180.5
8	% of families with ave. incomes of $500 per week (i.e. $26,089 per year) or more	100.0	113.6	114.7	104.8	115.8
9	% of families with ave. incomes of $1000 per week (i.e. $52,177 per year) or more	100.0	139.9	154.9	115.3	169.8
10	% of families with ave. incomes of $1200 per week (i.e. $62,613 per year) or more	100.0	149.7	176.0	120.1	202.3
11	% of families with ave. incomes of $1500 per week (i.e. $78,266 per year) or more	100.0	165.2	227.6	129.8	289.9
12	% of families with ave. incomes of $2000 per week (i.e. $104,354 per year) or more	100.0	185.2	328.1	146.4	470.9
13	**FAMILY STATUS AND EMPLOYMENT MEASURES**					
14	% of two parent families with children in which both parents are employed full time	100.0	143.3	158.2	116.5	173.1
18	**HOUSING TENURE MEASURES**					
19	% of families living in homes they fully own	100.0	140.3	155.4	115.3	170.5
20	% of families living in homes they are purchasing (i.e. which they own but haven't fully paid the loan off yet)	100.0	113.7	102.7	103.6	91.7
22	**HOUSING LOAN MEASURES**					
23	Median family housing loans per month ($)	100.0	113.4	124.5	105.5	135.7
24	Median family housing loans per year ($)	100.0	113.4	124.5	105.5	135.7
26	% of families with housing loans of $1000 per month (i.e. $12,000 per year) or more	100.0	129.3	149.0	112.8	168.8
27	% of families with housing loans of $2000 per month (i.e. $24,000 per year) or more	100.0	154.3	291.3	136.0	428.3
28	% of families with housing loans of $4000 per month (i.e. $48,000 per year) or more	100.0	149.2	375.4	144.4	601.5
29	**PARENTAL SCHOOL EDUCATION MEASURES**					
32	% of families in which at least one parent has completed Year 12 or equivalent	100.0	129.3	169.4	115.5	209.4
33	**PARENTAL POST SCHOOL QUALIFICATION MEASURES**					
34	% of families in which at least one parent has completed a Trade Certificate or higher	100.0	126.2	182.0	116.0	237.7
35	% of families in which at least one parent has completed a Bachelor Degree or higher	100.0	134.0	279.6	130.3	425.2
36	% of families in which at least one parent has completed a Postgraduate Degree	100.0	91.6	316.6	124.6	541.6

In all 19 measures presented in Table 4H, government school figures are less than the corresponding "other" school figures. And in all measures here besides that of row 36, government school figures are also less than the corresponding catholic school figures.

When one works down Table 4H from row 8 to row 12, one row at a time, it is clear that "other" and catholic school measures exceed government school measures by increasing extents as the measures refer to increasingly high SES levels – in this case on the basis of family income. A similar trend is observed moving down from row 26 to row 28 for housing loans, and from row 34 to 36 for parental post school qualifications, though the catholic school figures in rows 28 and 36 buck the trend here – especially those in row 36. Significantly, these trends demonstrate that families are increasingly likely to have children in "other" category schools as their SES levels increase towards extremely high SES levels.

The figures in row 20 display a different pattern to that evident in the other rows in Table 4H, though this row does not of itself provide a very specific indication of SES. The main

purpose of row 20 here is to provide an indication as to the proportions of families for which the housing loan figures in rows 23-28 are applicable.

Improved SES Scores

The comparative measures presented in the tables herein provide accurate indications as to what competent, honest, even-handed SES scores should look like – at least in terms of averages across catholic and "other" schools relative to government school average benchmarks. The tables which are normalised relative to government school averages, set to 100.0, most directly indicate the magnitudes of competent SES scores for schools here – that is, Tables 2, 4, 4L and 4H, though Tables 4, 4L and 4H only will be discussed henceforth in order to clearly distinguish between the three separate school sector categories under comparison here.

The family income measures in rows 2 and 3 of Tables 4 and 4H are arguably the clearest and most comprehensive indicators of SES of all those provided here, in that they reflect averages of ***all*** families in each respective school category. Measures in many rows here are not fully comprehensive measures, because they only represent a fraction of all families in each school sector category. In row 32, for example, the measure overlooks those families in which no parent has completed Year 12 or equivalent. Less than fully comprehensive measures can still, however, be highly significant indicators of SES levels. Furthermore, it can be seen that such figures in rows 9, 14, 19, 23-24, 26, 32 and 34, for example, show a remarkably similar pattern to that evident in rows 2 and 3. To emphasise this regularity of pattern, and high correlation among measures, Table 4P (P for "pattern") provides just those measures in rows 2-3, 9, 14, 19, 23-24, 26, 32 and 34 of Table 4H, as follows:

Table 4P: Selected SES Levels of Families with Children at Just Government, Just Catholic and Just "Other" Schools – in Terms of Family Income, Structure and Employment Status, Housing Tenure and Home Loan Levels, and Parental Education Levels – Measures Indicating Higher SES Levels – Relative to Government School Average = 100.0

Row No.	Measure, as at 2001 Census time, for Families with Children in Schools of Types Shown in the Columns to the Right Here (% = percentage, ave. = average)	Govt. only	Cath. only	Other only	Ave. for all schools	Estimate for Top 50% of Other schools
1	**FAMILY INCOME MEASURES**					
2	Median family income per week ($)	100.0	132.1	156.3	111.3	180.5
3	Median family income per year ($)	100.0	132.1	156.3	111.3	180.5
9	% of families with ave. incomes of $1000 per week (i.e. $52,177 per year) or more	100.0	139.9	154.9	115.3	169.8
13	**FAMILY STATUS AND EMPLOYMENT MEASURES**					
14	% of two parent families with children in which both parents are employed full time	100.0	143.3	158.2	116.5	173.1
18	**HOUSING TENURE MEASURES**					
19	% of families living in homes they fully own	100.0	140.3	155.4	115.3	170.5
22	**HOUSING LOAN MEASURES**					
23	Median family housing loans per month ($)	100.0	113.4	124.5	105.5	135.7
24	Median family housing loans per year ($)	100.0	113.4	124.5	105.5	135.7
26	% of families with housing loans of $1000 per month (i.e. $12,000 per year) or more	100.0	129.3	149.0	112.8	168.8
29	**PARENTAL SCHOOL EDUCATION MEASURES**					
32	% of families in which at least one parent has completed Year 12 or equivalent	100.0	129.3	169.4	115.5	209.4
33	**PARENTAL POST SCHOOL QUALIFICATION MEASURES**					
34	% of families in which at least one parent has completed a Trade Certificate or higher	100.0	126.2	182.0	116.0	237.7

Table 4P and other earlier tables indicate that if government school averages are used as a benchmark – competent, even-handed SES scores should average out to about 130 or so for catholic schools and about 150 or so for "other" non-government schools. These estimates are vastly higher than the SES scores that have actually been assigned to non-government schools for the purpose of determining the levels of funding they receive from the federal government. Systemic catholic schools have been assigned SES scores of 96 throughout Australia, except for the Australian Capital Territory where scores of 100 have been assigned. Independent schools have been assigned SES scores ranging from 57 to 133, averaging out to approximately 102.9. [2] These SES scores assigned to systemic catholic schools and independent schools alike are clearly much too low to provide meaningful indicators of SES levels relative to government school average SES levels.

The absurdly low scores presently in place for Australian non-government schools arise due to several methodological deficiencies, perhaps the most prominent of which is the simple fact that SES scores for independent schools are based largely on families ***other than*** the actual families of the actual children at actual schools. Trinity Grammar in Sydney, which charged annual tuition fees of over $14,000 in 2003, is one very high fee school which has received considerable media attention in recent times, on account of being due to receive $5 million in federal government funding in 2004 on the basis of its assessed SES score of 112. [3]

To be competent, SES scores for particular schools should obviously reflect SES levels of these actual schools themselves, and the actual families of the actual students at these actual schools. But the actual families of the actual students at Trinity Grammar, for example, only contribute a very small fraction towards Trinity's SES score of 112. This 112 arises largely on account of the SES levels of the many other people who, yes, live in the same Census collection districts as families with kids at Trinity, but who are typically, and on average, of vastly lower SES than Trinity families, and whose school children – if they have any – attend public or systemic catholic schools. The system of determining SES scores for independent schools is squarely within the "too absurd to be true" category, and is invariably likely to generate scores which systematically underestimate the true SES levels of schools – with the extent of underestimation likely to be the greatest for the schools whose children come from the families with the highest substantive SES levels – and in particular, very high fee schools. This is apparently why the public outcry – even from within non-government school circles – has been the greatest with respect to the many millions of dollars in federal government funding that has gone to the highest fee private schools whose students are typically, and on average, from families of extremely high SES. [4]

When comparing the government, catholic and "other" sector figures in the tables here, it is also important to recognise the presence of significant intra-sector variations, especially in respect of schools at the higher SES ends of the three school sector categories here.

Public schools operate in geographical locations ranging from Australia's highest SES suburbs in Sydney and Melbourne to the lowest SES areas in Australia – which are generally found on urban outskirts and rural areas. Students at public schools that are selective or situated in wealthy or otherwise advantaged locations are likely to be in families whose SES levels approach or even surpass those of many families with children at catholic and "other" schools.

Whilst the bulk of catholic schools in Australia are systemic or parish schools with fees typically in the order of $1000 to $2000 per child per year, a significant minority of catholic schools charge fees around the $10,000 per child per year mark – approaching the fee levels of the most expensive schools in the country. [5] Most expensive catholic schools are non-systemic ones, but several Melbourne catholic schools charging annual tuition fees of around

$10,000, or more, are actually systemic catholic schools. [6] It is clear, then, that a significant minority of catholic schools – systemic and non-systemic alike – are more or less as advantaged, in terms of SES levels, as the wealthiest and most advantaged among "other" non-government schools.

Whilst non-systemic catholic schools are generally classified as "independent schools", such schools are likely to fall within the catholic school category here, given how the 2001 Census questions dealt with these school sector distinctions. So schools classified as "other" here will in general be non-catholic schools generally classified as independent schools. Such non-catholic independent schools range from very low fee Aboriginal community schools – which serve students from very low SES backgrounds, through many other mainly (thought not always) religious schools charging varying fee levels, up to 100 or so independent schools which charge annual tuition fees in excess of $10,000 per child (based on 2003 figures). These 100 or so very high fee schools make up approximately 11% of Australia's 885 "other" (non-catholic) independent schools. [7] And the SES levels of families with children in these very high fee schools ($10,000 or higher) are obviously generally significantly higher than the average SES levels of families across ***all*** "other" category schools – many of which charge fees below $5000 per child per year (see note 5 again, which provides that independent school fees averaged $5267 per student in 2001). For example, row 32 of Table 3 shows that 61.79% of families with children in "other" schools have at least one parent who has completed Year 12 or equivalent, but among schools charging fees of $10,000 or more, this 61.79% figure might well be 95% or even higher. As has been stated previously, the estimates in the rightmost columns in Tables 3 through to 4P above, whilst not precise, are certainly meaningful for ***some*** fractions of "other" category schools (though not necessarily exactly 50%, and probably a different fraction for the different measures in the different rows), but even these figures would almost certainly still significantly underestimate the SES levels of most or all "other" category schools – and indeed some catholic schools as well – which charge annual fees of $10,000 or more.

