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JOURNAL OF THE TRANSACTIONS
OF
THE VICTORIA INSTITUTE

VOL. LXXXI

1949

JOURNAL OF
THE TRANSACTIONS
OF
The Victoria Institute
OR
Philosophical Society of Great Britain

VOL. LXXXI

1949



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* * The object of the Institute being to investigate, it must not be held to endorse the various views expressed either in the papers or in the discussions.

VICTORIA INSTITUTE

REPORT OF THE COUNCIL FOR THE YEAR 1948.

READ AT THE

ANNUAL GENERAL MEETING, MAY 23RD, 1949.

1. *Progress of the Institute.*

In presenting to the Fellows, Members and Associates, the Eighty-second Annual Report, together with a Balance Sheet and Statement of Income and Expenditure, the Council desires to express thanks to God for the continuation of the work of the Institute during a somewhat critical period.

The death of our Chairman, Air Commodore P. J. Wiseman, last October, was a serious loss to the Institute. For several years he had been the mainstay of the work of the Council, and since the death of the Honorary Secretary, Lieut.-Colonel T. C. Skinner, he had carried a double burden of responsibility.

The thanks of the Council are extended to all who contributed papers during the past session.

The Institute has been fortunate in securing the support of two new Vice-Presidents, the Lord Bishop of Worcester, and Dr. H. S. Curr, Principal of St. Luke's College.

The new Honorary Secretary, Mr. E. J. G. Titterington, offered his services at a time when they were very much needed, and he has already proved himself a capable and indefatigable officer.

The Council looks forward with confidence to an increasing sphere of usefulness for the Institute in the coming year, believing that it has a valuable function to perform in these days when so many thoughtful men and women are seeking for a faith which can be reconciled with the rapid advances in scientific discovery.

The work of the Institute is handicapped by the lack of suitable and adequate premises, which it has not been possible to find within the resources available. If any friends of the Institute are in a position to help in the search, their assistance will be gratefully welcomed.

2. Meetings.

The first two papers of the Session were circulated to subscribers and discussed by written communication. Three Ordinary Meetings were then held in addition to the Annual General Meeting and Presidential Address.

(Papers circulated.)

“The Origin of the Alphabet,” by F. F. BRUCE, Esq., M.A.

“The Earliest Known Animals,” by DOUGLAS DEWAR, Esq., B.A., F.Z.S.

(Papers circulated and read.)

“The Bearing of Psychical Research upon the Interpretation of the Bible,” by Rev. J. STAFFORD WRIGHT, M.A.

Ernest White, Esq., M.B., B.S., in the Chair.

“Physical Science and Miracle,” by F. T. FARMER, Esq., B.Sc., Ph.D.

R. E. D. Clark, Esq., M.A., Ph.D., in the Chair.

“The Use of the Bible in School Education,” by G. S. HUMPHREYS, Esq., M.A.

R. E. D. Clark, Esq., N.A., Ph.D., in the Chair.

“Presidential Address,” by Sir FREDERIC G. KENYON, G.B.E., K.C.B.; D.Litt., LL.D., F.B.A. “New Testament Criticism To-day.”

Air Commodore P. J. Wiseman, C.B.E., in the Chair.

3. Council and Officers.

The following is a list of the Council and Officers for the year 1948 :—

President.

Sir Frederick G. Kenyon, G.B.E., K.C.B., D.Litt., LL.D., F.B.A.

Vice-Presidents.

Prof. A. Rendle Short, M.B., B.S., B.Sc., F.R.C.S.

Trustees.

Wilson E. Leslie, Esq.
Air Commodore P. J. Wiseman, C.B.E. (to Oct., 1948).
Ernest White, Esq., M.B., B.S.
E. J. G. Titterington, Esq., M.B.E., M.A.

Council.

(In Order of Original Election.)

Douglas Dewar, Esq., B.A., F.Z.S.	Air Commodore P. J. Wiseman, C.B.E. (Chairman of Council).
Lieut.-Col. L. M. Davies, M.A., Ph.D., D.Sc., F.G.S., F.R.S.E.	Rev. C. T. Cook.
Wilson E. Leslie, Esq.	Ernest White Esq., M.B., B.S.
Percy O. Ruoff, Esq.	O. R. Barclay, Esq., M.A., Ph.D.
Robert E. D. Clark, Esq., M.A., Ph.D.	Rev. J. Stafford Wright, M.A.
	E. J. G. Titterington, Esq., M.B.E., M.A.

Honorary Officers.

Wilson E. Leslie, Esq., *Treasurer*.
R. E. D. Clark, M.A., Ph.D., *Papers Secretary and Editor*.

Auditors.

Messrs. Luff, Smith & Co., *Incorporated Accountants*.

Assistant Secretary.

Theodore I. Wilson, Esq.

