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6.5 A user view of coverage build-up, ultimate reach and model differences

INTRODUCTION

In Great Britain, we are perhaps fortunate in that we have just one industry readership survey of the adult population. The survey is, of course, the JICNARS National Readership Survey and is universally accepted by the advertisers, agencies and media owners. Indeed, such is the authority of the JICNARS/NRS, that it is regarded as '*the bible*' in terms of a publication's *number* of adult readers, the demographic composition of its readers and its position relative to other competitive titles. Moreover, for more than 20 years JICNARS has always had an excellent reputation for adopting the highest technical controls, for carrying out experimental studies in search of possible improvements and for trying to ensure that the readership figures released are both accurate and meet the 'best' readership definitions available for large-scale practical application in the field.

It is not surprising, therefore, that as media owners we do not feel that we are selling 'white-space' – but are selling readership statistics. Similarly, the advertising agencies are buying this 'potential' to reach so many readers of type x or type y. Associated with the cost of the space, the currency or valuation of our products is largely based on readership research, ie cost per '000s and the coverage levels achieved by combinations of publications and their insertion levels when forming a print media schedule.

Having said this, it is perhaps surprising (*or* pragmatically realistic) that JICNARS does not greatly concern itself with the post-survey uses (or abuses) of the data that it so carefully collects and publishes in both report and computer tape form. A particular exception to this point is the recent and long-awaited JICNARS ban on the use of *quarterly* data for promotional purposes. Such a move has greatly improved the situation whereby, for example, a small publication may lose (say) 20% of its readership from one quarter to the next simply due to sampling variation, and then increase its readership back to the original level in the next quarter. In practice such a publication would, of course, find it quite unrealistic to change its rate-card up and down every quarter in order to try to maintain a relatively constant cost per thousand. The purpose of explaining this foregoing example is to illustrate how highly important it is to media owner users to have reasonably stable readership statistics in times of reasonably stable circulation sales. Not only does this reduce the number of occasions when rate-cards can become temporarily and artificially out-of-line with competitors', but also *more importantly* it means that a publication's advertising revenue (dependent on whether it gets on to a media schedule or not) does not fluctuate wildly from period to period simply due to the ups and downs of sampling variations within the 'readership bible'.

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AVERAGE ISSUE DATA, COST PER THOUSANDS AND SCHEDULE COVERAGE ESTIMATES

Since there is just one 'industry readership bible' in Great Britain and since all of the Post Survey Information Service (PSIS) computer bureaux have models which produce identical average issue readership estimates (and thus identical cost per thousand data), media owners can confidently use one or more bureaux when commissioning cost-ranking computer analyses without risk that the advertising agency (or a competitor) will produce conflicting data based on the same target audience and data period.

However, even within the computer bureaux currently approved by JICNARS to provide PSIS services, *the same is not true for coverage build-up and schedule coverage estimates.* For media owners (who carry out, or pay for, the majority of schedule evaluation analyses in Great Britain), it is not an infrequent event for a representative of one media house to present a schedule evaluation and coverage analysis to an agency which conflicts (sometimes quite significantly) with the results presented by another media house using a different computer 'model' to analyse exactly the same problem. Perhaps rightly, JICNARS has *not* concerned itself with this post-survey schedule analysis use of the data. Nevertheless, we as media owners *are* concerned, and would like to see closer agreement between the coverage estimates produced by the various 'models'.

6.5 A user view of coverage build-up, ultimate reach and model differences

A 'BLIND' TEST – WHY WE DID IT

(**a**) even accepting that the Media Research Group (MRG) carried out an independent test in Great Britain in 1978 (reported in *Admap*, April and June 1978), it is our opinion that by far the greater majority of readership data users in Great Britain are neither aware of the differences in coverage estimates produced by the various 'models', nor of the possible magnitude of these differences in certain situations. We thus wished to update the MRG test – particularly since we understand that one or more of the '1978 models' may have been modified (and improved) since then – and to see whether differences still existed.
(**b**) we were informed that Interactive Marketing Systems (IMS) were preparing a similar exercise for this symposium. However, having seen some of their proposed test schedules, we were not fully convinced that they were necessarily representative of the GB media market (eg, a schedule of women's magazines being analysed solely on an 'all adults' base - and thus showing comparisons at unrealistically low coverage levels). Indeed, it turned out that *none* of the 27 schedules analysed in the IMS test achieved a coverage level as high as 50%.
(**c**) unlike both the MRG (1978) and IMS (1981) tests, we felt that it was highly desirable that a '*blind*' test was carried out once again. (*Note*: to our knowledge, the last 'blind' test was conducted by the MRG in the late 1960s, ie before IMS and TELMAR had launched their PSIS services in Great Britain.)
(**d**) in practice, schedule analyses are frequently requested on a main 'target group', *plus* additional sub-group breakdowns. To our knowledge, no previous tests have taken this into account and thus we wished to incorporate this factor into our own investigation.
(**e**) we wished to learn and acquire a greater understanding of the current 'models' on the market – particularly in terms of the differences in results (if any) between and within 'individual probability' models and 'formula' based models.