The empirical evidence presented herein suggests that SES scores for all non-government schools charging fees of $10,000 or more (whether systemic catholic, non-systemic catholic, or non-catholic) would need to be approximately 200, or even more than 200, in order to competently and even-handedly refect the true SES levels of families with children at these very high fee schools. As things presently stand, the 100 or so independent schools which charged annual tuition fees of $10,000 or more in 2003 had SES scores ranging from 103 to 133, with an average of approximately 118. [8] As the data presented herein demonstrates, SES scores of just 103 to 133, averaging out to 118, are clearly far too low to be competent and even-handed indictors even for catholic schools, let alone "other" category schools on average, and these figures are not possibly anywhere near as high as they'd need to be in order to accurately and honestly reflect real SES levels of the most expensive 11% of independent schools in Australia which charged annual tuition fees of $10,000 or more in 2003.

Conclusions

Whereas systemic catholic schools presently receive federal funding on the basis of assessed, or agreed, SES scores of 96 throughout Australia except for the ACT, and 100 in the ACT, the substantive comparisons presented herein indicate that competent, even-handed and honest SES scores for systemic catholic schools ought to be in the vicinity of 120 to 130 or so on average, and probably about 200 or more for those systemic catholic schools which charge annual tuition fees of $10,000 or so or more (such as those listed in note 6 following). SES

scores of 200 or so or more would also appear to accurately describe non-systemic catholic schools charging annual fees of $10,000 or more.

And, whereas Australia's 885 or so non-catholic independent schools presently receive federal funding on the basis of assessed SES scores ranging between 57 and 133, averaging approximately 103, the substantive comparisons here indicate that competent, even-handed and honest SES scores for these non-catholic independent schools ought to be in the vicinity of 150 or so on average, and probably about 200 or more for the 100 or so non-catholic independent schools which charge annual tuition fees of $10,000 or so or more.

If competent SES scores were applied to Australia's non-government schools under otherwise unchanged federal government funding arrangements, most or all non-government schools would receive significantly less than their present levels of federal government funding. Current funding arrangements are at best an exhibition of incompetent public administration and wasteful economic mismanagement, and, at worst, nothing short of fraudulent on the part of those schools and others who have lobbied hard and succeeded in gaining significant financial advantage – especially for the wealthiest highest fee schools – on the basis of SES scores which are low to the point of being manifestly false, misleading and deceptive.

Notes and Sources

1. All details of derivations of the comparative measures provided herein are available from the author ...

2. These figures of 57, 133 and 102.9 are shown on pages 5 (the 57 and 133) and 1 (the 102.9) of a graphs compilation found at the (Commonwealth) Department of Education, Science and Training (DEST) website at http://www.dest.gov.au/schools/ses/graphs.PDF.

3. This $5 million grant to Trinity Grammar has been reported in several newspaper articles including: 'Taxes help elite school to rebuild', by Linda Silmalis, on page 7 of the Sunday Telegraph, dated 4 January 2004; and 'School fees up but drift gathers pace', by Linda Doherty, on page 1 of the Sydney Morning Herald, dated 5 January 2004.

4. See for example, the article 'Why the new funding system for schools is a scandal', by Tony Keenan, the secretary of the Victorian Independent Education Union, which appeared in the Melbourne Age on 16 June 2003 (see at http://www.theage.com.au/articles/2003/06/15/1055615673363.html), which includes the following extract:

> Under the old formula, the wealthiest schools received the least amount of money, the poorest, the most. Under the new formula, each school receives funding on a per student basis, depending on their SES score. Unlike other forms of means testing, the SES model does not assess the socioeconomic status of individual families, rather the socio-economic status of various geographic census areas.
>
> Catholic schools stayed outside the SES system and essentially have not received any new funding increases under this new model, other than cost of living increases.

The result is that the new funding model has delivered significant funding increases to well-resourced non-government schools but little or no increase to the poorer schools.

5. Table 26 of Appendix 1 (the Statistical Annex) to the 'National Report on Schooling in Australia 2001 (found online at http://online.curriculum.edu.au/anr2001/pdfs/2001_Statswithlinks_15_9_03.pdf) shows that systemic catholic schools received an average of $1421 in fees per student, compared with $5267 for independent schools.

6. For example, the following fees for 2003 have been obtained at the Melbourne's Child Schools Directory at http://www.melbourneschild.com.au/melbourneschild/alpha_schools_directory.asp:
Genazzano FCJ College, Kew, Girls only, Yr 12 fees $10,392;
Loreto Mandeville Hall, Toorak, Girls only, Yr 12 fees $11,010;
Sacre Coeur, Glen Iris, Catholic Independent Girls School, Yr 12 fees $10,056; and
St Kevin's College, Toorak, Catholic Independent Boys School, Yr 12 fees $9550. All four of these schools have been assigned SES levels of 96 – as is the case for all systemic catholic schools Australia-wide, except those in the ACT where the systemic catholic schools are assigned SES scores of 100.

7. According to Table 1 on page 7 of ABS Cat. 4221.0, titled 'Schools Australia: 2002', there were 966 independent schools in Australia in 2002. An Independent Schools Council of Australia (ISCA) publication titled 'Independent Schooling in Australia 2003' (edited by Caroline Taylor-Steele, published 2003), refers to this 966 figure, on pages 1 and 17, and also states that this 966 includes 81 catholic independent schools. It hence follows that there were some 885 non-catholic independent schools in Australia in 2002 (i.e. 966 minus 81). Finally, the author has confirmed that approximately 100 independent schools charged annual tuition fees of $10,000 per student or more in 2003, and 100 is 11.3% of 885.

8. These figures of 103, 133 and 118 are obtained from the SES scores as published in the document titled 'Funding for Non-Government Schools 2001-2004' (at http://www.dest.gov.au/schools/ses/table.pdf), and school fee details compiled by the author.

Appendix 2

Comparison of the socio-economic status of families with children in government, catholic and "other" (i.e. non-catholic non-government) schools

(in progress working paper)

by Mark Drummond

as at 22 November 2003

Introduction

The SES (socio-economic status) model of funding for independent schools relies upon accurate SES indices for schools which receive funding under this model. Unfortunately, the SES indices used to describe schools have been less than competent and equitable because the data used to establish SES indices for independent schools has been largely unrelated to the actual families of the actual students at these individual schools. This paper, like many others before it, will explain how the SES indices developed for independent schools are generally much lower than they should be, and how this results in hundreds of millions of dollars each year going to schools which have no legitimate, substantive entitlement to the funds they are receiving.

The 2001 Census was the first which has collected data which distinguishes between government, catholic and "other" (non-catholic non-government) schools. This 2001 Census data is briefly described and then applied herein to develop some SES indices – at the national and state and territory levels, by school sector – which reflect the real level of SES advantage enjoyed, typically and on average, by independent schools and their students.

The SES Model – Funding Formulas and Flaws

The federal government's SES model for funding government schools awards independent private schools (i.e. non-government schools other than systemic/parish catholic schools) on the basis of their assessed socio-economic status (SES) index. The SES index of a school determines the amount of finding the school receives as a percentage of Average Government School Recurrent Costs (AGSRC) benchmarks, such that schools with an SES index of 130 or more receive the minimum level of 13.7% of AGSRC, whilst schools with an SES index of 85 or less receive the maximum level of 70.0% of AGSRC. In 2003, AGSRC levels were set at $7469 per secondary student. So, under the SES model, independent secondary schools have all received between $1023 (i.e. 13.7 % of $7469) and $5228 (70.0%) per student in 2003. For schools with SES scores between 85 and 130, the % of AGSRC assigned to non-government schools is:

$$\%\text{AGSRC} = \frac{13.7-70}{130-85}\times(SES-85)+70 \qquad \ldots[1]$$

which reduces to

$$\%\text{AGSRC} = 176.3444-1.25111\times(SES) \qquad \ldots[2]$$

So, for 2003, with AGSRC levels were set at $7469 per secondary student, funding per secondary student (FPSS) can be expressed as:

$$FPSS = \%AGSRC \times \$7469$$

so

$$FPSS = \$7469 \times [(176.3444 - 1.25111 \times (SES)] \quad \ldots[3]$$

Equations [1] –[3] above describe the sliding scale used to determine funding levels.

So all independent schools received at least the minimum allocation of $1023 (i.e. 13.7 % of $7469) per student in 2003. Many people would no doubt consider that such funding levels are grossly excessive when full and proper account is taken of the fee levels and exclusionary policies of many independent schools. Why, for example, should high SES schools, which charge fees in excess of AGSRC ($7469 per secondary student in 2003), be given very significant levels of funding ($1023 per student per year or more) which enable such schools to extend on the immense financial advantage that they attract to themselves on the basis of high fees and other sources of income?

The 13.7% and 70.0% figures appearing in [1] above reflect political value judgements, and many would think that the 13.7% ought to be reduced to zero, but, notwithstanding such concerns, the SES model is clearly based on a substantially sound needs-based rationale, with schools of higher SES should receive less funding, and vice-versa. But, in order to be competent and equitable, the SES funding model relies upon competent and equitable SES indexes for independent schools. It is here that the implementation of the whole system has been incompetent to the point of being utterly farcical. The SES indices that have been calculated that have only to the most superficial level reflected the true SES level of the children at particular schools and their families, and, as a result, ridiculous SES indices have been determined for most independent schools.

One would think, for example, that a great many independent schools – especially the very expensive ones – would have SES indices well exceeding 130. But the 98 independent schools which (it has been confirmed by the author) charged $10,000 or more in fees in 2003 have an average SES index of just 117.5; 33 (just over one-third) of these 98 have SES indices of less than 115 (and hence receive over $1400 per student per year); 18 have an index of less than 110 (so receive over $1900 per student per year), and five are below 105 (so receive over $2400 per student per year). Kings School in Parramatta, for example, has been assigned an SES score of just 116, and has attracted a massive funding boost because of this. If it's SES score was 130 or more – as it obviously should be (it's fees are $16,000 per year) – then Kings would receive about $1300 less per student per year than it does on the basis of its SES index of 116.

