CAMBRIDGE PHILOSOPHICAL SOCIETY

STATEMENT OF ACCOUNTS FOR THE YEAR ENDED 31 DECEMBER 1976 GENERAL INCOME AND EXPENDITURE ACCOUNT

Year ended 31.12.75				
£	£	Income	£	£
14,050		Dividends and interest (gross)		14,877
331		Members' subscriptions		360
17		Transfer from Compounders' Fund for life members		17
_		Donations		2
36		Sales of Arcturus Atlas		74
2		Sales of Society History		1
	10,197	Xerox copier: Income	11,158	
		Less : Expenses		
		3,481 Wages 4,075		
		6,016 Meter rent and copy charges 6,355		
297	9,900	403 Materials etc 1,344	11,774	(616)
14,733		· · · · · · · · · · · · · · · · · · ·	 	14,715
		${\it Expenditure}$		
	2,946	Executive secretary's salary	3,240	
	434	Printing and stationery	585	
	352	Postages	594	
	385	Audit fee and accountancy charges	450	
	71	Sundry expenses	120	
	54	Insurances	54	
	417	Expenses of meetings including honoraria	620	
	50	Delegates to conferences		
		Cost of copies for the Scientific Periodicals Library:		
	1,127	Mathematical Proceedings	1,293	
	469	Biological Reviews	603	
	343	Grants to translation service	318	
		Interest credited to:		
	275	Compounders' Fund	326	
	27	Sir Joseph Larmor's Fund	27	
		Transfers to:		
	2,000	Research Studentships Fund	2,500	
	500	Working Parties Fund	500	
	1,000	Travel Grants Fund	1,000	
	27	William Hopkins Prize Fund	27	
	66	William Bate Hardy Prize Fund	66	
	30	Sir Joseph Larmor's Fund	39	
	71	Depreciation of office equipment	60	
10,644				12,422

Excess of income over expenditure for the year ...

£2,293

£4,089

ACCUMULATED FUND

		ACCUMU	${f LATED}$	FUN	D				
Year ended									
31.12.75									
£	£							£	£
	r	D-1 4 T 1074	•					x	
194,951		Balance 1 January 1970				•••	•••		183,591
4,089		Excess of income over				i r	•••		2,293
(15,449)		Net profit/(loss) on sale	of invest	tments	•••	•••	•••		(6,776)
£183,591		Balance 31 December 1	976	•••	•••	•••	•••	ź	£179,108
		PUBLIC	ATION	FUN	D				
		Mathematical Procee	dings (Vo	olumes	79 and	l 80)			
		_	Income						
23,539		Sales							30,781
161		Sales of separates	•••	•••	•••	•••	•••		113
1,299			•••	•••	•••	•••	•••		_
250	•	Members' subscriptions	 TTminnomoid	•••	•••	•••	•••		1,321 250
230 174		Grant from Cambridge			 life mes	 b o ==	•••		189
1/4		Transfer from Compoun	ders ru	nu ior	me me	mbers	•••		109
25,423									32,654
20,120									02,001
		E	xpenditu	re					
	02 500							00 100	
	23,522	Printing	•••	•••	•••	•••	•••	28,136	
	1,239	Printing of separates	•••	•••	•••	•••	•••	1,588	
	3,893	Commission on sales	•••	•••	•••	•••	•••	5,137	
	1,094	Editorial expenses	•••	•••	•••	•••	•••	1,297	
	1,741	Carriage	•••	•••	•••	•••	•••	2,518	
	31,489							38,676	
	01,100	Less:						00,010	
		Cost of unsold copies t	ranefarre	d to Pu	blicatio	n Rese	rva		
	(1,595)	Fund			DIIOGOI) II 1. VOBO		(1,403)	
	(1,000)	Cost of copies for th			···· riodical	la Libr	AP37	(1,100)	
		transferred to Ger							
	(1,127)	Account	iorai iii	ome a	#IIG 132	pondio		(1,293)	
28,767	(1,127)	Account	•••	•••	•••	•••	•••	(1,200)	35,980
20,707									
(3,344)		Net surplus (deficit) for	VAGE	•••					(3,326)
3.202		Fund balance 1 January		•••	•••	•••	•••		(142)
0,202		rana palance i vanuar	y 1010	•••	•••	•••	•••		
£(142)		Fund balance 31 Decem	ber 1976				•••		£(3,468)
~(1±~)		Turiu Salarioo di 19000	~01 10.0	•••	•••	•••			_(5,100)