THE 'BLIND' TEST DETAILS

(**a**) *data base:* JICNARS/NRS April to September 1980.
(**b**) *the bureaux tested*: for reasons of both time and cost, we restricted our test to three* of the four PSIS listed bureaux currently offering schedule evaluation analyses in Great Britain, ie HRS (Holborn Research Services) – individual 'probability' model; IMS (Modal) - formula model; TELMAR – formula model.
(**c**) *the target audiences and sub-groups*: some schedules were analysed on 'all adults' plus five mutually exclusive social class breakdowns, ie AB, C1, C2, D and E. Other schedules were analysed on a main target group of women aged 15–44, plus three sub-groups, ie 15–24, 25–34 and 35–44. One schedule typical of that used by a large supermarket was analysed on a base of 'all female housewives'.
(**d**) *the test schedules*: the test schedules were split into three groups and are described in full in Appendix I.

Schedules I to VIII represent realistic real-life types of schedule, covering the various media groups in GB, eg quality daily newspapers, popular daily and Sunday newspapers, Sunday colour magazines, general weekly and monthly magazines, women's weekly magazines and women's monthly magazines.

Schedules IX to XIV are of more academic interest and were designed to compare the various models when schedules comprised *single insertions* in each publication on the list.

Schedules XV to XXII are again of more academic interest and were designed firstly to compare the various estimates of readership coverage build-up when insertions are increased within a *single population* and, secondly, to compare the coverage estimates produced with JICNARS' 'Theoretical (non-zero) Maximum Coverage' figures (ie = 100% minus the percentage claiming 'nil' frequency).

COMPARISONS OF RESULTS

The most important section of this paper is the Appendices. Very detailed summaries of the results are shown in Appendices II to V. In this paper, it is impossible to do justice to the quantity of data available. Neither is it possible to feel that we have summarised and interpreted every point and that we have explored every avenue of investigation. We strongly recommend to those readers who are interested in this subject that, at leisure, they explore and interpret these Appendices further for themselves.

Nevertheless, in the short time that was available to us for interpretation of the test results, we did discover some extremely interesting and important findings. The highlights are listed below:

** The authors did not test CRC (Cybernetics Research Consultants Limited – since past experience, and the MRG test in 1978, showed that CRC's 'probability model' gave results that were very close to those produced by HRS.*
** RSL (Research Services Limited), the current JICNARS research contractor who do not sell a 'Schedule Evaluation' programme, were used to supply the 'Net Average Issue Coverage Benchmarks' and the 'Theoretical (non-zero) Maximum Coverages' used in the comparisons of results.*

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(a) coverage estimate comparisons for schedules I–VIII (ie the realistic schedules – ref: Appendix II)

(**i**) the TELMAR (formula) program generally gave the *highest* coverage estimates (on seven out of the eight test schedules).
(**ii**) the HRS (probability) program gave the *lowest* coverage estimates (on seven out of eight schedules).
(**iii**) the IMS Modal (formula) program was sometimes close to the TELMAR coverage estimates and sometimes closer to the HRS coverage estimates. It gave the highest coverage on one occasion and the lowest once.
(**iv**) there appears to be *no consistent pattern*, either by absolute coverage sizes or by demographic breakdowns, which explains the relative *sizes* of the coverage estimate differences between the three models tested. It is inferred, therefore, that these 'coverage estimate differences' are much more related to the 'reading frequency claim distributions' and the 'observed probabilities' *within* the various publication groups tested (and, possibly, even related to the specific titles *within* these broad publication groups).
(**v**) for two schedules, Schedules I and VIII (which both comprised solely daily newspapers), none of the coverage estimates for the three models exceeded the 'Theoretical (non-zero) Maximum Coverage'.