These figures should ring alarm bells – an SES index of 105 or so should reflect a school of just slightly above average SES – which is obviously never even close to being the case among schools which charges fees of over $10,000 a year.

So why are the SES scores of independent schools so counter-intuitive? Why, in particular, is it that many of the most expensive independent schools have SES indices which are so much lower than their fees and common sense would indicate beyond any real doubt?

The main problem with the SES index determination process is not the mathematical process itself – that is quite fine. The problem, rather, is that the data used to calculate a given

school's SES index are the SES levels not just of the families sending their kids to that particular independent school, but of *all families* resident in the same Census collection districts as the families with children at that particular school. So Kings and other high fee schools have ended up with ridiculously low and unrepresentative SES indices – and hence massive funding boosts – in very large part because of the SES levels of families who, yes, are resident within the same Census collection districts as Kings boys' families *but who do not attend Kings nor have anything at all to do with Kings!* Perhaps 1 to 10 percent of the data used to obtain Kings' SES index is based on the actual families of the actual boys at Kings themselves, but the remaining 90 to 99 percent or so of the data used to determine Kings' SES index is data for families who have nothing to do with Kings at all.
rather on *all families* in census collection districts where families of . So the SES index for schools like Kings might reflect the actual families with boys at Kings in a weighting of 1 to 10 percent or so,

So Kings and other high fee schools are receiving millions of dollars each year largely because of the generally modest level of wealth of families sending their kids to *government schools* – who just happen to live in the same census collection district as families with boys in Kings. This is a classic case of "garbage in, garbage out" ...
...

Comparisons Possible Using 2001 Census Data and Other Data Sources

The 2001 Census has been the first in which families and households with children at school(s) were asked to state whether their children attended "government", "catholic" or "other non-government" schools. Before 2001, people were only asked to distinguish between government and non-government schools, without any further distinction between catholic and non-catholic schools.

The 2001 Census also, as previously, sought data on incomes and education levels of people in families and households. So the Census has, in effect, generated a giant database which can be thought of as a giant spreadsheet or Table, with each individual, household or family occupying one record, or row, in the Table, and each field/category of data occupying the columns. So for each family, there'd be a column providing, among many other things, family income, highest educational qualification of a family member etc., as well as the type(s) of school(s) attended by kids.

So the 2001 Census has provided data that, when cross-matched within the Census database, enables the determination of average income levels of families with kids in government schools, catholic schools and other (non-government) schools. At the time of 2001 Census, 66.0% of families had children in government schools only, 18.2% had children in catholic schools only, and 10.5% had children in "other" schools only, making up a total of 94.7% of all families with children in schools. The remaining 5.3% or so of families have children in more than one type of school (for example the 2.7% with children in government and catholic schools), but the vast majority (94.7%) of families have children in just one type of school only, and the data for these families enables excellent comparisons of the average socioeconomic status levels of families with children in the various school sectors.

Achieving More Accurate SES Indices

Anyhow, returning now to the SES scores themselves. If the SES model is essentially sound and the major problem lies in gross inaccuracy of the actual SES indices for schools, how, then, can better SES indices be established?

The majority of Australian families with children at school already receive at least some form of Centrelink benefit such as Family Tax Benefits and Child Care Benefits, so the onerous task of submitting forms with precise details of wealth, income and other information is a regular part of life for the majority of Australian families with children in schools.

The following Table appears at http://www.familyassist.gov.au/Internet/FAO/FAO1.nsf/Payments/FTBA.html#COP, showing the "income limit[s] at which Family Tax Benefit stops being paid ($pa)":

Table 1 - Family Tax Benefit Part A Entitlement Limits

	No. children 18-24 years			
No. children 0-17 yrs	Nil	One	Two	Three
Nil		$86,956	$95,144	$103,332
One	$85,702	$93,891	$102,079	$111,046
Two	$92,637	$100,826	$109,792	$118,759
Three	$99,572	$108,539	$117,506	$126,473

As Table 1 above shows, even quite high income families are entitled to the Family Tax Benefit Part A, among other Centrelink benefits, but, in order to obtain such benefits, families need to submit their Centrelink forms with accurate income and wealth levels. So Centrelink already holds vast amounts of data - which can provide accurate measures of the SES levels of actual families of actual kids at actual schools. Such data could easily be cross-matched to help formulate accurate SES indices. Indeed such cross-matching already takes place every year between Centrelink and the Australian Tax Office for all recipients of Centrelink benefits such as Family Tax Benefit A as described in the Table above.

Whilst many very wealthy families presently don't qualify for Centrelink payments like the Family Tax Benefits, and so would not need to submit their income details to Centrelink, asking such high income earners to submit forms to assist in the determination of accurate SES indices would merely amount to asking such high income earners to undertake an activity which the vast bulk of Australian families already routinely do. It was always intended that government grants to independent schools would generate fee reductions, and, in any event, such funding can in a very real sense be considered a form of social security payment, subsidy or benefit that goes to independent schools and their often very wealthy families.

But such forms would not need to be filled out in order to obtain very good SES indices for schools based on the actual families of the actual kids in the actual schools. The government could simply cross-match Australian Tax Office data with the names of the parents of the kids

at independent schools, in order to obtain accurate SES details, at least in respect of before and after tax income.

Surveys could be done to accurately measure the educational and occupational status of the actual families of actual kids in particular independent schools.

So if accurate SES indices were obtained, what would they look like? The numbers, that is?

Because funding of independent schools is based upon AGSRC benchmarks, it would be competent and equitable to calibrate SES scores relative to a score of 100 for the average SES level of government schools Australia-wide.

Two significant indicators of a school student's socio-economic background, or socio-economic status (SES), are the level of income of that student's family, and the highest educational qualification of the student's parents.

Table 2 here shows the average income levels of children in the various school sectors – for Australia as a whole and also broken down by state and territory.

Table 2: Comparison of Average Income Levels of Families with Children in Different School Types

Weighted Average Family Incomes ($)	Government	Catholic	Other	All	Non-Govt
AUS	53,731	66,782	76,134	58,643	70,130
NSW	56,355	69,308	79,451	61,185	72,493
VIC	55,039	64,630	80,574	59,971	70,111
QLD	49,296	66,311	70,172	54,435	67,939
WA	53,433	65,857	72,603	57,690	68,399
SA	49,372	61,924	69,847	54,264	65,444
TAS	45,902	59,402	70,801	50,388	63,776
ACT	68,948	80,703	92,441	74,141	83,700
NT	55,711	65,899	73,538	58,609	68,817
AUS	53,731	66,782	76,134	58,643	70,130
MAX	68,948	80,703	92,441	74,141	83,700
MIN	45,902	59,402	69,847	50,388	63,776

In Western Australia, the average in the above Table for "Other" school families ($72,603) exceeds that of government school families ($53,433) by $19,170. In all other states and territories, the "other" school average exceeds the government school average by more than $20,000. Australia-wide, the "other" school average exceeds the government school by over $22,000. This of course conforms well with common sense. Table 26 of the National Report on Schooling in Australia 2001 (found at Appendix 1: Statistical Annex at http://online.curriculum.edu.au/anr2001/pdfs/2001_Statswithlinks_15_9_03.pdf - this document provides a wealth of data relevant to the present paper), for example, shows that independent schools in 2001 received an average of $5267 in fees, compared with $1421 for catholic schools (i.e. systemic/parish catholic schools it would appear – certainly the figures here are in line with what one understands systemic catholic school fees to be, nothing, though that several very high fee catholic schools – especially in Melbourne – are part of the systemic/parish system).

Significantly, even taking into account that Table 2 figures are for 2001, and Table 1 figures are for 2003, it is clear from Tables 1 and 2 – viewed together – that the vast majority of

families with children even at independent schools will already be receiving Centrelink Family Tax Benefit Part A – so such families are already subject to Centrelink and ATO data matching. So extending this data matching to DEST should be readily possible and can hardly be considered onerous in any way, or an infringement of privacy beyond what already results from Centrelink-ATO data matching.

What is perhaps surprising is the very considerable extent to which the incomes of catholic school families exceed those of government school families – by over $13,000 on average Australia-wide. It is clear, furthermore, that this additional level of income is not in any significant way due to the often claimed reason that catholic families are larger than families with children in other school types – indeed, many Catholics send their kids to government schools. For example, as was stated earlier, the 2001 Census revealed that 18.2% of families with children at school had children in catholic schools only, and a further 2.7% of families had one or more children in both government and catholic schools. So over 20.9% of families have children in catholic schools, whereas students at catholic schools make up almost exactly 20% of all school children. Furthermore, Table 17 of the Australian Bureau of Statistics Catalogue 4221.0, titled 'Schools Australia 2002', (the 2001 and earlier versions of which previous years did not sub-divide between catholic and independent schools) shows that catholic school students made up 657,210 of the 3,314,923 school students across all systems. So Catholic school students made up 19.8% of all school students in 2002. It is clear, then, that catholic families and catholic school students each make up around 20% of their respective categories, which indicates that the size of catholic families (in terms of numbers of kids in schools) is about equal to the Australia-wide average for all schools).

The 2001 Census revealed that about 1,748,649 families had one or more kids in schools, and ABS Cat. 4221.0 for 2001 showed there were 3,268,141 kids in all schools in Australia. So, Australia-wide across all school sectors, families with kids in schools had an average of about 1.87 kids at some form a school somewhere. As above, all evidence available indicates that this 1.87 figure is relatively constant across the government, catholic and "other" sectors, though the following Table (which is imperfect on account of unavoidably using 2001 and 2002 data, and omitting the 5.3% or so of families mentioned earlier with children at more than one type of school) suggests that families with kids in non-government schools have a very slightly greater number of children in schools than do their government school counterparts.

Table 3: Estimation of average numbers children in schools per family

Sector	No. students in schools (ABS Cat. 4221.0 2002)	No. of Families with Students in This Sector Only (2001 Census)	Children per family (raw)	Children per family (adjusted)	Relative to Govt = 100
Govt	2268769	1154278	1.97	1.83	100.0
Cath	657210	317994	2.07	1.93	105.1
Other	388944	183447	2.12	1.98	107.9
All Non-Govt	1046154	501441	2.09	1.95	106.1
TOTAL	3314923	1655719	2.00	1.87	101.9

The adjusted figures in the rightmost column above are the most accurate here. These are adjusted to correct for the fact that 2002 student numbers are combined with families as in 2001, and the 5.3% of families with kids in more than one type of school.

Table 3 has been derived here to be considered in conjunction with Table 2. Whilst it can be claimed that non-government school families had slightly more kids in schools on average

than did government school families (about 6% more – 1.95 being 6% more than 1.83), this doesn't go close to accounting for the immense extent to which, on average, non-government school families have higher levels of income than government school families, as is made clear in Table 4 below. Table 4 below is a repeat of Table 2 but with its entries now converted to an index calibrated relative to 100 for the Australia-wide average of families sending their kids to government schools only.