Biological Reviews (Volume 51)

£ £ 15,107 Sales 140 Sales of separates 933 Members' subscriptions 250 Grant from Cambridge University 44 Transfer from Compounders' Fund for life members	£ 19,347 223 998 250 55 20,873
140Sales of separates933Members' subscriptions250Grant from Cambridge University44Transfer from Compounders' Fund for life members	223 998 250 55
933 Members' subscriptions	998 250 55
250 Grant from Cambridge University 44 Transfer from Compounders' Fund for life members	250 55
44 Transfer from Compounders' Fund for life members	55
·	
16,474	20,873
Expenditure	
8,973 Printing 10,248	
508 Printing of separates 435	
3,352 Commission on sales 4,514	
625 Editorial expenses 740	
1,276 Carriage 1,412	
14,734 17,349 Less:	
Cost of unsold copies transferred to Publication Reserve (296) Fund (190) Cost of copies for the Scientific Periodicals Library	
transferred to General Income and Expenditure (469) Account (603)	
13,969	16,556
2,505 Net surplus for year 17,678 Fund balance 1 January 1976	4,317 20,183
£20,183 Fund balance 31 December 1976	£24,500
PUBLICATION RESERVE FUND Mathematical Proceedings	
3,370 Sales	2,357
Cost of unsold copies of Volumes transferred from	
1,595 Publication Fund 1,403	
437 Carriage 135	
185 Clerical fees 89	
336 West Cambridge Store building costs —	
2,553	1,627
817 Net surplus for year	720
817 Net surplus for year	730 14,128
	£14,858

Biological Reviews

			Вгоюди	ai Ke	views					
Year ended 31.12.75										
£	£								£	£
1,326		Sales Less:	•••	•••	•••	•••		•••		819
		Cost of unso	ld copie	s of	$\mathbf{Volumes}$	trans	ferred	\mathbf{from}		
	296	Publication		•••			•••	•••	190	
	80	Carriage		• • •	•••	•••	•••	•••	37	
	185	Clerical fees	•••	•••	•••	•••	•••	•••	89	
	336	West Cambri	dge Sto	re bui	lding co	sts	•••	•••		
										316
429		Net surplus for ye	ar	•••	•••			•••		503
15,844		Fund balance 1 Ja		1976	•••		•••	•••		16,273
£16,273		Fund balance 31	Decemb	er 197	76	•••	•••	•••		£16,776
		COM	POUN	DER	s' FUI	D				
4,935		Balance 1 Januar	y 1976		•••	•••	•••			5,374
275		Transfer from Gen			ind Exp	enditu	гө Асс	ount		326
<i>399</i>		Life subscriptions	receive	d	•••	•••	•••	•••		336
5,609		-								6,036
		Less:		_	,					
	1~1	Transfer to P							100	
	174	Mathematic				•••	•••	•••	189	
	44 17	Biological 1			 d E	 	 A oo		55 17	
235 -	17	Transfer to Ge	merarin	COLLE	andExp	enuru	reacc	ount	17	261
200 -								•		
£5,374		Balance 31 Decem	ber 197	6	•••	•••	•••	•••		£5,775
		RESEARCI	ı stu	DEN	тѕніг	s fu	ND			
11		Balance 1 January	7 1976	•••	•••			•••		—
239		Transfer from Wo	rking P	arties	Fund	• • •	•••	•••		
2,000		Transfer from Gen	eral Inc	ome a	nd Expe	enditu	e Acc	ount		2,500
2,250		-								2,500
0.050		Less:			الماليين					0.420
2,250		Research Stu	dentsnij	os awe	ıraea	•••	•••	•••		2,438
Nil		Balance 31 Decem	ber 197	6		•••	•••	•••		£62
		WORK	ING P	ART	ies fi	UND				
916		Balance 1 January	1976	•••	•••	•••	•••	•••		577
500		Transfer from Gen	eral Inc	ome a	nd Expe	enditu	e Acco	ount		500
1,416		_								£1,077
		Less:								
	600	Grants for W				 101 1	•••	•••	985	
020	239	Transfer to R	esearch	Stude	entships	rund	•••	•••	_	005
839 -								-		985
£577		Balance 31 Decem	her 107	ß						£92
		Datatice of Decelli	131	•	•••	•••	•••	•••		====