4. Election of Officers.

In accordance with the Rules, the following Members of the Council retire by rotation: Douglas Dewar, Esq., B.A., F.Z.S.; Rev. C. T. Cook; and Ernest White, Esq., M.B., B.S., who offer (and are nominated by the Council) for re-election.

The Auditors, Messrs. Luff, Smith & Co., Incorporated Accountants, offer, and are nominated by the Council for re-election as Auditors for the ensuing year, at a fee of five guineas.

5. *Obituary.*

The Council regrets to announce the following deaths:—

Dr. J. Barcroft Anderson, A. Cowper Field, Esq., G. L. Hicks, Esq., Pastor G. J. Cooke, Rev. Thomas Miller, M.A., L. R. Wheeler, Esq., Ph.D., M.Sc., B.A., F.L.S., W. E. H. Stokes, Esq., John Edwards, Esq., Mrs. T. C. Skinner, Air Commodore P. J. Wiseman, C.B.E.

6. *New Fellows, Members and Associates.*

The following are the names of new Fellows, Members and Associates elected in 1948:—

FELLOWS: Rev. Albert R. Smith, F.R.G.S., J. A. Van Niekerk, Esq., W. H. Clare, Esq., Spencer D. Thomas, Esq., L. E. Porter, Esq., B.A., H. V. Goold, Esq., L.R.I.B.A., Rev. E. W. Mills, F. D. Syer, Esq., M.B.E., M.A., P. S. F. Rowden, Esq., R. E. Hamilton, Esq., G. E. Barends, Esq., M.A., Rev. E. H. Steele, J. B. Nicholson, Esq. (on transfer from Member), Rev. W. S. Ridgway, M.A., V. D. K. C. Ross, Esq., Rev. Hugh C. C. McCullough, Montague H. Knott, Esq., B. C. Martin, Esq., A.C.I.I., J. Turnbull, Esq., Pastor L. W. Boone, Rev. Alwin R. De Alwis, F/Lt. Rev. Alan MacLeod, M.A., F. F. Stunt, Esq., LL.B. (Life), C. E. A. Turner, Esq., M.Sc.

MEMBERS: W. R. Coates, Esq., Jan M. Hofmeyr, Esq., B.Sc., W. Richardson, Esq., F. I. Anderson, Esq., B.Sc., R. N. Tyrrell, Esq., M. V. O. Samuel Milner, Esq., J. S. Phillips, Esq., F. King, Esq. (on transfer from Associate), G. K. Lowther, Esq., Kenneth N. Taylor, Esq. (on transfer from Associate), A. S. Deek, Esq., B.Sc., A.R.I.C., D. F. Sage, Esq., A. E. Hyam, Esq., John Byrt, Esq., B.Sc., Professor L. Ramm, A.B., B.D., M.A., Capt. E. P. Flowers (late R.A.), E. E. Oakes, Esq., A.M.I.C.E., M.I.H.E., Rev. M. J. B. Fuller, M.A. (on transfer from Associate), Rev. Paul Faunch (on transfer from Associate), Peter Hill, Esq. (on transfer from Associate), E. C. Staddon, Esq., A.M.I.E.E., Rev. E. W. L. May, M.A., W. Bennet, Esq., M.A., E. F. Witts, Esq., Rev. H. F. MacEwen, B.A.B.D., C. Hartley, Esq., M.A., M.B., B.Chir., Miss Betty L. Neel, N. Forbes Palmer, Esq., F. Foulkes, Esq., M.Sc., B.A., D. Russell, Esq., A. F. Forbat, Esq., M.B., B.S., Rev. G. A. Scott, H. R. Minn, Esq., M.A., B.D., Rev. G. R. Delbridge, A.C.T., Th.L., C. J. F. Upton, Esq., B.A., Miss Louie Bush, Rev. F. Martin Argyle, M.A., Rev. A. R. Cressy, A.B., B.D., R. H. Kipping, Esq., M.B., Ch.B., Mrs. Ellen J. Watkins, Mrs. Dorothy Beach, L. E. Buckley, Esq., James Van Sommer, Esq., Dudley F. Whitney, Esq., B.Sc., D. C. Cameron, Esq., P. H. Nielsen, Esq., Rev. Alexander Barkley, B.A., Rev. R. Strang Miller, J. H. Wellington, Esq., M.A., J. M. Bage, Esq., M.A., P. W. Petty, Esq., B.A.

ASSOCIATES: M. C. Brown, Esq., H. J. Blackmore, Esq., K. J. Frampton, Esq., G. V. Prosser, Esq., D. H. Trapnell, Esq., M. Williams, Esq., P. M. Tankard, Esq., K. H. Marr, Esq., K. W. Campbell, Esq., H. Butterley, Esq., N. Chynoweth, Esq., H. J. Edwards, Esq., H. Rogers, Esq., R. Weir, Esq., N. Bathgate, Esq., E. Buckle, Esq., R. Gibson, Esq., J. S. Elliot, Esq., D. G. McCraw, Esq., A. J. Gerlach, Esq., K. Gridale, Esq.