Table 4: Comparison of Average Income Levels of Families with Children in Different School Types – Index Relative to Government School Australia-wide Average = 100

Indices Based on Weighted Average Family Incomes ($)	Government	Catholic	Other	All	Non-Govt
AUS	100.0	124.3	141.7	109.1	130.5
NSW	104.9	129.0	147.9	113.9	134.9
VIC	102.4	120.3	150.0	111.6	130.5
QLD	91.7	123.4	130.6	101.3	126.4
WA	99.4	122.6	135.1	107.4	127.3
SA	91.9	115.2	130.0	101.0	121.8
TAS	85.4	110.6	131.8	93.8	118.7
ACT	128.3	150.2	172.0	138.0	155.8
NT	103.7	122.6	136.9	109.1	128.1
AUS	100.0	124.3	141.7	109.1	130.5
MAX	128.3	150.2	172.0	138.0	155.8
MIN	85.4	110.6	130.0	93.8	118.7

As is shown in Table 4 above, the average incomes of catholic school familles exceed those of government school families by 24.3%. The average incomes of "other" school familles exceed those of government school families by 41.7%. And the average incomes of all non-government school familles exceed those of government school families by 30.5%.

Table 5 now compares families, with children in the different school sectors, based on the percentage of families in which parent(s) hold a university bachelor degree or higher educational qualification.

Table 5: Percentage of Families with Parent(s) Holding a University Bachelor Degree or Higher Educational Qualification

% of Families with Bachelor Degree and Higher	Government	Catholic	Other	All	Non-Govt
AUS	7.6	10.2	21.3	9.64	14.2
NSW	8.7	10.5	22.6	10.39	14.3
VIC	8.2	9.6	25.1	10.49	15.0
QLD	5.3	10.6	16.5	7.46	13.1
WA	6.7	10.2	18.8	8.67	13.5
SA	6.2	8.4	17.2	8.06	12.3
TAS	6.3	8.0	22.8	8.23	13.8
ACT	21.5	17.7	42.4	22.43	24.2
NT	6.5	9.1	15.7	7.63	11.7
AUS	7.6	10.2	21.3	9.64	14.2
MAX	21.5	17.7	42.4	22.4	24.2
MIN	5.3	8.0	15.7	7.5	11.7

Australia-wide, and in all states and territories, the percentage of families in "other" schools with a parent with a bachelor degree or higher is more than 2.5 times higher than the corresponding percentage for government school families.

Table 6 is a repeat of Table 5 but with its entries converted again to an index calibrated relative to 100 for the Australia-wide average of families sending their kids to government schools only:

Table 6: Percentage of Families with Parent(s) Holding a University Bachelor Degree or Higher Educational Qualification – Index Relative to Government School Australia-wide Average = 100

Indices Based on % of Families with Bachelor Degree and Higher	Government	Catholic	Other	All	Non-Govt
AUS	100.0	134.0	279.6	126.3	186.7
NSW	113.8	137.4	295.8	136.3	187.7
VIC	107.8	126.2	329.6	137.5	197.3
QLD	68.9	139.5	215.8	97.8	172.0
WA	88.0	134.2	246.5	113.7	177.1
SA	80.9	110.2	225.7	105.7	161.8
TAS	83.0	105.0	299.4	107.9	180.7
ACT	281.6	232.7	556.4	294.1	316.7
NT	85.2	119.3	205.8	100.1	152.9
AUS	100.0	134.0	279.6	126.3	186.7
MAX	281.6	232.7	556.4	294.1	316.7
MIN	68.9	105.0	205.8	97.8	152.9

Table 7 now provides indices which reflect an equal (i.e. 50:50) weighting of the Indices shown in Tables 3 and 5. These Indices are simply the geometric mean of the two corresponding numbers in Tables 3 and 5.

Table 7: SES Indices (Geometric Mean of Income and Percentage of Families with Bachelor Degree or Higher)

Socio-Economic Status Index = Geometric Mean of % degree or higher and average income indices	Government	Catholic	Other	All	Non-Govt
AUS	100.0	129.0	199.0	117.4	156.1
NSW	109.2	133.1	209.2	124.6	159.1
VIC	105.1	123.2	222.3	123.9	160.5
QLD	79.5	131.2	167.9	99.5	147.5
WA	93.6	128.2	182.5	110.5	150.1
SA	86.2	112.7	171.3	103.3	140.4
TAS	84.2	107.7	198.6	100.6	146.4
ACT	190.1	187.0	309.4	201.4	222.1
NT	94.0	120.9	167.8	104.5	139.9
AUS	100.0	129.0	199.0	117.4	156.1
MAX	190.1	187.0	309.4	201.4	222.1
MIN	79.5	107.7	167.8	99.5	139.9

Tables 2 and 4 through 7 all reveal quite clearly that, based on family income and educational levels, families of children at schools in the "other" category are of very considerably higher SES than families in government and catholic schools.

...

Recommended improvements to the SES model

What follows requires further development and consideration, but there might be merit in a system as follows:

Recommendation 1:

SES indices for all schools should be based on actual data for the actual families of the actual children attending schools ...

Recommendation 2:

SES indices should be established for all schools and should be adjusted/calibrated such that the Australia-wide government school average is 100.

Recommendation 3:

SES indices should be kept as meaningful ratios rather than transformed into normally distributed (i.e. bell curved) values with a pre-determined standard deviation.

...

Comments/Refinements

Any comments, suggestions regarding the above will be welcomed. This working paper is free to be passed around to anyone interested in this matter.

Regards,

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Appendix B
Supplementary Submission to the Senate Inquiry into Commonwealth Funding for Schools, Dated 4 August 2004 (online at http://www.aph.gov.au/SENATE/committee/eet_ctte/completed_inquiries/2002-04/schoolfunding/submissions/sub07c.pdf)

Further Illustration of Deficiencies in the Process Used to Determine SES Scores for Non-Government Schools – Based on 2001 ABS Census Data.

Working Paper by Mark Drummond, as at 4 August 2004

My original submission (numbered 7) to the Senate Inquiry into Commonwealth Funding for Schools (as at http://www.aph.gov.au/Senate/committee/eet_ctte/schoolfunding/submissions/sub007.pdf) includes as follows on page 5:

> families with kids attending [a particular non-government school] X would contribute about 8% to CD aggregate SES scores (8% being 4 as a percentage of 50); families with kids attending non-government schools ***other than*** X would contribute about 32% to such CD aggregate SES scores (16 as a percentage of 50); and families attending government schools only would contribute about 60% to such CD aggregate SES scores (30 as a percentage of 50).**

The SES score determination process is actually even worse than is indicated by this above statement, because the above statement assumes that all data used to determine SES scores is data for families with children in at least some K-12 (i.e. Kindergarten [or equivalent] to Year 12) schools. But this is ***not nearly*** the case. The formula used to determine SES scores for schools is as follows:

$\frac{A}{3}+\frac{B}{3}+\frac{C}{6}+\frac{D}{6}$ OR, equivalently: 0.333A + 0.333B + 0.167C + 0.167D **...[1]**

where
A is the average value from step 4 for the SES scores for the Occupation dimension;
B is the average value from step 4 for the SES scores for the Education dimension;
C is the average value from step 4 for the SES scores for the Household Income dimension; and
D is the average value from step 4 for the SES scores for the Household Income based on Families with Dependent Children dimension.

The above formula [1] above is as obtained from the DEST website as lowermost below here. The main point to note here is that, out of A, B, C and D above, only D is confined to "Families with Dependent Children". Components A, B and C – which contribute a 83.3% weighting towards SES scores, are based on households ***without regard for whether such households have children in them or not***, let alone children attending a K-12 school, let alone a non-government school ... let alone the particular non-government school for which the SES score is being determined!! And even the 16.7% weighted component D here (based on families with dependent children) will include at least some data for families whose children do not attend K-12 schools (i.e. babies and pre-school infants and/or dependents studying at TAFE or University, for example).

So what percentage or fraction of Australian households have K-12 school children in them?

The Australian Bureau of Statistics 2001 Census Basic Community Profile (Catalogue No. 2001.0 – available free of charge via www.abs.gov.au) hosts Tables including as follows:

Table B31 states that there were 6,744,795 households in total, of which 4,866,031 (72.1%) were family households

Table B17 shows that there were 4,936,828 families in total, of which:

- *1,764,167 (35.7%) were "couple families without children"*

- 2,321,165 (47.0%) were "couple families with at least one child"
- *417,043 (8.45%) were "couple families with non-dependent children only"*

- 762,632 (15.4%) were "one parent families with at least one child"
- *232,663 (4.71%) were "one parent families with non-dependent children only"*

So of the 4,936,828 families in total, ***only 2,434,091 (i.e. 49.3% of all families) have dependent children*** (i.e. children under 15 and/or 15-24 year old dependent students). This 2,434,091 figure is found as 2,321,165 minus 417,043 PLUS 762,632 minus 232,663 (noting figures as above).

Key Findings and Explanations Here

Whereas Table B17 of ABS Cat. 2001.0 states that there were 4,936,828 families in total, Table B31 states that there were 4,866,031 family ***households***. This discrepancy (4,936,828 MINUS 4,866,031 equals 70,797, which is 1.45% of 4,866,031). So this is a fairly minor discrepancy of no real gravity here.

Of 6,744,795 households in total, only 4,866,031 (72.1%) were family households, but only 49.3% of Australian families have children under 15 or dependent students aged 15-24. Now 49.3% of 72.1% equals 35.6%.

So only 35.6% of Australian households have children under 15 or 15-24 year old dependent students.

BUT (and this is of yet further significance), among households with dependent children/students, some of these households would be absent of children attending schools (i.e. Kindergarten [or equivalent] to Year 12, or K-12, schools). All up then it is likely that less than one-third of all households host K-12 school kids. **For present purposes it shall therefore be estimated that approximately 30% of all Australian households host at least one K-12 school child (this is bound to be close to the mark - certainly to the nearest 10%).**

So this 30% figure, along with equation [1] above, and the discussion that followed this equation, shows clearly that families with K-12 school children only contribute about 30% of the data used to determine SES scores for schools – the remaining 70% being contributed by households absent of K-12 school children. So the 8% figure in the quote presented uppermost above (from my original 21 June Senate Inquiry submission) should be reduced to about 30% of this 8% figure – that is, to about 3%!

So we can approximately conclude then that **SES scores for non-government schools typically reflect data based on the actual families of the actual kids at these actual**

schools with a weighting of just 3% or so, with the other 97% or so of data being contributed by households and families with no substantive connection whatsoever with the actual school whose SES score is being determined.