TRAVEL GRANTS FUND

Year ended	TRAVEL GRANTS FUND	
31.12.75		4
£ 202	£ Balance 1 January 1976	£ 147
1,000	Transfer from General Income and Expenditure Account	1,000
1,202		1,147
1.055	Less:	1 105
1,055	Travel Grants awarded	1,125
£147	Balance 31 December 1976	£22
	WILLIAM HOPKINS PRIZE FUND	
67	Balance 1 January 1976 Interest on £663 Surrey County 6% Redeemable Stock	133
39 27	1978/80 Transfer from General Income and Expenditure Account	40 27
	Transier from General Freeding and Expenditure Recount	
133	To Dr. 111	200
	Less: Prize awarded during year	200
£133	Balance 31 December 1976	Nil
	Note: The Society is Trustee only of the investment held	
	for this fund.	
	WILLIAM BATE HARDY PRIZE FUND	
134	Balance 1 January 1976	200
66	Transfer from General Income and Expenditure Account	66
200		266
_	Less: Prize awarded during year	200
£200	Balance 31 December 1976	£66
	Balance 31 December 1970	
	SIR JOSEPH LARMOR'S FUND	
447	Balance 1 January 1976	448
	Sale of Faraday Pamphlets Interest and transfer from General Income and Expendi-	250
57	ture Account	66
504 56	Less: Lecture and expenses	764 66
	2000. 2000tato data vaporados	
£448	Balance 31 December 1976	£698

BALANCE SHEET 31 DECEMBER 1976

31.12.75			- · 						
£	£							£	£
	00~	Fixed Assets:							
	397	Equipment as at 1 Jan	nuary 1		•••	•••	•••	401	
	76	Additions at cost	•••	•••	•••	•••	•••		
	473							401	
	71	Less: Depreciation for	year	•••	•••		•••	60	
402		-	•						341
238,705		Investments at cost	•••	•••	•••		•••		229,251
		(market value 31.12.75		,423)					
		(market value 31.12.76	£231	,520)					
	0.011	Current Assets:							
	2,311	Stocks of Xerox mater			1	•••	•••	1,265	
	3,976 901	Sundry debtors and in				ıe	•••	4,991	
	901 654	Cash held by stockbrol Cash at bank: Current		···	•••	•••	•••	5,036	
	390	Deposit			•••	•••	•••	1,296 1,543	
	178	Cash and postage stam			•••	•••	•••	200	
		casii and postage stan	ps m i	iwiici	•••	•••	•••		
	8,410							14,331	
		Less: Current Liabilities:							
	6,447	Sundry creditors	•••	•••	•••	•••	•••	4,716	
	<i>158</i>	Subscriptions received	in adv	ance	•••	•••	•••	718	
	6,605							5,434	
1,805		Net Current Assets							8,897
				•••	•••	•••	•••		
£240,912								:	£238,489
		Ti'							
102 501		Financed by: Accumulated Fund							170 100
183,591		Publication Fund:	•••	•••	•••	•••	•••		179,108
	(142)	Mathematical Proceed	linas					(3,468)	
	20,183	Biological Reviews	e e e e e e e e e e e e e e e e e e e	•••	•••		•••	24,500	
20,041		Dividged Herical	•••	•••	•••	•••	•••		21,032
,									-,
		Publications Reserve F	und:						
	14,128	Mathematical Proceed	lings	•••	•••	•••		14,858	
	16,273	${\it Biological}{\it Reviews}$	• • •	•••	•••	•••	•••	16,776	
30,401									31,634
5,37 4		Compounders' Fund	<u></u> .	•••	•••	•••	•••		5,775
		Research Studentships		•••	•••	•••	•••		62
577		Working Parties Fund		•••	•••	•••	•••		92
147		Travel Grants Fund	 Tr	•••	•••	•••	•••		22
133 200		William Hopkins Prize William Bate Hardy P		nd	•••	•••	•••		66
200 448		Sir Joseph Larmor's F			•••	•••	•••		698
		ou occopii Marinoi s F	assu.	•••	•••	•••	•••		
£240,912								4	£238,489
		Note: Unsold copies of pu	blicatio	na har	to not 1	haan wa	boul		