7. *Membership.*

Life Fellows	25
Annual Fellows	147
Life Members	31
Annual Members	303
Associates	59
Library Associates	47
 Total Nominal Membership	 612

8. *Donations.*

C. J. Young, Esq., 11s.; Mrs. G. Scott-Challice, 10s.; J. D. C. Anderson, Esq., £1; S. P. Cully, Esq., 5s.; Peter Hill, Esq., £1; F. Junkison, Esq., 4s.; Rev. F. St. J. Oram, 10s.; Dr. H. J. Orr-Ewing, 8s.; Conway Ross, Esq., 19s.; H. H. Goodwin, Esq., £2; B. P. Sutherland, Esq., £1 11s.; Miss L. C. Ord, £1; Rev. Henry W. Bromley, £2 9s. 7d.; F. Grimm, Esq., £2 2s.; Rev. G. A. Scott, 11s.; J. B. Nicholson, Esq., £2 18s.; Rev. Principal H. S. Curr, M.A., Ph.D., £1 1s.; Dr. D. S. Milne, 14s. 6d.; Miss L. Bush, 16s.; Dr. J. A. Widtsoe, 9s.; Col. G. M. Oldham, £2 2s.; Mrs. J. Watkins, 9s.; D. Prismall, Esq., 4s. 6d.; T. C. Denton, Esq., £2; J. McGavin, Esq., 6s.; Miscellaneous, 8s. 4d. Total, £26 8s. 11d.

ERNEST WHITE,

Chairman.

BALANCE SHEET, 31ST DECEMBER, 1948.

LIABILITIES.				ASSETS.			
1947		£	s. d.	1947		£	s. d.
£		£	s. d.	£		£	s. d.
9	SUBSCRIPTIONS PAID IN ADVANCE	10	0 0		CASH AT BANK :—		
				492	Current Account	468	1 6
				17	“Gunning” Prize Account	16	17 5
				7	“Langhorne Orchard” Account	7	5 6
				20	“Craig” Memorial Trust Account	19	15 0
				<u>536</u>		<u>511</u>	<u>19 5</u>
	CREDITORS :—				6 PETTY CASH AND STAMPS IN HAND....		9 19 7
336	Expense Accounts	11	11 0		DEBTORS :—		
	Reserve for cost of “Transactions”			150	Subscriptions in Arrears Estimated to produce	200	0 0
	1946 and 1948			70	Inland Revenue <i>re</i> Income Tax Repayment Claim	89	7 1
	as at 1st January 1948	300	0 0	<u>220</u>		<u>289</u>	<u>7 1</u>
	Additional Reserve	350	0 0		INVESTMENTS (AT COST) :—		
		650	0 0		“Gunning” Fund :—		
	Less Cost of “Transactions”			508	£673 3½ per cent. Conversion Stock	508	0 0
	1946....	200	0 0		“Langhorne Orchard” Fund :—		
		450	0 0	200	£258 18s. 3½ per cent. Conversion Stock	200	0 0
	LIFE SUBSCRIPTIONS :—			220	“Schofield” Memorial Fund :—		
707	Balance at 1st January, 1948	680	0 0		£378 14s. 6d. 2½ per cent. Consolidated Stock	220	0 0
	Less Amount carried to Income and Expenditure Account	30	0 0				
<u>680</u>		<u>650</u>	<u>0 0</u>				
	508 “GUNNING” FUND (<i>per contra</i>)	508	0 0				
64	Balance at 1st January, 1948	87	8 11				
24	Dividends and Interest receivable	23	12 4				
<u>88</u>		<u>111</u>	<u>1 3</u>				

<u>200</u> "LANGHORNE ORCHARD" FUND (<i>per contra</i>)			200 0 0	<u>400</u> "Craig" Memorial Trust Fund :—			400 0 0
26	Balance at 1st January, 1948	34 8 6		£376 7s. 4d. War Stock 3½ per cent.			1,328 0 0
9	Dividends and Interest receivable	9 1 8	43 10 2				
<u>35</u>				<u>1,328</u>			
"SCHOFIELD" MEMORIAL FUND (<i>per contra</i>)			220 0 0	LIBRARY, FURNITURE AND EQUIPMENT (NOT VALUED)			
19	Balance at 1st January, 1948	28 8 0		INCOME AND EXPENDITURE ACCOUNT :—			
9	Dividends receivable	9 9 4	37 17 4	189	Balance at 1st January, 1948	413 19 5	
<u>28</u>				264	Add Net Excess of Expenditure over Income for the year ended 31st December, 1948	115 2 2	
"CRAIG" MEMORIAL TRUST (<i>per contra</i>)			400 0 0	453		529 1 7	
400				39	Deduct Donations received	27 7 11	502 13 8
<u>£2,504</u>			<u>£2,641 19 9</u>	414			
				<u>£2,504</u>			<u>£2,641 19 9</u>