What an utterly astonishing state of affairs this is!

EXTRACT FROM DEST WEBSITE FOLLOWS BELOW.

Regards,

Mark Drummond
4 August 2004

EXTRACT FROM DEST WEBSITE

From http://schoolgrg.dest.gov.au/ (see '**Guidelines for calculating a school's SES score**' under 'SES Info') there is as follows describing how SES scores for schools are determined. The main point here is the fact that only the one-sixth weighting based on 'Families with Dependent Children' ensures that the data is based on families with children – the other five-sixths contribution to SES scores is from data which includes households/people without any kids at all, let alone school age kids, **let alone kids at non-government schools**, **let alone kids attending the school for which the SES score is being determined!! See especially the formula with the A, B, C and D in it in Step 5 below**)

SCHEDULE Guidelines for determining the SES score of a school

1 Application of Guidelines

These Guidelines apply to any determination of an SES score for a school for the purposes of the Act.

2 Definitions

In these Guidelines, the following definitions apply:

Act means the *States Grants (Primary and Secondary Education Assistance) Act 2000;*

Australian Bureau of Statistics means the Australian Bureau of Statistics established under section 5 of the *Australian Bureau of Statistics Act 1975;*

calendar year means the 2000, 2001, 2002, 2003 or 2004 calendar year;

CD number, for a CD, means the number attributed to the CD by the Australian Bureau of Statistics for the purposes of the Census;

Census means the 1996 Census of Population and Housing conducted by the Australian Bureau of Statistics;

Census Collection District (or ***CD***) means an area designated by the Australian Bureau of Statistics as a Census Collection District for the purposes of the Census;

geocoding, for a student residential address included in a statement of addresses for a school, means the process of assigning that address to a CD;

school means a non-government school;

SES dimension means any of the following dimensions:

(a) Occupation;
(b) Education;
(c) Household Income;
(d) Household Income based on Families with Dependent Children;

SES dimension score, for a CD, means the number, rounded to 4 decimal places, derived from data collected by the Australian Bureau of Statistics for the purposes of the Census and shown in the column *SES dimension score* for an SES dimension opposite the CD number for that CD shown in the column *CD number* in the document entitled *Funding Arrangements for Non-Government Schools 2001 – 2004: SES Dimension Scores for Census Collection Districts (CDs) based on the SES Index for General Recurrent Grants Funding* published by the Department;

statement of addresses, for a school, means a statement:

(a) that contains student residential addresses for the school for the calendar year specified in the statement; and
(b) that is provided by the approved authority of the school to the Department;

student residential address, for a school, means the residential address of a student receiving primary education or secondary education at the school other than a student:

(a) who is an overseas student; or
(b) who is receiving primary distance education or secondary distance education at the school.

3 Geocoding of students' residential addresses

Each student residential address contained in the statement of addresses for a school is to be geocoded unless it is not reasonably practicable to geocode that address.

4 Method to be followed in determining the SES score for a school

Work out the SES score for a school using the following method statement:

Method statement

Step 1 Set out opposite each geocoded student residential address in the statement of addresses for the school, the applicable CD number for that address.

Step 2 Where a CD that is listed as a result of step 1 has one or more SES dimension

scores, set out opposite the CD number the SES dimension score applicable to each such dimension for the CD.

Step 3 Total the SES dimension scores set out in step 2 for each SES dimension for the school.

Step 4 Divide the result of step 3 for each SES dimension by the number of geocoded student residential addresses for which there is an SES dimension score for that dimension. The average values are to be rounded to 4 decimal places, with rounding up if the fifth decimal place is 5 or more.
[Note: If a geocoded student residential addresses does not have an SES dimension score for that dimension it is not counted for the purpose of arriving at an average value for the dimension.]

Step 5 Apply the resulting average values from step 4 to the following formula to produce a raw SES score. The resulting raw SES score is to be rounded to 4 decimal places, with rounding up if the fifth decimal place is 5 or more:

$$\frac{A}{3} + \frac{B}{3} + \frac{C}{6} + \frac{D}{6}$$

where: **A** is the average value from step 4 for the SES scores for the Occupation dimension;
B is the average value from step 4 for the SES scores for the Education dimension;
C is the average value from step 4 for the SES scores for the Household Income dimension; and
D is the average value from step 4 for the SES scores for the Household Income based on Families with Dependent Children dimension.

Step 6 Round the result of step 5 to a whole number, with rounding up if the first decimal place is 5 or more, to produce the SES score for the school.

Appendix C

Median Family Incomes [$ per year] by Type of School and by Political Unit (2001 Census)

State or Territory	Families with children in Govt schools only	Families with children in Catholic schools only	Families with children in Other schools only	Families with at least one child in a non-government school	All families with children in schools
NSW	49,049	64,667	79,531	68,472	54,964
VIC	48,652	59,533	80,711	65,071	53,925
QLD	42,924	61,588	65,211	63,102	48,293
SA	43,329	57,148	63,826	59,799	48,076
WA	47,336	61,302	69,326	64,285	51,920
TAS	39,379	55,058	64,344	58,250	44,142
NT	48,843	62,394	72,916	67,346	53,320
ACT	63,392	78,542	96,652	83,816	71,600
AUS	**46,889**	**61,501**	**73,567**	**65,437**	**52,202**

Median Family Incomes by Type of School and by Political Unit (2001 Census)
Relative to AUS Government = 100

State or Territory	Families with children in Govt schools only	Families with children in Catholic schools only	Families with children in Other schools only	Families with at least one child in a non-government school	All families with children in schools
NSW	104.6	137.9	169.6	146.0	117.2
VIC	103.8	127.0	172.1	138.8	115.0
QLD	91.5	131.3	139.1	134.6	103.0
SA	92.4	121.9	136.1	127.5	102.5
WA	101.0	130.7	147.9	137.1	110.7
TAS	84.0	117.4	137.2	124.2	94.1
NT	104.2	133.1	155.5	143.6	113.7
ACT	135.2	167.5	206.1	178.8	152.7
AUS	**100.0**	**131.2**	**156.9**	**139.6**	**111.3**

Median Family Incomes by Type of School and by Political Unit (2001 Census)
Relative to AUS All Schools = 100

State or Territory	Families with children in Govt schools only	Families with children in Catholic schools only	Families with children in Other schools only	Families with at least one child in a non-government school	All families with children in schools
NSW	94.0	123.9	152.4	131.2	105.3
VIC	93.2	114.0	154.6	124.7	103.3
QLD	82.2	118.0	124.9	120.9	92.5
SA	83.0	109.5	122.3	114.6	92.1
WA	90.7	117.4	132.8	123.1	99.5
TAS	75.4	105.5	123.3	111.6	84.6
NT	93.6	119.5	139.7	129.0	102.1
ACT	121.4	150.5	185.2	160.6	137.2
AUS	**89.8**	**117.8**	**140.9**	**125.4**	**100.0**

The above Tables show that the median family incomes of non-government school families comfortably exceed those of government school families in all states and territories.
And because family income is positively skewed, **mean** incomes would probably indicate this income disparity to an even greater extent than is indicated here by **median** income data.

prepared by Mark Drummond
June 2004

Appendix D

Percentage of Australia school students with at least one parent with a Bachelor Degree or Higher, by School Type and Political Unit (according to 2001 ABS Census data)

by Mark Drummond, July 2004

Percentage of students with at least one parent with a Bachelor Degree or Higher, by State/Territory

	Students in Govt. Schools only	Students in Govt. & Catholic Schools only	Students in Govt., Catholic & Other (i.e. non-Catholic) Non Govt. Schools	**Students in Catholic Schools only**	Students in Catholic & Other Non Govt. Schools only	**Students in Other Non Govt. Schools only**	Students in Govt. & Other Non Govt. Schools only	**ALL children in all schools**
AUS (i.e. total)	**7.63**	8.96	19.14	**10.22**	20.53	**21.32**	22.10	**9.94**
NSW	**8.68**	9.99	19.39	**10.48**	20.96	**22.56**	23.43	**10.67**
VIC	**8.22**	8.12	13.93	**9.62**	20.44	**25.14**	24.74	**10.82**
QLD	**5.26**	7.89	20.97	**10.64**	20.48	**16.45**	18.38	**7.78**
WA	**6.71**	8.32	24.56	**10.23**	19.80	**18.80**	18.67	**8.96**
SA	**6.17**	7.87	10.81	**8.40**	15.93	**17.21**	16.49	**8.25**
TAS	**6.33**	6.73	60.00	**8.01**	18.57	**22.83**	24.46	**8.49**
ACT	**21.48**	18.09	41.67	**17.75**	37.70	**42.43**	47.69	**22.92**
NT	**6.50**	6.91	N/A	**9.10**	9.46	**15.69**	12.66	**7.74**

As above but relative to all families Australia-wide = 100.0

	Govt. Schools only	Govt. & Catholic Schools only	Govt., Catholic & Other (i.e. non-Catholic) Non Govt. Schools	**Catholic Schools only**	Catholic & Other Non Govt. Schools only	**Other Non Govt. Schools only**	Govt. & Other Non Govt. Schools only	**ALL children in all schools**
AUS (i.e. total)	**76.8**	90.2	192.7	**102.8**	206.6	**214.6**	222.4	**100.0**
NSW	**87.3**	100.6	195.1	**105.5**	210.9	**227.1**	235.8	**107.4**
VIC	**82.8**	81.7	140.2	**96.8**	205.7	**253.0**	249.0	**108.9**
QLD	**52.9**	79.4	211.0	**107.0**	206.1	**165.6**	185.0	**78.3**
WA	**67.6**	83.7	247.2	**103.0**	199.2	**189.2**	187.8	**90.1**
SA	**62.1**	79.2	108.8	**84.5**	160.3	**173.2**	166.0	**83.0**
TAS	**63.7**	67.8	603.8	**80.6**	186.9	**229.8**	246.2	**85.5**
ACT	**216.1**	182.1	419.3	**178.6**	379.5	**427.1**	480.0	**230.6**
NT	**65.4**	69.5	N/A	**91.5**	95.2	**157.9**	127.4	**77.9**