 ${\it Note}: {\it Unsold copies of publications have not been valued}$

AUDITORS' REPORT

We have examined the foregoing Statement of Accounts with the books and vouchers, and in our opinion, the same show a true and fair view of the Income and Expenditure of the Society for the year ended 31 December 1976 and of its financial state on that date, to the best of our knowledge and belief.

Cambridge 27 June 1977 PETERS, ELWORTHY & MOORE
Chartered Accountants

INDEX

			3
Akbulut, S. On the 2-dimensional homology classes of 4-manifolds			
Allwright, D. J. Harmonic balance and the Hopf bifurcation .			
Baker, J. W. and Milnes, P. The ideal structure of the Stone-Čech con	pacti	fication of	a
group	•		•
Barbour, A. D. The uniqueness of Atkinson and Reuter's epidemic wa	aves		•
Barnes, E. S. and Mather, M. The number of non-homogeneous latt sets of R^n	ice po	ints in su	b-
Bedford, J. C. and Gibson, C. G. On stratifying 3-jets of functions			
Brown, G. Singular infinitely divisible distributions whose charac vanish at infinity	teristi	e function	ns
Burgess, D. C. J. and Fitzpatrick, M. On separation axioms for ordered topological space	certa	in types	of
Calladine, C. R. The 'static-geometric analogy' in the equations of the	in shel	ll structur	es
Carter, M. R. Bounds for the solution of a non-linear parabolic initia			
problem	•		
Davies, E. B. Scattering from infinite sheets	•		
Domb, C. A generalization of the Konigsberg bridges problem .			
Edmunds, D. E. and Webb, J. R. L. Some generalisations of the Borsu	ık–Ul	am theore	m
Erbach, D. W. The non-existence of a certain finite projective plane			
Falconer, K. J. Applications of outwardly simple line families to pla	ne cor	vex sets	
Farmer, M. R. and Loizou, G. An algorithm for the total, or partial, polynomial	factor	risation of	a
Fitzpatrick, M. and Burgess, D. C. J. On separation axioms for certai	n type	s of order	\mathbf{d}
topological space			
Gaspar, Z. and Thompson, J. M. T. A buckling model for the set	of un	ibilic cata	8 -
trophes	•		•
Gibson, C. G. and Bedford, J. C. On stratifying 3-jets of functions	•		•
Godambe, A. V. On representation of Poisson mixtures as Poisson su terization of the gamma distribution	ms an	d a chara	.c-
Goddard, A. J. Some remarks on the existence of spacelike hypersumean curvature	faces	of constar	nt
Grünbaum, B. and Shephard, G. C. The eighty-one types of isohe	dral ti	lings in th	he
plane	•		
Hall, P. On the $L^{\mathfrak{p}}$ convergence of sums of independent random varial	oles		
Harper, D. L. Primitive irreducible representations of nilpotent group	ps		
Hartley, B. A dual approach to Černikov modules			
Hayman, W. K., Patterson, S. J. and Pommerenke, Ch. On the coe	fficien	ts of certa	in
automorphic functions			
Heading, J. Properties of two-way transmission in generalized way problems.	•		•
Hunter, D. B. The positive-definiteness of the complete symmetric order	functi	ons of eve	en, •
Hunter, R. J. and Lloyd, J. W. Weakly compactly generated locally	conve	x spaces	
Kallenberg, O. A counter example to R. Davidson's conjecture on line		-	
Kingman, J. F. C. The asymptotic covariance of two counters .			
g,	•		•