We report to the members of the Victoria Institute that we have audited the foregoing Balance Sheet dated 31st December, 1948, and have obtained all the information and explanations we have required. We have verified the Cash Balances and Investments. The Arrears of Subscriptions have been estimated by the Assistant Secretary to produce the sum shown on the Balance Sheet, but we have been unable to verify this valuation. The amount appearing under Life Subscriptions should in our opinion be the subject of an actual valuation as at the accounting date. Subject to the foregoing, in our opinion the Balance Sheet is properly drawn up so as to exhibit a true and correct view of the affairs of the Institute according to the best of our information and the explanations given to us and as shown by the books of the Institute.

Drayton House,
Gordon Street, London, W.C.1.
10th May, 1949.

(Signed) LUFF, SMITH & CO.,
Incorporated Accountants.

INCOME AND EXPENDITURE ACCOUNT FOR THE YEAR ENDED 31ST DECEMBER, 1948.

EXPENDITURE.				INCOME.			
1947		£	s. d.	1947		£	s. d.
£		£	s. d.	£		£	s. d.
	To Rent, Light, Cleaning and Hire of Lecture Room	83	12 0		By Subscriptions :—		
69				248	Fellows	257	17 0
179	„ Assistant Secretary's Salary	100	0 0	263	Members	307	0 7
25	„ „ „ Expenses	100	0 0	53	Associates	73	9 8
5	„ National Insurance	5	4 2	<u>564</u>		<u>638</u>	<u>7 3</u>
245	„ Printing and Stationery	160	19 6	27	„ Proportion of Life Subscriptions		30 0 0
50	„ Postages	44	18 6	45	„ Sale of Publications		84 16 5
5	„ Audit Fee	5	5 0	13	„ Income from "Craig" Memorial Trust		13 3 4
35	„ Sundry Office Expenses	31	10 0	<u>649</u>		<u>766</u>	<u>7 0</u>
<u>613</u>			<u>531 9 2</u>		„ Excess of Expenditure over Income carried to Balance Sheet		115 2 2
300	„ Additional Reserve for Estimated Cost of "Transactions" 1947 and 1948		350 0 0	<u>£913</u>		<u>£881 9 2</u>	
<u>£913</u>			<u>£881 9 2</u>			<u>£881 9 2</u>	

THE ANNUAL GENERAL MEETING
OF THE
VICTORIA INSTITUTE

HELD AT 12, QUEEN ANNE'S GATE, LONDON, S.W.1,
ON MAY 23RD, 1949.

SIR FREDERIC G. KENYON, G.B.E., K.C.B., D.Litt., LL.D.,
F.B.A., THE PRESIDENT OF THE INSTITUTE, IN THE CHAIR.

The Minutes of the Annual General Meeting held on May 24th, 1948, were read, confirmed and signed.

The Report of the Council and Statement of Accounts for 1948, having been circulated, were taken as read.

The Chairman then called upon the Rev. J. Stafford Wright, M.A., to move, and R. J. C. Harris, Esq., A.R.C.S., B.Sc., Ph.D., A.R.I.C., to second, the *First Resolution*, viz. :—

“That the Report and Statement of Accounts for the year 1948, presented by the Council, be received and adopted.”

There being no comments or amendments, the Resolution was put to the Meeting and carried unanimously.

C. E. A. Turner, Esq., M.Sc., was then called upon to propose, and N. S. Denham, Esq., D.Litt., to second, the *Second Resolution*, viz. :—

“That the President, Sir Frederic G. Kenyon, G.B.E., K.C.B., D.Litt., LL.D., F.B.A.; Vice-President, Professor A. Rendle Short, M.B., B.S., F.R.C.S.; Honorary Treasurer, Wilson E. Leslie, Esq.; and R. E. D. Clark, Esq., M.A., Ph.D., Honorary Editor of *Transactions*, be and hereby are re-elected to their offices. Also that the election of the Lord Bishop of Worcester, The Right Rev. W. Wilson Cash, D.S.O., O.B.E., D.D.; and the Rev. Principal H. S. Curr, M.A., B.D., B.Litt., Ph.D., Vice-Presidents; and E. J. G. Titterington, Esq., M.B.E., M.A., Honorary Secretary, be and hereby are, confirmed.”

There being no comments or amendments, the Resolution was put to the Meeting and carried unanimously.