As above but relative to all families = 100.0 for each State/Territory

	Govt. Schools only	Govt. & Catholic Schools only	Govt., Catholic & Other (i.e. non-Catholic) Non Govt. Schools	**Catholic Schools only**	Catholic & Other Non Govt. Schools only	**Other Non Govt. Schools only**	Govt. & Other Non Govt. Schools only	**ALL children in all schools**
AUS (i.e. total)	**76.8**	90.2	192.7	**102.8**	206.6	**214.6**	222.4	**100.0**
NSW	**81.3**	93.7	181.7	**98.2**	196.4	**211.5**	219.6	**100.0**
VIC	**76.0**	75.0	128.8	**88.9**	189.0	**232.3**	228.6	**100.0**
QLD	**67.6**	101.5	269.6	**136.8**	263.3	**211.6**	236.4	**100.0**
WA	**75.0**	92.9	274.3	**114.3**	221.0	**210.0**	208.4	**100.0**
SA	**74.8**	95.4	131.0	**101.8**	193.1	**208.6**	199.9	**100.0**
TAS	**74.5**	79.3	706.5	**94.3**	218.7	**268.8**	288.0	**100.0**
ACT	**93.7**	79.0	181.8	**77.4**	164.5	**185.2**	208.1	**100.0**
NT	**84.0**	89.2	N/A	**117.5**	122.2	**202.8**	163.6	**100.0**

As above but relative to families with Children in Government Schools only = 100.0 for each State/Territory

	Govt. Schools only	Govt. & Catholic Schools only	Govt., Catholic & Other (i.e. non-Catholic) Non Govt. Schools	**Catholic Schools only**	Catholic & Other Non Govt. Schools only	**Other Non Govt. Schools only**	Govt. & Other Non Govt. Schools only	**ALL children in all schools**
AUS (i.e. total)	**100.0**	117.5	251.0	**134.0**	269.1	**279.6**	289.8	**130.3**
NSW	**100.0**	115.2	223.5	**120.8**	241.6	**260.1**	270.1	**123.0**
VIC	**100.0**	98.7	169.4	**117.0**	248.6	**305.6**	300.8	**131.6**
QLD	**100.0**	150.1	398.9	**202.3**	389.6	**313.0**	349.7	**148.0**
WA	**100.0**	123.9	365.8	**152.4**	294.8	**280.0**	278.0	**133.4**
SA	**100.0**	127.6	175.1	**136.1**	258.1	**278.8**	267.2	**133.7**
TAS	**100.0**	106.4	948.2	**126.6**	293.5	**360.8**	386.6	**134.2**
ACT	**100.0**	84.3	194.0	**82.6**	175.6	**197.6**	222.1	**106.7**
NT	**100.0**	106.3	N/A	**140.0**	145.6	**241.5**	194.9	**119.1**

As above but relative to families with Children in Government Schools only Australia-wide = 100

AUS (i.e. total)	**100.0**	117.5	251.0	**134.0**	269.1	**279.6**	289.8	**130.3**
NSW	**113.8**	131.0	254.2	**137.4**	274.8	**295.8**	307.2	**139.9**
VIC	**107.8**	106.4	182.7	**126.2**	268.1	**329.6**	324.4	**141.9**
QLD	**68.9**	103.5	274.9	**139.5**	268.5	**215.8**	241.0	**102.0**
WA	**88.0**	109.1	322.1	**134.2**	259.6	**246.5**	244.7	**117.4**
SA	**80.9**	103.2	141.8	**110.2**	208.9	**225.7**	216.3	**108.2**
TAS	**83.0**	88.3	786.7	**105.0**	243.5	**299.4**	320.8	**111.4**
ACT	**281.6**	237.3	546.4	**232.7**	494.4	**556.4**	625.4	**300.5**
NT	**85.2**	90.5	N/A	**119.3**	124.0	**205.8**	166.0	**101.5**

Appendix E
Comments on 3 September 2008 *New Matilda* article by Chris Bonnor titled 'Funding Public Schools in the Clever Country'

On 5 September 2008 I (Mark D) added comments to a 3 September 2008 *New Matilda* article by Chris Bonnor titled 'Funding Public Schools in the Clever Country' (see at http://newmatilda.com/2008/09/03/funding-public-schools-clever-country), as follows, and please note that there is no reference at all here to "non-government schools" or "private schools":

> This is a great article Chris, but we need to employ hard science, or hard maths, to help Julia Gillard, Kevin Rudd and others see how silly some of their school funding advice has been in recent times – specifically, the advice that has led them to believe it was competent and just to keep the current Kemp/Howard SES (socioeconomic status) funding model till at least 2012.
>
> The core problem with the SES funding model has always been the way the SES scores for schools are calculated. Specifically, only about 3% of the data feeding into schools' SES scores is data for the actual families of the actual kids at the actual schools (it may be as high as about 10% for some schools, but perhaps as low as 1% for others – the Government would have the data needed to fully confirm these figures, and it's time we find out the true percentages here for each and every school receiving funding according to the SES model). So SES scores suffer from what an engineer would refer to as a ridiculously high "noise to signal ratio" in that irrelevant noise (data from households with no substantive connection to the school whose SES score is being determined) drowns out the valid "signal" (data from the actual families with kids at the school whose SES score is being determined). So there's a huge "garbage in, garbage out" flaw that gives rise to SES scores that are just totally absurd and invalid in view of this huge "noise to signal ratio". THIS is why the SES scores are so ridiculously low (and funding levels correspondingly so ridiculously high) for schools like Kings and Geelong Grammar. The wealthiest schools would have SES scores well over 200 if SES scores were competently calculated, but scores are (1) mainly based on data from households with no connection to the school, as above (all just totally beyond the pale!), and (2) invalidly set to a normal distribution with a mean of 100 and a standard deviation of 15. This transformation to a normal distribution (bell curve) just totally distorts and invalidates SES scores for schools. Why? Well substantive SES data is NOT normally distributed. Chi-squared goodness of fit tests could confirm this. Income and other SES input variables are positively skewed to a significant extent. And with a mean of 100 and a standard deviation of 15, we have the misleading impression that the families of kids at a school with an SES score of say 130 have incomes (and other SES input variables) only about one and a half times greater on average than those of families with kids at a school with an SES score of 85, when the families at the school with the 130 SES score would probably be receiving incomes about four times greater on average than those at the school with an SES score of 85. Ratio comparisons like this 130 to 85 comparison lose all meaning following transformation to a normal distribution. The normal transformation employed in the current SES score determination process can hence and otherwise have no place at all in a valid funding formula. And the Government effectively knows this. The Government certainly doesn't put income levels on to a normal distribution (i.e. a bell curve) before determining income tax levels, Medicare levies, and government benefits such as the family tax benefit etc. By basing school funding levels on SES data that has been ridiculously and invalidly transformed to a normal distribution, the Government is being inconsistent as well as incompetent.
>
> Hard science, hard maths and hard engineering wouldn't tolerate rubbish like this absurd SES determination process. The SES score system is about as competent as a fuel that's 3% petrol and the other 97% water. The mechanical system we refer to as a car wouldn't move very far if we tried to run it with such a ridiculously diluted fuel mix, and the current Kemp/Howard school funding system is every bit as incompetent as this 3 to 97 fuel-water mix, but it seems that competence and fairness simply don't matter to the politicians and senior bureaucrats responsible for this SES scandal. They just have to be good "wheeler-dealer" types it seems. All very demoralising! The irony here is that we really don't need a competent education system at all if the only skills valued by the powers that be are hollow wheeler-dealer type skills.
>
> We need politicians and senior bureaucrats responsible for school funding systems (and people seeking a fairer system as well) to either (1) vastly strengthen their hard maths, science and engineering type skills themselves, or (2) at least show better respect for such skills when applied to these sorts of debates.
>
> Mark Drummond

Appendix F
Article by John August titled 'Public Funding of Non-Government Schools' in the Spring 2009 Edition of the *Australian Humanist* Journal

written in Dari, which the women especially were not willing to have translated for fear of reprisals, and eventually they got back to Australia.

It was a really extraordinary and brave effort. Sarah made a film for the BBC called 'Australia's Pacific Solution', which was shown right across Europe, but it was never shown in Australia. For some months the ABC said it was going to show it, but they were actually just stalling and they eventually said at the end of 2002, 'we've done a refugee thing this year so we're not going to show it.' By that time its currency had diminished somewhat. But, undaunted, Kate then contacted the letter-writing brigade and said if anyone would like to send us the cost of duplicating a video, we'll send them a copy of the BBC video. We had hundreds of copies made and sent, and they were shown in hundreds of homes and mechanics institute halls and town halls all around the country. I'm confident that more people in Australia have seen that film, than would have seen it if it had gone to air on Four Corners.

Let me tell you: you don't mess with Kate. She gets things done.

I'd like to finish with two other observations. The first is that Kate and I were both deeply touched and honoured to be invited to be the recipients of the Australian Humanist of the Year award this year, and from the list it is apparent we are in very good company. I was particularly pleased that you'd recognised what Kate has done, because it is very easy, given the public prominence that I've had in what I've been doing, for people to assume it was me and not her. Far from it, it has been a great team effort and if I was to award line honours I'd give them to Kate.

The second thing I want to say is – and it is rather off the tack, but you'll understand – we are at the moment in the final stages of a national consultation on whether Australia needs a charter of rights. I don't imagine I need to persuade many people in this room that a charter of rights would be a good idea in this country. Can I tell you this? It is a really important thing for each one of you, who supports the idea of a charter of rights, to put in a submission. It need only be a single page. You don't have to go into great flights of rhetoric. You don't have to put forward great reasoned arguments. A page just saying you support the idea will carry great weight. They will get lots of pro forma submissions which are in effect mass manufactured, from the predictable groups. To some extent they are devalued because they are predictable. But if ordinary people out in the community, unbidden by anyone, write in and express their own views that will carry great weight. This is an opportunity that comes once in a generation. The last decade or so have shown us, I think, that we need some framework of human rights protection in the Australian legal system. This is our chance for it, so let's go for it and guarantee there will be another generation of Humanists in this country. □

Taped by **Dick Clifford**,
transcribed and edited by **Rosslyn Ives**.

Public funding of non-government schools

John August

There's been some discussion among Humanists about the worth of funding non-government schools. In a 2005 *AH* No. 80, there was a dialogue between Doug Everingham and David Blair. One important dimension was the nature of the curriculum and whether it 'indoctrinated' religious values. For sure, a religious school can still teach positive secular values under a curriculum. And, as David Blair noted to me in personal communication, there are *non-religious* non-government schools – we should not therefore point a finger at them indiscriminately.

One issue is *indoctrination*. But other issues involve the justice and equity of separating schools into government schools (GS) and non-government schools (NGS), and how they are funded, regardless of whether they are faith-based or not. Even if we can endorse the equity of some funding of NGS, the socio-economic model used to fund them is inherently flawed and inequitable, as I'll show.

One argument for the funding of NGS is that all parents pay tax, so such taxes should flow to GS and NGS alike. However, this imagines that tax is a system where you can track where your taxes are sent; it seems to suggest you should be able to *opt out* of paying tax if you're not benefiting. But that is not what taxation is: it is spent for the general public good, and such an *opting out* mentality would be disastrous for the good of society. Further, this argument begs the question of where it leaves people – both single and in couples – who are not or will not have children and are paying tax, of which some will go to the education of other people's children. Should they be paid a bonus corresponding to the money they've saved the education system?