TABLE 1
Schedules V and VI (Base: women 15–44)
Coverage estimates

	Theoretical (non-zero) maximum %	*IMS Modal* %	*TELMAR* %	*HRS* %
Schedule V	(50.1)	50.9→	59.5→	48.4
Schedule VI	(70.0)	60.4→	75.2→	66.6

TABLE 2
Coverage estimates (base: women 15–44)

	Schedule VI %	*Schedule VIII* %	*VIII–VI (Difference)* %
IMS (Modal)	60.4	68.3	(+7.9)
TELMAR	75.2	72.0	(−3.2)
HRS	66.6	65.2	(−1.4)

(**vi**) for five schedules (Schedules II, III, IV, V and VI) one or both of the formula models exceeded this theoretical 'non-zero maximum' coverage.
(**vii**) in a few instances the coverage differences between the three models were relatively small, eg a range of 2.5 coverage points between the highest and lowest for Schedule VIII (daily newspapers).
(**viii**) in many instances, the differences between the coverage estimates were huge, ie of 10–15 coverage points! (**Table 1**).
(**ix**) in the past, it has been argued (*not* by media owner users) that differences between models do not matter too much if the relative rankings of alternative schedules remain the same *within* each model. Unfortunately this cannot be assumed or guaranteed, as a comparison between Schedule VI (say, a colour schedule) versus Schedule VIII (say, a mono schedule) vividly illustrates! (**Table 2**).

(b) the whole is not always the sum of the parts *(ie comparing the coverage for the main target audience with the sum of the sub-group coverages – Schedules I to VI – ref: Appendix III)*

The formula models never total exactly. This would seem to be inevitable since, presumably, the formulae are different for each separate sub-group analysed *and* for the grand total. Individual respondent (probability) programs do total exactly, by definition. The differences found in the formula models were not excessively large in percentage terms – although in absolute terms, in one instance (Schedule II) the difference did amount to roughly 500,000 adults. For a media owner sales representative facing an agency media buyer with such a computer print-out, this might cause problems – since the agency executive might well be looking for some excuse with which to deflect the media owner's sales pitch! (**Table 3**).

TABLE 3

	Base group coverage	*Sub-groups totalled*
Schedule I		
IMS (Modal) ('000s)	8524→	8303
Index	(100)	(97.4)
TELMAR ('000s)	9269→	8945
Index	(100)	(96.5)
Schedules I to VI		
Average Index Difference	IMS modal	−1.7
	TELMAR	−1.5
Maximum Index Difference	IMS modal	−3.0
	TELMAR	−3.6

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(c) frequency distributions and cumulative frequency distributions

Frequency distributions are less rarely used in Great Britain nowadays, simply because one does not know what to do with them other than look at the 'four or more OTS' or 'six or more OTS' coverage levels on certain special occasions. Nevertheless, we did wish to see whether or not the three models gave similar frequency distribution shapes, *and* similar 'six or more OTS coverage levels'. *Again there is no consistent pattern.* The graphs in **Figures 1**, **2** and **3** show that sometimes the frequency distributions are similar in shape and sometimes quite markedly different. However, the coverage levels of the three models at 6+ OTS were relatively similar and within three coverage points of one another in the three schedules looked at in this way. A major difference between the models appears to be the estimates of the number of people having *exactly one* OTS.

TABLE 4
6+ OTS coverage estimates

	IMS (Modal) %	*TELMAR* %	*HRS* %
Schedule V	23.4	22.6	25.8
Schedule VI	36.2	35.3	37.1
Schedule VII	43.3	39.9	42.9

(d) schedules with single insertions in publications (*Schedules IX to XIV – ref: Appendix IV*)

(i) coverage estimates for single insertion schedules are *relatively* consistent between models. The coverage point differences from the RSL/JICNARS 'net average issue benchmark' were as shown in **Table 5**.

(ii) the IMS (Modal) and TELMAR results are virtually identical in these special circumstances.