B. E. McCormick, Esq., was then called upon to move, and R. N. Tyrrell, Esq., M.V.O., to second, the *Third Resolution*, viz. :—

“ That Douglas Dewar, Esq., B.A., F.Z.S. ; Rev. C. T. Cook ; and Ernest White, Esq., M.B., B.S., retiring Members of the Council, be and hereby are re-elected. Also that the election of Rev. J. Stafford Wright, M.A. ; E. J. G. Titterington, Esq., M.B.E., M.A. ; Lieut.-Col. W. E. Shewell-Cooper, M.B.E., N.D.H., F.L.S., F.R.S.A. ; R. E. Ford, Esq., R. J. C. Harris, Esq., A.R.C.S., B.Sc., Ph.D. ; and F. D. Bacon, Esq., co-opted to fill vacancies on the Council, be and hereby are, confirmed.”

There being no comments or amendments, the Resolution was put to the Meeting and carried unanimously.

E. J. G. Titterington, Esq., M.B.E., M.A., was then called upon to move and the Rev. J. Stafford Wright, M.A., to second, the *Fourth Resolution*, viz. :—

“ That Messrs. Luff Smith and Co., Incorporated Accountants, be and hereby are re-elected Auditors at a Fee of Five Guineas, and that they be thanked for their past services.”

There being no comments or amendments, the Resolution was put to the Meeting and carried unanimously.

The Chairman then called on Ernest Luff-Smith, Esq., F.S.A.A. to move, and Ernest White, Esq., M.B., B.S., to second the *Fifth Resolution*, viz. :—

“ That as from the 1st January, 1950, the Annual Subscription for Fellows be Three Guineas, and for Members Two Guineas, with corresponding increases in the scales for Life Fellows and Life Members ; and that all subscriptions become payable on 1st January in each year.”

There were no comments or amendments, and the Resolution was put to the Meeting and carried unanimously.

The President then announced the Rev. J. Stafford Wright, M.A., as the winner of the Gunning Prize for his Paper on “ The Decalogue and Psychological Well-being: its Present-day Significance and Value to Mankind.” A cheque for £40 was then handed to Mr. Stafford Wright.

The subject of the Langhorne Orchard Prize was next mentioned, the subject being “ The Modern Conception of the Universe in Relation to the Conception of God.”

The Honorary Secretary then made a statement about the issue of the Volumes of Transactions for 1947 and 1948.

A hearty vote of thanks to the Chairman for presiding terminated the Meeting.

(This paper was not *read* before the Institute, but was circulated in proof form).

THE NATURE AND INTERPRETATION OF THE CHRISTIAN ETHIC

By PHIL. W. PETTY, B.A.

SYNOPSIS.

The conviction that there must be some "law" which is binding upon all men is widespread, but all attempts to discover and state it have ended in failure.

God, as Creator, must be behind both the law which comes to our reason from without and that which comes through desire and feeling from within. Therefore attempts to define goodness without reference to God must be self-defeating. Further, the failure to recognise the reality of sin has resulted in finality being attributed to conclusions which have only a temporary and relative validity.

Christian Ethics must recognise that "there is none righteous, save One. . . ." Clearer understanding of ethical principles will, it is suggested, come as we endeavour to treat others as persons, doing to them as we would have done to ourselves. Personal relations cannot be fully defined in other than personal terms. While we must, because of the distorting effect of sin, accept the guidance given by principles, we must not treat persons as raw material on which to practise principles. To do so breaks the truly personal relationship and closes a door to fuller knowledge of the good.

THE confusion existing to-day in the realm of rational ethics is so great that it is not only impossible to construct an ethical system in which the evident truths enunciated by the great masters of thought can be synthesised, but it is hard to see how such a system can ever be constructed, at least from the standpoint of rational ethics.¹ Since this state of affairs

¹ It is sometimes suggested that one theory is strong where another is weak, e.g., Kant gives force to the idea of "ought" while eudæmonistic theories can never really do this. This is rather like building three houses, one with good floors, another with sound walls and a third with a watertight roof and then trying to imagine that between the three one has a satisfactory dwelling. The trouble is that it is precisely the strong point of the one theory which is unacceptable to the other.

cannot be satisfying philosophically, and since it cannot be final for anyone who believes in God as the source of all goodness, the time has plainly come to examine afresh the premisses which have guided moral philosophers since the Renaissance, during the era of the development of the rational ethic, away from its undoubted origin in religion. Emil Brunner has attempted this task in a monumental work which it will take many years to appraise fully.¹ The modest purpose of this paper is to examine some of the radically new ideas which are advanced in "The Divine Imperative", and to show how they may be related to the realisation of the ultimate nature of personal relations of which Martin Buber and others have made us so acutely aware, and also to the New Testament, which, as ever, proves on examination to have everything which appears new to us buried not far below its surface.