Another argument is that everyone has the choice about where to send their child. If they want to make the choice to send their child to a NGS, that's fine; but they need to take responsibility for their own choice, and pay the additional charge themselves.

A better argument, with some limited traction, is that children at NGS save the taxpayer money, equating to the marginal costs of educating each additional child in the public system, and should be subsidised to a matching extent. However, this subsidy should reflect the saving and should be applied to such NGS uniformly and equitably. But the current system is neither uniform nor equitable. Mark Drummond, a Canberra researcher *, estimated that marginal costs were approximately $4,000 per student. So, if we're to *save* taxpayers and education systems money, we'd need to have a subsidy of less than this per child to the NGS student. Let's split the difference and make this subsidy $2,000. And ideally such a notional subsidy should be applied uniformly – not the case for the existing much larger subsidy. Still, we might justify an increase over $2,000 (or even $4,000) if this subsidy represented increased need, regional impoverishment or similar. But then the argument would be that we were compensating for some

impoverishment rather than saving the taxpayer money which would have otherwise have been lost.

Drummond notes that whilst private schools have had massive funding boosts in recent years, thereby increasing their attractiveness, the vast majority (around 70%) of Australians continue to be predominantly or wholly educated in the government school systems. But in spite of the increase in funding, the majority of NGS have not acted to reduce their school fees or enrol additional students. Rather, they've expanded the already comprehensive services they provide for students or just 'pocketed the difference' in other ways. So we can wonder about the self-sacrificing efforts of the relatively small proportion of families of the students who attend NGS.

A fundamental inequity in the socio-economic status model used to calculate NGS funding levels arises, according to Drummond,

> because the funding a non-government school receives is not based on the actual families of the actual students at the actual school, but, rather, on the average of all families who just happen to live within the same census collection districts as families with children at the school. So the whole system has a very high noise to signal ratio.

Or a low 'signal to noise', if you prefer, with any attempt at something ethical being drowned out by 'noise'. And NGS benefit enormously from such 'noise', because, as Drummond explains,

> for nearly all non-government schools, the vast majority of family income data feeding into socio-economic status (SES) scores are for families vastly less wealthy than those with children at the schools for which the socio-economic status scores are being calculated, so socio-economic status scores are much lower and funding levels significantly higher than they'd be under a competent and equitable funding model in which socio-economic status scores and funding levels were based only on the data for actual families of actual students at actual schools.

Drummond's calculations are that the families of children who attend a particular NGS only contribute about 3% to the SES score for that school on average; households unrelated to the school contribute the other 97% or so. He notes Geelong Grammar as one example. This school received massive over-funding because of its socio-economic status score of 111 – below that of every single ACT NGS which Drummond has examined – with the score dominated by households which have nothing to do with Geelong Grammar.

While some claim that children in non-government schools come from families that are no wealthier than children in government schools, Drummond's statistical analyses show that 'children in non-government schools are typically, and on average, from much wealthier and higher SES backgrounds than their public school counterparts.' This is not to deny that there are cases where struggling parents send their children to NGS. And we also need to distinguish between the upper-echelon private schools and the more moderately run Catholic schools. Nevertheless, the overall picture is seriously distorted.

Focusing on the Howard's government's socio-economic status model, in 2003 the 100 or so most expensive private schools in Australia – which charged tuition fees of $10,000 or more per student per year – had socio-economic status scores which averaged about 119. But real 2001 Census data suggest the scores should have been up around the 200 mark for these 100 or so most expensive private schools in Australia, which clearly serve families whose wealth and SES levels generally are very significantly greater than those of their public school counterparts.

But there are other consequences, including the growth in fundamentalist schools of different varieties. Mark Drummond comments:

> The Howard Government set things up so that pretty well any branch of any religion or philosophy could start up its own separate school or even an entire school system, at the expense of the cultural bridge-building and social cohesion achieved when children of diverse cultural backgrounds can study and play together as they've done to such positive effect in public schools. So the Howard approach, all too often supported by Labor, has encouraged a divisive 'balkanisation' of communities.

Certainly, Howard presided over things getting worse. But what has Labor's record been recently and since coming to power? Mark Drummond comments:

> Labor has tried to re-write history by incorrectly blaming their 2004 election loss in part on their school funding policy. Their 2004 school funding policy was very sound and certainly vastly more technically competent and equitable than the SES funding model and their 2007 election policy in support of the SES model. Labor's problem in 2004 was that their school funding campaign just didn't cut through at all. The Coalition claimed that Labor had a 'hit list' of schools, but if that was true then the Coalition's funding policy had the entire public system on their hit list, plus a surprisingly high number of private schools who lost out very unfairly as well. But Labor just couldn't explain the truth of the matter to the community.

Looking back on Rudd's win, for those of us who thought it would be good to get Howard out of power we can only see the difficult trade-offs Labor had to make in the lead-up to the 2007 election. Was it better to have a Rudd government at all, even if its hand were tied in a lot of ways, being less able to differentiate itself against the Howard Government and forge a new start?

There's a lot of murk and misunderstanding about education policy and the funding of NGS, and we've not as a community been able to identify and rally behind its problems to force change. Further, those who benefit from the NGS system are an articulate and well resourced lobby group, who have an interest in obscuring the matter. But, when you stop to look, the problems are in fact reasonably clear.

We can worry about some schools 'indoctrinating children', or reflect that there are secular NGS. Indeed. But, underneath that, the system which funds NGS does not equitably deliver any promise which might be held in the idea that such parents are 'saving the taxpayer money'. Current patterns of distribution are designed to benefit vested interests. □

John August is President of the NSW Humanists. He has a long-time interest in the worth of rigorous numerical analysis, how ethics relates to politics, and the ideas put forward to justify taxes and expenditures.

* The comments by **Dr Mark Drummond** were drawn from E-mail exchanges with John August. Drummond is a Mathematics and Statistics teacher at the Canberra Institute of Technology.

As above but just main extracts of relevance to this 2010 Senate Inquiry into NAPLAN – all from page 5 of the article (with emphasis added here in ***bold italics***):

A fundamental inequity in the socio-economic status model used to calculate NGS [non-government school] funding levels arises, according to Drummond,

> ***because the funding a non-government school receives is not based on the actual families of the actual students at the actual school, but, rather, on the average of all families who just happen to live within the same census collection districts as families with children at the school. So the whole system has a very high noise to signal ratio.***

Or a low 'signal to noise', if you prefer, with any attempt at something ethical being drowned out by 'noise'. And NGS benefit enormously from such 'noise', because, as Drummond explains,

> ***for nearly all non-government schools, the vast majority of family income data feeding into socio-economic status (SES) scores are for families vastly less wealthy than those with children at the schools for which the socio-economic status scores are being calculated, so socio-economic status scores are much lower and funding levels significantly higher than they'd be under a competent and equitable funding model in which socio-economic status scores and funding levels were based only on the data for actual families of actual students at actual schools.***

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While some claim that children in non-government schools come from families that are no wealthier than children in government schools, Drummond's statistical analyses show that ***'children in non-government schools are typically, and on average, from much wealthier and higher SES backgrounds than their public school counterparts.'*** This is not to deny that there are cases where struggling parents send their children to NGS. And we also need to distinguish between the upper-echelon private schools and the more moderately run Catholic schools. Nevertheless, the overall picture is seriously distorted.

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Appendix G
My School *FACT SHEET: About ICSEA*, dated January 2010

My School FACT SHEET

January 2010

About ICSEA

The best way to compare the academic performance of schools is to locate groups of schools with students who had similar abilities when they started school. Unfortunately, no measures of starting abilities are currently available nationally. Instead, research has been undertaken to develop a set of alternative measures that are highly correlated with student performance.

The Index of Community Socio-Educational Advantage (ICSEA) is a special measure that enables meaningful and fair comparisons to be made across schools. It has been developed specifically for the *My School* website for the purpose of identifying schools serving similar student populations. It measures key factors that correlate with educational outcomes, as indicated by the National Assessment Program – Literacy and Numeracy (NAPLAN), unlike more general measures of socio-economic status.

ICSEA uses Australian Bureau of Statistics (ABS) and school data to create an index that best predicts performance on NAPLAN tests. The variables that make up ICSEA include socio-economic characteristics of the small areas where students live (in this case an ABS census collection district), as well as whether a school is in a regional or remote area, and the proportion of Indigenous students enrolled at the school. More specific information about the calculation of the ICSEA is available in the ICSEA Technical Paper on the *My School* website (www.myschool.edu.au).

Statistically similar schools

The ICSEA value determines which schools are listed as statistically similar on the *My School* website. Up to 60 statistically similar schools are grouped here. On the website the school you select appears at the top of the list of statistically similar schools, and other schools appear beneath in alphabetical order.

Statistically similar schools generally have a number of factors in common such as the social and economic background of the students, whether the school is remote, the proportion of Indigenous students, or a combination of these factors. Statistically similar schools are not necessarily located close to each other or cover the same age group of students. Not every school will have 60 statistically similar schools in their group.

What about schools that serve specific student groups and students outside their local area?

ICSEA values are calculated for schools irrespective of the proximity of students' homes to the school, so schools which draw students from a wide geographic area will still have an ICSEA value. Some schools, however, will not have an ICSEA value because of the nature of their student population. An example could be a school for children with intellectual disabilities.

To ensure that the *My School* website makes fair comparisons between schools, the ICSEA values for all schools have been checked with State and Territory governments, Catholic education commissions, and independent schools and their associations. On the basis of this feedback, ICSEA values were revised for situations in which schools had a student population with social and economic characteristics that were not well reflected in ABS census collection district data.

What information will be compared?

Comparisons are made between the average NAPLAN scores achieved by students at the school being viewed and the average for the group of schools to which it is statistically similar. Colour coding is used to indicate the differences which are notably higher or lower.