FIGURE 1
OTS frequency distributions

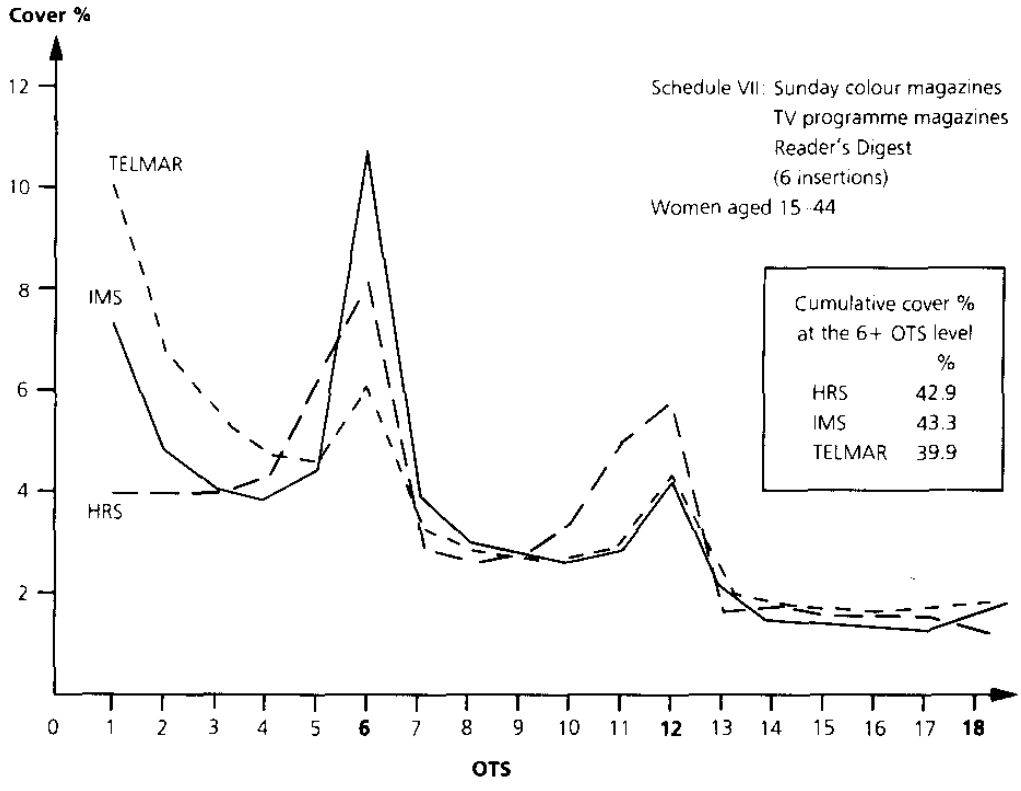

FIGURE 2
OTS frequency distributions

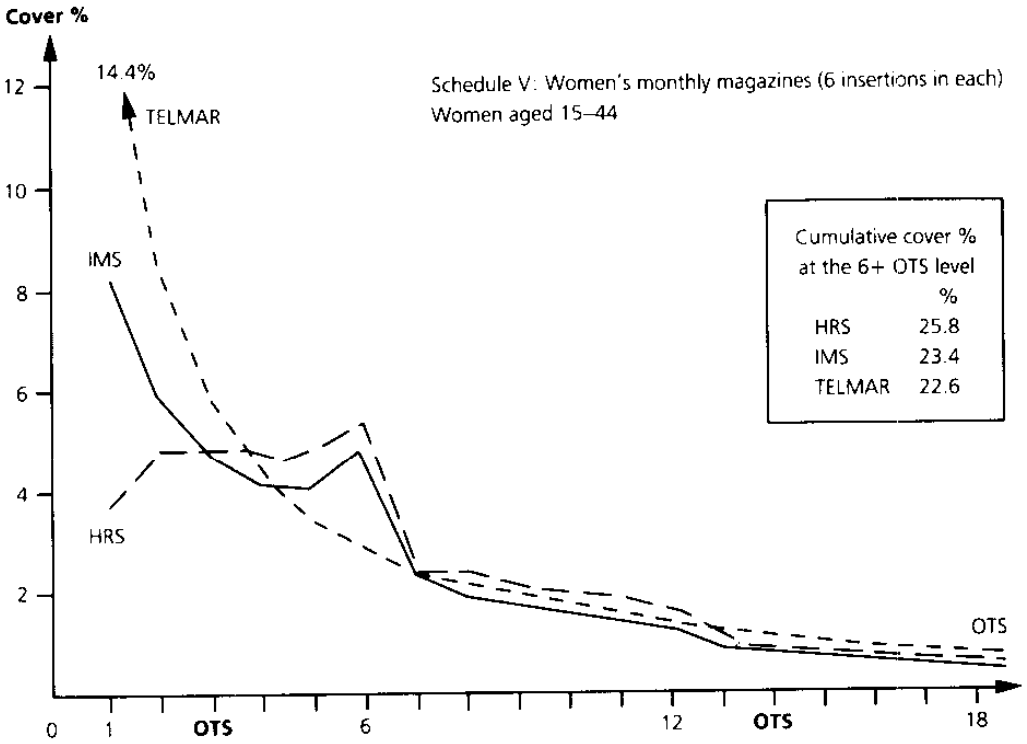

FIGURE 3
OTS frequency distributions

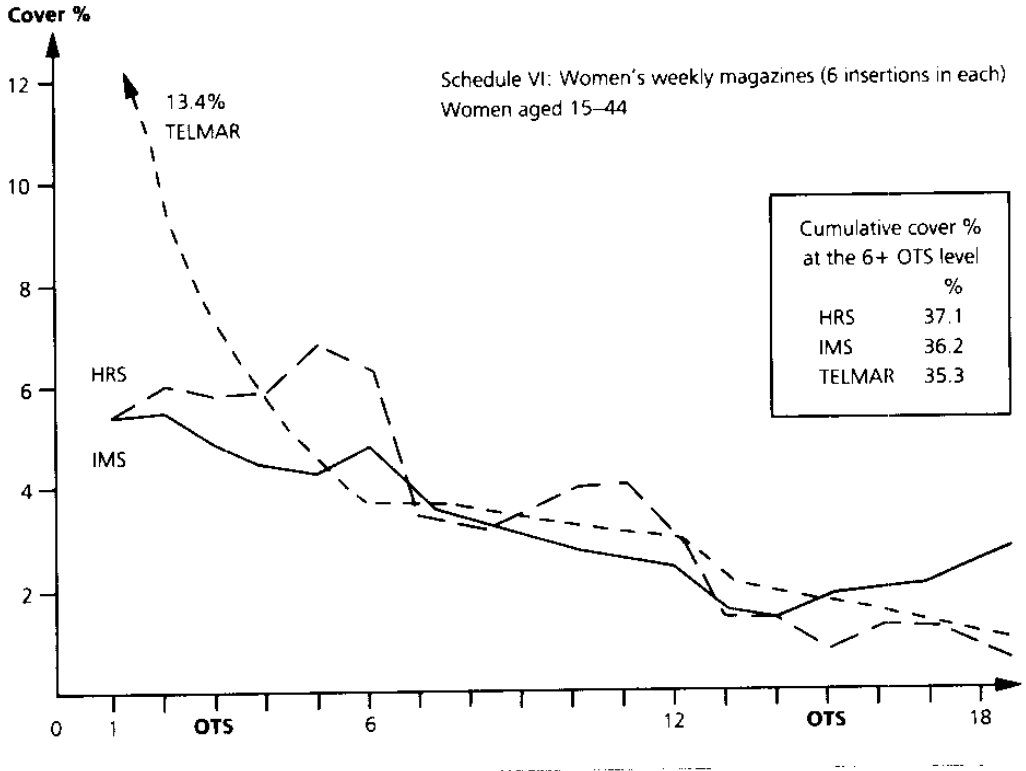

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TABLE 5
Difference from benchmark

	IMS	*TELMAR*	*HRS*
Mean coverage point difference	0.5	0.5	0.0
Maximum coverage point difference	1.6	1.6	0.1

(e) cumulative readership build-up
(ie coverage estimates for multiple insertions in single publications. Schedules XV to XXII – ref: Appendix V)

(i) the IMS (Modal) and TELMAR results were identical.
(ii) because the JICNARS question for monthly magazines is quite specific, ie it covers a *'specific'* six month period rather than an *'average'* six month period and thus it does *not* contain a 'less than one out of six' scale point, we knew from the MRG test in 1978 that using a formula model, a schedule of 12 insertions in a monthly magazine could yield a coverage estimate higher than the 'theoretical (non-zero) maximum'. This was verified in Schedules XVII and XXII. For monthly magazines, it is suggested therefore that JICNARS might ask either about reading in the last 12 months, *or* over an 'average' six month period.
(iii) previously, in 1978, we had also been told that formula models would not produce coverage estimates higher than the 'theoretical (non-zero) maximum' at the six insertion level for monthly magazines. This was not found to be the case – see Schedules XIX, XX and XXI in Appendix V.
(iv) the formula model coverages exceeded the 'theoretical (non-zero) maximum' for 12 insertions in the (weekly) *Observer Sunday Colour Magazine* - Schedules XVII and XVIII.
(v) since both the IMS and TELMAR systems are 'black-box' methods, we do not know where their saturation levels occur.
(vi) the HRS probability model, by definition, can never totally reach 'theoretical (non-zero) maximum' coverage level unless an infinite number of insertions is used. This does not cause anomalies for daily, Sunday or weekly publications. However, because of the different form of the JICNARS reading frequency question for monthly publications, the HRS coverage estimates at the six insertion level (and, similarly, the figures at the six insertion level published in JICNARS' own 'Cumulative Readership' tables of their main NRS survey reports) do *not* reach the number of people claiming to have read in the last six months.