iv Index

	PAGE
Kyle, J. Spectra of derivations	49
Lam, K. Y. Nonsingular bilinear maps and stable homotopy classes of spheres	419
Lloyd, J. W. and Hunter, R. J. Weakly compactly generated locally convex spaces .	85
Loizou, G. and Farmer, M. R. An algorithm for the total, or partial, factorisation of a	405
polynomial	427
McSherry, D. M. G. Fully admissible binary relations in topology	259
Maddox, I. J. Consistency and Nörlund means	107
Mather, M. and Barnes, E. S. The number of non-homogeneous lattice points in subsets of \mathbb{R}^n	265
Maxwell, G. On the crystallography of infinite Coxeter groups	13
Milnes, P. and Baker, J. W. The ideal structure of the Stone-Čech compactification of a group	401
Morton, H. R. Some unexpectedly non-singular orbit spaces	35
Parry, G. P. On the crystallographic point groups and on Cauchy symmetry	168
Partington, J. R. On the Banach–Saks property	369
Passi, I. B. S. and Vermani, L. R. The associated graded ring of an integral group ring	25
Patterson, S. J., Pommerenke, Ch. and Hayman, W. K. On the coefficients of certain	
automorphic functions	357
Pestana, D., Sreehari, M. and Shanbhag, D. N. Some further results in infinite divisibility	289
Pommerenke, Ch., Hayman, W. K. and Patterson, S. J. On the coefficients of certain automorphic functions	357
Rennie, B. C. The Riemann integrability of $f'^2 + g'^2$, f' , g'	278
Robbins, K. A. A new approach to subcritical instability and turbulent transitions in a	210
simple dynamo	309
Rousseau, R. The left Hilbert algebra associated to a semi-direct product	411
Ruess, W. Closed graph theorems for generalized inductive limit topologies	67
Sayer, F. P. The eigenvalue problem for infinite systems of linear equations	269
Sewell, M. J. On Legendre transformations and elementary catastrophes	147
Shanbhag, D. N., Pestana, D. and Sreehari, M. Some further results in infinite divisi-	111
bility	289
Sharp, R. Y. A commutative Noetherian ring which possesses a dualizing complex is	
acceptable	197
Shephard, G. C. and Grünbaum, B. The eighty-one types of isohedral tilings in the	
plane	177
Smith, R. R. On non-unital Jordan-Banach algebras	375
Snaith, V. P. The 2-primary J-homorphism	381
Sreehari, M., Shanbhag, D. N. and Pestana, D. Some further results in infinite	
divisibility	289
Steiner, R. J. Exact sequences of conjugacy classes and rationalization	249
Swinnerton-Dyer, Sir Peter. The Hopf bifurcation theorem in three dimensions .	469
Thompson, J. M. T. and Gaspar, Z. A buckling model for the set of umbilic catas-	
trophes	497
Vermani, L. R. and Passi, I. B. S. The associated graded ring of an integral group ring	25
Wassermann, A. S. Injective W^* -algebras	39
Webb, J. R. L. and Edmunds, D. E. Some generalisations of the Borsuk-Ulam theorem	119
Zucker, I. J. The evaluation in terms of Γ -functions of the periods of elliptic curves	110
admitting complex multiplication	111

THE PREPARATION OF MANUSCRIPTS

The attention of authors is particularly directed to the following requests.

1. Papers should be typed, double-spaced, on one side of white paper (of which A4, 210 by 297 mm, is a suitable size). The pages must be numbered. Margins of 30 mm should be left at the side, top and bottom of each page. The copy sent must be clear.

A cover page should give the title, the author's name and institution, with the address at which

mail is to be sent to him.

The title, while brief, must be informative (e.g. A new poof of the prime-number theorem, whereas Some applications of a theorem of G. H. Hardy would be useless).

The first paragraph or two should form a summary of the main theme of the paper, providing

an abstract intelligible to mathematicians.

For a typescript to be accepted for publication, it must accord with the standard requirements of publishers, and be presented in a form in which the author's intentions regarding symbols etc. are clear to a printer (who is not a mathematician).

The following notes are intended to help the author in preparing his manuscript. New authors may well enlist the help of a senior colleague, both as to the substance of their work and the details of setting it out correctly and attractively.

2. Notation

Notation should be chosen carefully so that mathematical operations are expressed with all possible neatness, to lighten the task of the compositor and reduce the chance of error.

For instance, n_k (n sub k) is common usage, but avoid if possible using c sub n sub k. Fractions are generally best expressed by a solidus. Complicated exponentials like

$$\exp \left\{z^2 \sin \theta / (1+y^2)\right\}$$

should be shown in this and no other way.