As above, but in text:

About ICSEA

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Appendix H
ICSEA Scores for ACT Primary and Secondary Schools as Published in the Canberra Times on 30 January 2010

The Canberra Times SATURDAY, JANUARY 30, 2010

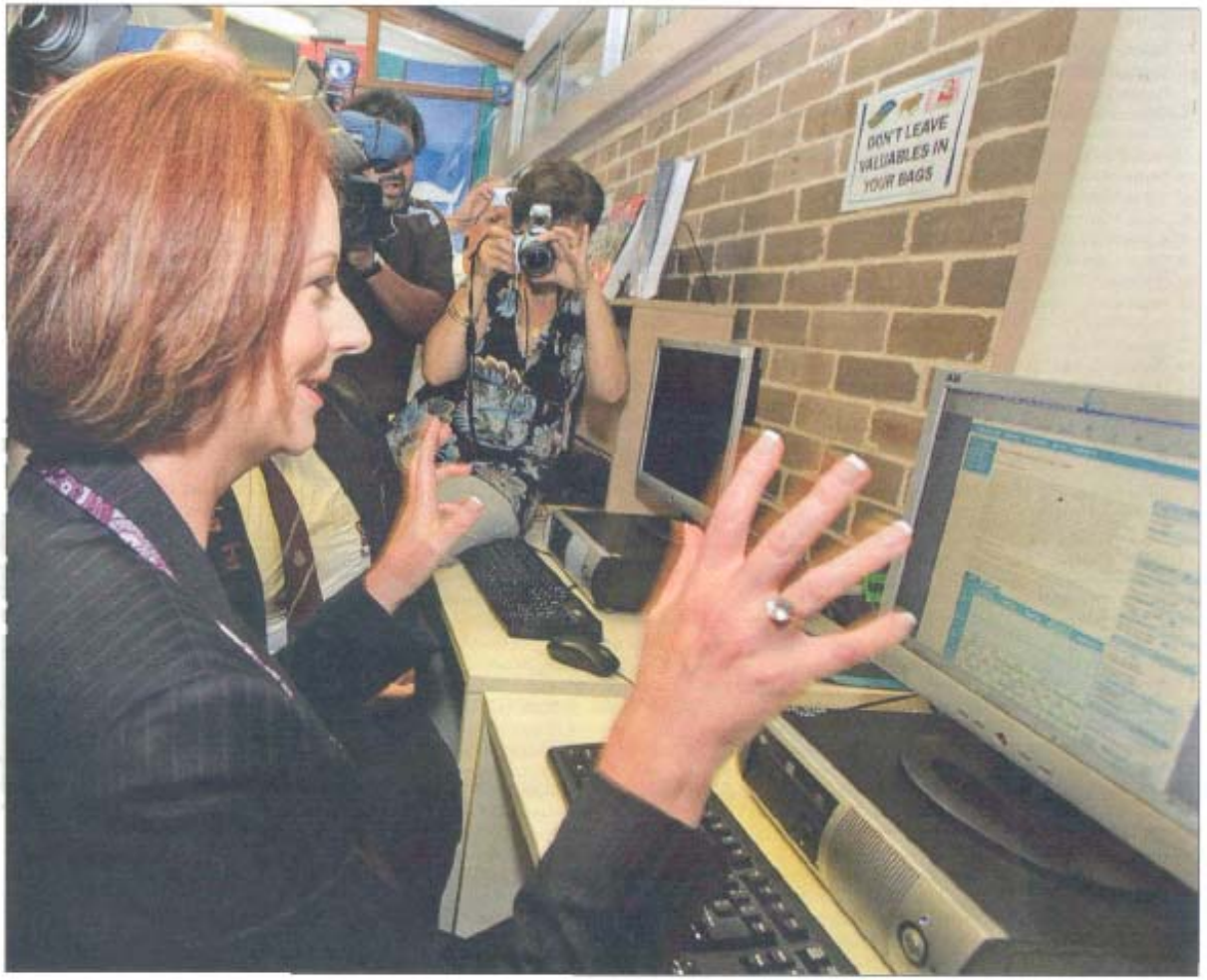
SPECIAL 4-PAGE LIFTOUT

HOW YOUR SCHOOL RATES NATIONALLY

We compare the performance of every ACT school with results from statistically similar schools across Australia

ICSEA RANKINGS

SCHOOL	ICSEA
St Bede's Primary	1186
Ainslie School	1173
Aranda Primary	1168
Canberra Girls' Grammar School	1164
St Thomas More's Primary	1161
Canberra Grammar School	1161
Forrest Primary	1159
Holy Trinity Primary	1158
Hughes Primary	1154
Campbell Primary	1154
Radford College	1152
Telopea Park School	1150
Garran Primary	1150
Yarralumla Primary	1149
Turner School	1146
Sts Peter & Paul's Primary	1144
Red Hill Primary	1143
Farrer Primary	1143
Curtin Primary	1140
St Joseph's Primary	1138
St Vincent's Primary	1135
Sacred Heart Primary	1134
Ainslie North Primary	1131
Hawker Primary	1129
Alfred Deakin High	1126
Lyneham Primary	1124
Rosary Primary	1122
Majura Primary	1122
Orana School	1120
Chapman Primary	1120
Macquarie Primary	1119
Lyneham High	1119
Weetangera Primary	1116
Holy Spirit Primary	1116
Brindabella Christian College	1115
Marist College	1111
Burgmann Anglican School	1111
Daramalan College	1110
Blue Gum Community School	1110
Canberra Montessori School	1110
Fadden Primary	1108
Campbell High	1108
Harrison School	1106
St Jude's Primary	1104
Merici College	1101
Duffy Primary	1101
Amaroo School	1099
St John Vianney's Primary	1097
St Clare's College	1095
Maribyrnong Primary	1095
Torrens Primary	1094
Emmaus Christian School	1094
Good Shepherd	1093



Duffy Primary	1101
Amaroo School	1099
St John Vianney's Primary	1097
St Clare's College	1095
Maribyrnong Primary	1095
Torrens Primary	1094
Emmaus Christian School	1094
Good Shepherd	1093
Canberra High	1091
Mawson Primary	1090
Arawang Primary	1088
Gold Creek School	1086
St Benedict's Primary	1083
Islamic School of Canberra	1083
Stromlo High	1081
St Edmund's College	1081
Palmerston District Primary	1080
Kaleen Primary	1080
St Michael's Primary	1079
St Matthew's Primary	1074
Melrose High School	1074
St Monica's Primary	1072
Giralang Primary	1071
Trinity Christian School	1069
St Francis Xavier College	1068
Kaleen High	1067
Miles Franklin Primary	1064
St Anthony's Parish School	1058
St Thomas the Apostle Primary	1057
Belconnen High	1056
Melba Copland Secondary School	1055
Holy Family Parish Primary	1055
Canberra Christian School	1054
Wanniassa Hills Primary	1052
Florey Primary	1052
Mount Rogers Primary School	1051
Gowrie Primary	1051
Evatt Primary	1046
St John the Apostle Primary	1045
Fraser Primary	1045
MacKillop Catholic College	1045
Bonython Primary	1042
St Thomas Aquinas Primary	1041
Monash Primary	1041
Covenant College	1038
Ursenbi Primary	1037
St Francis of Assisi Primary	1037
Taylor Primary	1036
Wanniassa School	1032
Ngunnawal Primary	1027
Calwell Primary	1027
Calwell High	1021
Latham Primary	1019
Kingsford Smith School	1018
Caroline Chisholm School	1015
Theodore Primary	1014
St Clare of Assisi Primary	1013
Macgregor Primary	1006
Lanyon High School	1003
Charnwood-Dunlop School	990
Gordon Primary	989
Gilmore Primary	979
Charles Conder Primary	973
Richardson Primary	946
Jervis Bay Primary	849

HANDS ON: Deputy Prime Minister Julia Gillard goes back to school on Thursday after the early-morning launch of the My School website.

In a class of their own

The My School website was designed to allow parents to see how students were performing in literacy and numeracy at different schools.

Yesterday, *The Canberra Times* published the raw figures showing how each school performed on its National Assessment Program – Literacy and Numeracy tests. Most of Canberra's schools performed better than the national average.

The following tables outline how each Canberra school is performing compared with schools with similar populations.

The Australian Curriculum, Assessment and Reporting Authority, which publishes the website, has developed the Index of Community Socio-Educational Advantage.

This index is designed to measure the differing levels of educational advantage of each school's students.

The index takes into account 16 factors, such as parents' educational attainment, income, internet access and where the students live.

ICSEA values range from about 500 to 1300, although the vast majority are between 900 and 1100, with 1000 about average.

Forty-six of the ACT's schools have an ICSEA value above 1100 and all but six are above 1000.

The website uses this index to determine which 60 schools are most similar to each school, taking the 30 immediately above and immediately below.

It then works out the average results from these 60 schools to give an indication of how a particular school would be expected to perform. It lists this as the school's "similar" score.

The Canberra Times tables published in these pages today show how each ACT school has performed when compared with this similar score. The table includes each schools' score and the difference between this and the similar score assigned by the authority.

Schools are listed according to which schools performed above expectations. The results show that although most Canberra schools performed better than the national averages, almost three-quarters did not perform as well as would be expected.

It also reveals that several smaller schools are punching well above their weight, providing NAPLAN test scores much higher than expected. For example, the Islamic School of Canberra, which has 120 students at its Watson campus, recorded a score of 490 in Year 3 spelling. Students at similar schools, based on the ICSEA values, scored 425. This means there is a 65 point difference. We have published the school's score of 490, and the difference of 65. It is the largest difference, so it is listed first.

Some schools – such as Canberra High in Year 7 reading – performed exactly as the authority's formula expected. They have a difference of zero.

Those schools that performed below expectations have a negative difference result. The larger this result, the worse than expected that school performed.

However, parents should not regard these listings as a league table. Rather, they provide a snapshot of how students performed against those from similar schools in the NAPLAN tests last year.

The results should also be read in conjunction with school-provided information on the My School website.

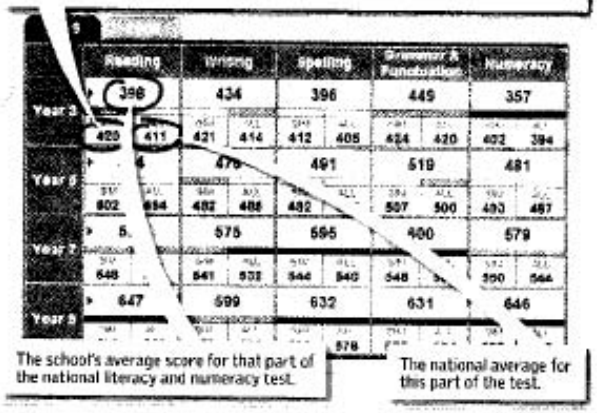
For example, Kaleen High School scores relatively poorly, however, its profile points out it provides specific help for students with special needs.

"A number of students within a Learning Support Unit and a Learning Support Unit (Autism) are supported within the school with specific learning programs," it said.

■ Further details are available at myschool.edu.au

WHAT THE NUMBERS MEAN

The average score of about 60 schools with populations that are statistically similar to the selected school. The schools share a number of factors in common such as the social and economic background of the students, whether the school is remote, the proportion of Indigenous students, or a combination of these factors.



The school's average score for that part of the national literacy and numeracy test.

The national average for this part of the test.

www.myschool.edu.au

As above but just schools and ICSEA scores:

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