Summary
(i) on realistic schedules, coverage level estimates vary significantly between the three models.
(ii) some variations are large enough to affect media choice.
(iii) the base group coverage is not equal to the sum of the sub-group coverages for two of the models.
(iv) formula model coverage estimates can frequently exceed the 'theoretical (non-zero) maximum' for weekly and monthly publication schedules.
(v) frequency distribution shapes and cumulative frequency distributions (eg coverage estimates at the 6+ OTS level) differ between the three models.
(vi) the single insertion schedules tested gave coverage results relatively close to the 'net average issue' benchmark.
(vii) for individual weekly and monthly publications, the cumulative readership build-up can exceed the 'theoretical (non-zero) maximum coverage' at 12 insertions for a weekly and at six insertions for a monthly publication.

CONCLUSIONS

***'Research data collection** and **model design development** must take **user needs** into full consideration.'*
User needs are as follows:
(i) the prime user requirement is for the 'best possible' average issue readership data.
(ii) as secondary requirements, we should like to see: agreed 'saturation levels' for schedule coverages; sub-groups that add up to the main total; models that agree (or roughly agree) on their coverage estimates; economic analysis costs; data with which it is possible to increase 'understanding' among media sales representatives and agency media personnel using relatively fast and simple training programmes.*

* *The authors are conscious of the 'dynamic' nature of reading behaviour that can occur in real-life situations, eg six insertions in the* Observer *or* Sunday Times Colour Magazine *might achieve different coverage levels according to whether these insertions are spread out over six weeks or six months. Further, they would welcome investigations into such possible 'dynamic' differences. However, from a practical user viewpoint, they would recommend research that ultimately leads to a final* pragmatic solution *(or compromise), which can easily and cheaply be analysed, applied and understood within the practical framework of the media buying and selling operation.*

APPENDIX I
The schedules (multiple publication, multiple insertion schedules)

	Schedule							
	I	*II*	*III*	*IV*	*V*	*VI*	*VII*	*VIII*
The Times	6	—	—	—	—	—	—	—
Guardian	6	—	—	—	—	—	—	—
Financial Times	6	—	—	—	—	—	—	—
Daily Telegraph	6	—	—	—	—	—	—	—
Observer Mag	—	6	—	—	—	—	6	—
Telegraph S Mag	—	6	—	—	—	—	6	—
Sunday Times Mag	—	6	6	—	—	—	6	—
Radio Times	—	—	6	—	—	—	6	—
TV Times	—	—	6	—	—	—	6	—
Reader's Digest	—	—	6	—	—	—	6	—
Daily Express	—	—	—	6	—	—	—	6
Daily Mail	—	—	—	6	—	—	—	6
Daily Mirror	—	—	—	6	—	—	—	6
Sun	—	—	—	—	—	—	—	6

	Schedule							
	I	*II*	*III*	*IV*	*V*	*VI*	*VII*	*VIII*
Sunday Express	—	—	—	6	—	—	—	—
Sunday Telegraph	—	—	—	6	—	—	—	—
Sunday Mirror	—	—	—	6	—	—	—	—
News of the World	—	—	—	6	—	—	—	—
Woman	—	—	—	—	—	6	—	—
Woman's Own	—	—	—	—	—	6	—	—
Woman's Realm	—	—	—	—	—	6	—	—
Woman's Weekly	—	—	—	—	—	6	—	—
Family Circle	—	—	—	—	6	—	—	—
Woman & Home	—	—	—	—	6	—	—	—
Good Housekeeping	—	—	—	—	6	—	—	—
Ideal Home	—	—	—	—	6	—	—	—
Homes & Gardens	—	—	—	—	6	—	—	—
House & Garden	—	—	—	—	6	—	—	—

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Schedule

IX = 1 insertion in Schedule I publications
X = 1 insertion in Schedule II publications
XI = 1 insertion in Schedule III publications

Schedule

XII = 1 insertion in Schedule IV publications
XIII = 1 insertion in Schedule V publications
XIV = 1 insertion in Schedule VI publications

Schedule

XV = 6 insertions in the Observer Magazine *(Base i)*
XVI = 6 insertions in the Observer Magazine *(Base ii)*
XVII = 12 insertions in the Observer Magazine *(Base ii)*
XVIII = 26 insertions in the Observer Magazine *(Base ii)*