In the manuscript, italics, small capitals and capitals are specified by single, double and triple underlining. Bold-faced type is shown by wavy underlining; wavy will be printed wavy.

It helps if displayed equations or statements which will be quoted later are numbered in order

on the right of their line. They can then be referred to by, for example, 'from (7)'.

Greek letters can be denoted by Gk in the margin.

If an author wishes to mark the end of the proof of a theorem, the sign | or | may be used. Footnotes should be avoided.

3. Diagrams

It is extremely helpful if diagrams are drawn in indian ink on white card, faintly blue or green-lined graph paper, or tracing cloth or paper. Symbols, legends and captions should be given on a transparent overlay. Each text figure must be numbered as Figure 1, Figure, 2, ... and its intended position clearly indicated in the manuscript:

Figure 1 here

The author must pencil his name on all separate sheets of diagrams.

A figure is expensive to reproduce and should be included only when the subject matter

demands it, or when it greatly clarifies the exposition.

The Society recognizes that some authors do not have the facilities for producing drawings of a sufficiently high standard to be reproduced directly and it is therefore willing to have such diagrams re-drawn, provided that they are reasonably clear.

4. Tables

Tables should be numbered (above the table) and set out on separate sheets. Indicate the position of each in the text as for figures:

Table 3 here

5. References

References should be collected at the end of the paper numbered in alphabetical order of the authors' names. A reference to a book should give the title, in italics, and then in Roman type the publisher's name and the place and year of publication:

(4) Jeffreys, H. The earth, 5th edition, University Press, Cambridge, 1970.

A reference to a paper should give in italies the title of the periodical, the number of the volume and year, and the beginning and end pages of the paper. Titles should be abbreviated as in Mathematical Reviews:

(6) LITTLEWOOD, J. E. The 'pits effect' for functions in the unit circle. J. Analyse Math. 23 (1970), 237-268.

Mathematical Proceedings of the Cambridge Philosophical Society

MPCPCO 82 (Pt 3) 353-507 (1977) 0305-0041 November 1977

CONTENTS

FALCONER, K. J. Applications of outwardly simple line families to plane convex sets .	PAGE 353
HAYMAN, W. K., PATTERSON, S. J. and POMMERENKE, CH. On the coefficients of certain	
automorphic functions	357
Partington, J. R. On the Banach-Saks property	369
SMITH, R. R. On non-unital Jordan-Banach algebras	375
SNAITH, V. P. The 2-primary J-homomorphism	381
BEDFORD, J. O. and Gibson, C. G. On stratifying 3-jets of functions	389
BAKER, J. W. and MILNES, P. The ideal structure of the Stone-Čech compactification of	
a group	401
ROUSSEAU, R. The left Hilbert algebra associated to a semi-direct product	411
LAM, K. Y. Non-singular bilinear maps and stable homotopy classes of spheres	419
FARMER, M. R. and LOIZOU, G. An algorithm for the total, or partial, factorization of	
a polynomial	427
Hall, P. On the L^p convergence of sums of independent random variables	439
KINGMAN, J. F. C. The asymptotic covariance of two counters	447
ALLWRIGHT, D. J. Harmonic balance and the Hopf bifurcation	453
SWINNERTON-DYER, SIR PETER. The Hopf bifurcation theorem in three dimensions .	469
HEADING, J. Properties of two-way transmission in generalized wave propagation	
problems	485
GODDARD, A. J. Some remarks on the existence of spacelike hypersurfaces of constant	7000
mean curvature	489
THOMSPON, J. M. T. and GASPAR, Z. A buckling model for the set of umbilic catastrophes	497

© The Cambridge Philosophical Society 1977

CAMBRIDGE UNIVERSITY PRESS

BENTLEY HOUSE, 200 EUSTON ROAD, LONDON NW1 2DB 32 EAST 57TH STREET, NEW YORK, N.Y.10022

Price £7.60 net (U.S.A. and Canada US \$18.00)
Subscription price £19.00 per volume (£38.00 per annum) net post free
(US \$45.00 per volume (US \$90.00 per annum) in U.S.A. and Canada)

Printed in Great Britain at the University Press, Cambridge