Since the day when Descartes emerged from the room in which he had locked himself for four days, philosophy and ethics have been betrayed over and over again by their anthropocentric view of truth. We shall see something of this error as we consider the drift of thought since that day, but we dare not delude ourselves with the idea that we have seen it all, for it is not open to us to detach ourselves completely from the stream of events in which we ourselves move, though by rational reflection we can in part do so. For the same reason, though the temptation is powerful to shut the books and start again from the profound words of the New Testament, we dare not yield to it; firstly because to do so would be to delude ourselves as to the absolute objectivity of our standpoint; and secondly because we should be forsaking a rich heritage, since no school of ethics, not even ethical hedonism, has been uninfluenced by the message of Christ, with whom the idea of goodness is for ever associated. Kant strove to produce a purely rational ethic which owed nothing to the transcendental idea, but it is doubtful if even he thought he had succeeded,² and quite evident to-day that he failed, despite the massiveness of his thought. On the other hand, Kant would have rejected root and branch the basic premiss of the utilitarians, but C. S. Lewis is undoubtedly nearer the mark when he makes³ Screwtape complain to Wormwood that the enemy "is a hedonist at heart.

¹ *The Divine Imperative*, Engl. trn., 1937. Lutterworth Press.

² *Critique of Pure Practical Reason*, Pt. 1, Bk. II, Ch. 2.

³ C. S. Lewis, *Screwtape Letters*, Ch. 22.

All these fasts and vigils and stakes are only a façade. Or like foam on the seashore. Out at sea, in His sea, there is pleasure and more pleasure. He makes no secret of it; at His right hand are pleasures for evermore."

On the other hand it is necessary to consider the other side of the picture and face the fact that the New Testament opposes the Kantian maxim¹ with the devastating statement that² "None is good save one, that is God," and condemns the great Perfectionist systems together with every form of hedonism in one word "He that saveth his life shall lose it." How does it come about that, while we recognise so much in Kant and Hegel, even in Bentham and Mill, which accords with our idea of right, the New Testament and Christian experience join in pronouncing them essentially wrong? Let us be quite clear about this—it is not simply the student's rational understanding of New Testament truth which results in this sentence on the great post-Renaissance systems of ethical thought, but also the experience of ordinary unreflecting Christian goodness.

Let us see first if there are any basic assumptions which the New Testament makes and which rational ethics have been either unable or else unwilling to include in their systems. It may be that in the course of this investigation we shall find something which, though unrecognised, accounts for the truth in these systems, and may yet point the way towards a synthesis of all that is true in them.

One basic assumption of the New Testament is that of a God who is both good and righteous and whose will is therefore good and right.³ Before passing to the consideration of these two terms, with their strangely interlaced meanings, we must emphasise that we have here terms relating to two basic human experiences. In any system something must be known intuitively. For the Kantian, it may be one of the great maxims, for the utilitarian the goodness of pleasure, but there must be a starting point somewhere in direct experience. The good

¹ "There is nothing in the world, or even out of it that can be called good without qualification, except a good will." *Metaphysic of Moral*, Sect. 1.

² Luke xviii, 19.

³ It is characteristic of the New Testament approach and in conformity with the idea advanced in this paper that "good" and "right" are ultimate experiences, that this position is never argued and rarely stated. It is those things which are taken for granted that have the strongest hold on thought—cf. the contemporary idea that *all* increasing complexity is really progress, an idea which would be most difficult to defend really adequately, but which has almost completely mastered popular thought.

and the right can be described, and the conceptions denoted by the words modified, but they can neither be defined nor reached by any process of reasoning. "If we are to retain ethics as a normative science, a theory of ethics must involve the intuitive knowledge of certain truths. Even a theory opposed to most forms of intuition, like hedonism, must begin with an intuition that pleasure ought to be pursued, or that only actions which cause pleasure can be right."¹ Reason and experience may modify the conception of what is in fact good or right, but they can neither establish nor eliminate the basic conceptions of goodness and rightness. From the standpoint of the New Testament, this is what would be expected if, behind human ideas of goodness and rightness, there is God whose will is supremely the good and the right. It is at this point that rational ethics commonly departs from a Christian standpoint, e.g.,² "When we say that 'good' means 'commanded by God,' we are not defining 'good,' for most people feel that a good action would still be a good action even if it were not commanded by God." From the standpoint of the New Testament it is clear that the bare idea of God *not* commanding a good action is intolerable and it is also clear that this very feeling that the action is good is itself part of the Divine command. The fatal misconception of the individual as standing alone and in his own right has led thought astray at the critical point. Whence come man's ethical feelings? In the Biblical conception the good and the right, as the will of God, are embodied not merely in commands but in the very texture of the Universe.³ "We still have to discover why good actions are good, and therefore worthy of being commanded by God," but whence comes this idea of goodness? We have said that it is a basic human experience, and indeed it is; but if this is true, there is no point in arguing in a circle, while if it is not true there appears to be no point in arguing at all.