Schedule

XIX = 6 insertions in the Reader's Digest
XX = 6 insertions in Woman & Home
XXI = 6 insertions in House & Garden
XXII = 12 insertions in House & Garden

APPENDIX II
Percentage coverages (Schedules I to VIII)

Schedule	*Base*	*RSL/JICNARS 'non-zero' maximum %*	*IMS (Modal) (F) %*	*TELMAR (F) %*	*HRS (P) %*
	All adults	25.9→	19.8	21.6	19.1
	AB	60.5→	52.8	53.9	49.9
	C1	35.5→	25.1	28.4	26.5
I	C2	15.5→	9.3	10.6	9.2
	D	10.1→	6.0	6.9	5.9
	E	7.4→	4.4	4.5	4.8
	All adults	31.1→	30.7	32.1	27.8
	AB	63.1→	63.2*	64.0*	59.2
	C1	42.6→	41.1	42.9*	38.2
II	C2	21.8→	20.8	21.8	18.7
	D	14.9→	11.9	12.7	12.2
	E	9.8→	8.9	9.6	8.4

(continued on next page)

APPENDIX II (continued)
Percentage coverage (Schedules I to VIII)

	All adults	59.5→	60.1*	61.7*	56.4
	AB	76.4→	76.3	78.2*	73.1
	C1	67.6→	66.8	68.6*	64.2
III	C2	55.5→	54.7	59.1*	52.4
	D	50.0→	49.0	52.0*	46.8
	E	42.0→	41.3	43.0*	39.6
	All adults	83.8→	83.6	84.8*	80.6
	AB	81.1→	79.4	81.0	76.5
	C1	85.6→	85.2	86.3*	81.9
IV	C2	86.9→	87.0*	88.1*	84.5
	D	84.6→	84.2	85.6*	81.9
	E	71.9→	71.6	72.2*	68.2
	Women 15–44	50.1→	50.9*	59.5*	48.4
V	15–24	41.0→	40.0	46.9*	38.5
	25–34	54.8→	55.7*	64.4*	53.5
	35–44	56.1→	57.4*	66.5*	54.9
	Women 15–44	70.0→	60.4	75.2*	66.6
VI	15–24	70.4→	62.4	78.1*	67.6
	25–34	70.4→	59.4	74.5*	66.9
	35–44	69.2→	58.1	72.1*	65.1
VII	**Women** 15–44	na→	68.3	72.0	65.2
VIII	**Housewives**	73.5→	69.9	69.5	67.4

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*(F) = Formula model (P) = Probability model * = Higher than the 'non-zero' maximum.*

APPENDIX III
Coverages – differences between base group total and the sub-groups totalled (Schedules I to VI)

	IMS (Modal) (F)			*TELMAR (F)*		
	Base group (BG) '000s	*Sub-groups Total '000s*	*Index (Base = BG)*	*Base group (BG) '000s*	*Sub-groups Total '000s*	*Index (Base =BG)*
Schedule						
I	8,524	8,303	(97.4)	9,269	8,945	(96.5)
II	13,213	12,816	(97.0)	13,793	13,289	(96.4)
III	25,848	25,274	(97.8)	26,525	26,526	(100.0)
IV	35,940	35,738	(99.4)	36,446	36,361	(99.8)
V	5,726	5,665	(98.9)	6,692	6,582	(98.4)
VI	6,796	6,758	(99.4)	8,457	8,448	(99.9)
Average Index difference			−1.7%			−1.5%
Maximum Index difference			−3.0%			−3.6%

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HRS is not included as, by definition, sub-groups total to the Grand Total in individual probability models. Nevertheless, we checked that in all cases this was true.

APPENDIX IV
Single insertion, multiple publication (Schedules IX to XIV)