We must now consider the conflict between what is felt to be the right and what appears to be the good. The drunkard, knowing well enough that the public house is no place for him, finds himself craving for a drink, that is to say alcohol appears to him for the present to be a good. Men do in fact seek what

¹ W. Lillie, *Intro. to Ethics*, Ch. 7, 6.

² W. Lillie, *op. cit.*, Ch. 9, 2., etc.

³ Gal. vi, 7-8, Rom. i, 18-21.

appear to be "good" things;¹ even the bad man is not bad for the sake of being bad but for the sake of achieving something which appears to him, it may be for a transitory moment, as good. It may be the pleasure arising from hatred cherished and translated to action that man seeks, or it may be the highest good of another sought at great cost to self, but whatever it is, it appears, at the time, to be good. Yet, with the idea of the good, interpreted in this way, the idea of the right is so often in conflict. If both have their origin from One who wills the good that is always right, how can this be?

The New Testament interprets the contradiction as sin. Sin has distorted both the idea of the good² and also the idea of the right and thus made conflict between them inevitable. Here arises the great obstacle in the path of the man who would construct a Christian ethic, and there is no by-passing it. It means as the Master said that "None is good save one. . . ." Not even in his ideas can man be wholly right while still in the thralldom of sin. Revelation may be given him, pure as crystal spring, but he muddies it all too soon in the eddies of his thought. Here is seen man's extremity that can only be met by the Divine forgiveness. Here is explained the failure of every purely rationalistic system which, with man as the sole point of reference, can find no room for the conception of a God whose will is itself the good and the right, nor yet for radical evil, the strange perversion whereby man, for no reason outside himself, chooses the evil under the delusion that it is the good.³

¹ W. H. Green, Bk. II, Ch. I, 154. "Self-satisfaction is the form of every object willed, but the filling of the form, the character of that in which self-satisfaction is sought, ranges from sensual pleasures to the fulfilment of a vocation conceived as given by God, and makes the object what it really is." "In all willing a self-conscious subject seeks to satisfy itself," Bk. III, Ch. 1, 156. This differs from the contention of this paper, in this—that where the good is sought also as the right, attention is diverted from the desires of the doer to the object or action done, and therefore self-satisfaction cannot be said to be the motive of the doer, inasmuch as it is not his conscious motive, and it is doubtful if the idea which some would advance of an unconscious motive has any meaning at all. Whatever truth may underlie the idea of unconscious *craving* should not be allowed to spill over into words which lose their meaning unless allied to conscious thought and will. If the object is sought as the good, though known not to be the right, then attention is usually centred in the desire of the doer. Ethics touches psychology here, and the subject is too big for adequate discussion in a paper like this.

² Luke xi, 34, etc.

³ All moral systems recognise evil, but not its tragic nature or its depth. "Thou oughtest, therefore thou canst," is the implicit assumption of all forms of rational ethic. It will not and cannot recognise the truth of the predicament outlined in Rom. vii.

This leads us to another basic difference between the natural ethic and the New Testament ethic.¹ "The natural ethic says though I may sometimes fail in my external behaviour, my inmost will is good. The Gospel says though outwardly you may even do some good, yet your inmost heart is sinful. . . . It is not merely acts which are sinful, but the person, the doer. It is characteristic of natural morality and ethics that it seeks exclusively to answer the question, 'What ought I to do?' It deals only with conduct, not with the person who acts." It is obvious that it is here that the answer is to be sought to the radical defect in the Kantian ethic—its conflict with the general feeling that a man who *wants* to do good and does it is really a better man than the one who acts under some compulsion.² Realising the good and doing the right, therefore, can only mean that man has been restored to his rightful relationship with God, that he is again moving within the sphere of the Divine will. Sin cannot be understood, for it is in its very essence irrational. It can only be interpreted as "the severance of freedom from the will of God." Redemption means restoration not to a self-righteous independence of God where man *has* something that is *his*, but towards his rightful place within the will of God which he recognises as right for himself and good for others, as well as himself. The Christian ethic, therefore, is concerned not with acts themselves, but rather with the person who acts. This person, however, has still to apprehend the good and the right, which ideas still relate to objective choices, which must be made. We therefore have still to answer the question "How is the will of God known? How is man to know the good and the right? What principles are to guide him when the two appear to conflict?"

We can consider this question of the interpretation of the will of God under the headings of law, conscience, reason and tradition before passing to the consideration of that conception of personality which has dawned on the world with new, yet familiar, light.

Consider first the idea of law as normative for conduct—and we do not say Christian conduct, for God is God of all and His will is the good and the right for all. An ethic, if it is to have any validity whatever, must have universal validity.

¹ Emil Brunner, *op. cit.*, Ch. 8.

² Hence the sting of Schiller's jibe, "We do good, but unfortunately by inclination."

“We are against this course of action, not as Christians, but as sensible men,” wrote a man with an honours philosophy medal to his name recently. Such ideas are not uncommon, but they can never be admitted without abandoning all hope of finding any ethical direction.