Schedule	Base	RSL/JICNARS net average issue benchmark %	IMS (Modal) (F) %	TELMAR (F) %	HRS (P) %
	All adults	12.8→	12.5	12.5	12.8
	AB	38.2→	37.3	37.3	38.2
	C1	16.7→	16.2	16.2	16.7
IX	C2	5.1→	5.0	5.0	5.1
	D	3.0→	2.9	2.9	3.1
	E	2.8→	2.8	2.8	2.8
	All adults	19.6→	19.5	19.5	19.6
	AB	46.7→	46.1	46.1	46.7
	C1	26.8→	26.4	26.4	26.8
X	C2	12.0→	11.9	11.9	12.0
	D	6.4→	6.4	6.4	6.4
	E	5.8→	5.5	5.6	5.8
	All adults	43.9→	44.1	44.1	43.9
	AB	60.7→	61.0	60.9	60.7
	C1	50.3→	50.5	50.5	50.3
XI	C2	39.2→	39.5	39.5	39.2
	D	35.3→	35.6	35.6	35.3
	E	31.0→	31.0	31.0	31.0
	All adults	70.2→	70.2	70.2	70.2
	AB	65.5→	66.0	66.0	65.5
	C1	71.4→	71.6	71.6	71.4
XII	C2	74.3→	73.6	73.6	74.3
	D	71.7→	71.3	71.3	71.6
	E	58.7→	59.1	59.1	58.7
	Women 15–44	32.9→	31.9	31.9	32.9
XIII	15–24	25.3→	24.6	24.6	25.3
	25–34	36.0→	35.7*	35.0*	36.0
	35–44	38.7→	37.5	37.6	38.8
	Women 15–44	43.5→	42.3	42.3	43.5
XIV	15–24	45.9→	44.3	44.3	45.9
	25–34	42.5→	41.4	41.4	42.5
	35–44	41.5→	40.9	40.9	41.5
Mean coverage points difference from benchmark		→	0.5	0.5	0.0
Maximum coverage points difference		→	1.6	1.6	0.1

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Note

*(i) *apart from possible rounding differences of 0.1 coverage points, this is the only instance we found of a difference between IMS (Modal) and TELMAR on 'single insertion' schedules.*

(ii) the HRS model should agree with the benchmark (by definition), since the first insertion in each publication is based on 'average issue' data and only the second and subsequent insertions are based on probabilities.

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APPENDIX V
Single publications with multiple insertions (schedules XV to XXII)

Schedule		*RSL/JICNARS 'non-zero' maximum %*	*IMS (Modal) (F) %*	*TELMAR (F) %*	*HRS (P) %*
XV	Observer Mag × 6 (Base: adults)	16.9→	14.6	14.6	13.7
XVI	Observer Mag × 6 (Base: women 15–44)	19.5→	16.9	16.9	15.7
XVII	Observer Mag × 12 (Base: women 15–44)	19.5→	19.7*	19.7*	17.4
XVIII	Observer Mag × 26 (Base: women 15–44)	19.5→	22.7*	22.7*	18.7
XIX	Reader's Digest × 6 (Base: adults)	30.0→	31.7*	31.7*	28.4
XX	Woman & Home × 6 (Base: women 15–44)	20.4→	22.1*	22.1*	19.5
XXI	House & Garden × 6 (Base: women 15–44)	14.8→	15.6*	15.6*	13.7
XXII	House & Garden × 12 (Base: women 15–44)	14.8→	18.8*	18.8*	14.6

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Note
*(i) *denotes a coverage level higher than the 'non-zero' maximum.*
(ii) the TELMAR and IMS (Modal) results are identical.

The pattern of asterisks shown above was also consistent within *all age and social class sub-groups analysed with the one following exception:*

Schedule	*RSL/JICNARS 'non-zero' maximum %*	*IMS (Modal) (F) %*	*TELMAR (F) %*	*HRS (P) %*
XVII Observer Mag × 12				
Women 15–44	19.5→	19.7*	19.7*	17.4
15–24	21.3→	22.0*	21.9*	18.7
25–34	18.8→	18.1	18.2	17.0
35–44	18.0→	18.4*	18.4*	16.3

Using the Average Issue and Reading Frequency claim data for April to September 1980, it was also possible (using a pocket calculator) to determine six insertion coverage estimates for single publications using the method approved by JICNARS and published in the 'Cumulative Readership' tables in the JICNARS National Readership Survey reports (Volumes 1 & 2). This exercise was carried out for the two schedules based on 'all adults', ie Schedules XV and XIX.

(continued on next page)

APPENDIX V (continued)
Single publications with multiple insertions (Schedules XV to XXII)

Schedule	*RSL/JICNARS 'non-zero' maximum %*	*'JICNARS method' six insertion cumulative readership %*	*IMS (Modal) & TELMAR (F) %*	*HRS (P) %*
Schedule XV (Observer Mag × 6)	16.9→	14.1	14.6	13.7*
Schedule XIX (Reader's Digest × 6)	30.3→	28.8	31.7	28.4*

** The HRS estimate is lower (by definition), and possibly slightly better than the 'JICNARS method' figure – since the 'JICNARS method' calculates probabilities on an average basis of 'all adults', whereas the HRS model calculates separate probabilities for mutually exclusive age within class within sex sub-groups.*