It is evident that any kind of law, embodying a set of principles, can be only a rough and ready guide. The Ten Commandments are commonly taken as normative, yet they are not normative, invariably, in this world. The man faced with the choice of telling a lie to save the life of a friend or telling the truth which he knows will end in his death is, provided that the right be on the side of his friend, in a dilemma. In a perfectly good world, such a state of affairs could not arise doubtless, but that does not help to guide conduct here. Further, the conception of an external law can never take motive into account. In the Sermon on the Mount, Christ transforms the purely external command concerned with action into a command which takes account of motive, but in doing so the command ceases to be universal and external, and this is nowhere more clearly seen than in the controversies over the Sabbath day. Christ considers the keeping of the Sabbath in a fresh light, but in doing so, moves to new ground. The command is no longer one that can be universalized in terms of direct command or prohibition. It may be that it is right to heal on the Sabbath day but it does not follow, necessarily, that all dispensaries should be open on Sundays. For this reason we must reject the ever-present temptation to reduce the Christian ethic to a set of rules formulated by ourselves. Goodness does not consist in compliance with any law that can be stated as a series of universal principles or commands, and the law of love is no exception to this, for it is not such a law.

What of the claims of conscience? We need spend little time over this. It is paradoxically true that if we do not obey our conscience then we do wrong, but if we do obey it we do not necessarily do right, and the history of mankind is too thickly strewn with the wreckage caused by men who were sure they were right to permit us to accord to conscience the position of sole arbiter of man's actions. Conscience is too deeply involved in sin.

Reason, as already observed, cannot provide a basis for ethical action. It can only modify one already there. We have suggested that the ideas of the good and the right are intuitive,

but distorted by sin, and therefore twisted, often unrecognisable reflections of the true Good and Right.¹ Reason shares in the distorting influence of sin, but, because of the power it gives man in a measure to step aside and view himself from without, it is capable, in alliance with conscience and experience, of bringing about a clearer understanding of the will of God. It can never lead to a universal ethic, however, because of its inseparable relation with the man who reasons. It is all the time dealing with shifting sand and has no hope of constructing from it solid rock.

Tradition differs from law in that it is not conceived as divinely given but rather as resulting from accumulated human experience, though the Divine command is, in part, worked out by human society and embodied in human tradition. The British conception of fair play, for example, has surely something of universal value in it and this can only arise from the Divine Will.² Yet tradition either takes no account of motive or else fails to give precise instructions at the critical point of time. Furthermore it, too, is involved in sin and therefore in part invalidated by it.

No absolute interpretation of the will of God can be found here. Normally, perhaps, all four will point in one direction, and then there is reasonable certainty; but what happens when two or more are in conflict? Further, it will not have escaped notice that we are here considering acts rather than persons, and there-

¹ Theistic thinkers, and even Christian thinkers have not, of course, been at one in regarding the will of God as the ground of the Good. In Greek thought and in religions of the type of Zarathustra, there is present the idea that God became Lord by choosing the good, or that God is God because He always chooses the good. This idea came over into Christian thought with Aquinas. "God's holiness consists in the fact that essentially His will can will only the good and the right. Thus it presupposes an eternal standard of all willing which is not subject to the free choice of God, a standard with which the Divine will agrees not freely but of necessity so that God's holiness consists precisely in this necessary agreement." The idea has found its way into Protestant thought. Cf. Dale, *The Atonement*, Lect. 10. "God is the Moral Ruler of the Universe. . . . Does it imply that the will of God is . . . the ultimate ground of moral obligation, that goodness is good only because God commands it? This hypothesis is intolerable." "There is an eternal Law of Righteousness. . . ." Once again, it is impossible to discuss this within the compass of a paper. The idea of an Eternal Law of Righteousness existing as it were alongside God is here rejected.

² The idea that God is not at work unless He is felt to be at work, that an idea of right does not derive from God if the man who thinks it holds that it does not so derive is a common one. It will be clear that this view is no part of the present thesis.

fore are standing rather on the ground of rational ethics than on that of the New Testament.

Thus at last we come to the distinctive standpoint of the New Testament ethic which differs alike from all forms of rational ethic and also from the bulk, but not all, of the Old Testament ethical ideas. It is based on the conviction that the good and the right for myself and the good and the right for my neighbour must be basically the same, since my neighbour and I have both been created by God. From this conviction arises the command to seek the good of my neighbour equally with my own. That good which is his, is also mine. It is also right. Where my neighbour's good appears to conflict with mine, or with what seems to be right, then the reason for the conflict is sin. We shall have to consider the implications of this later. In the meantime, let it be emphasized that here we have a conception of good which is not based on any ultimate principle but rather on an ultimate relationship, that which exists between two men. The term for this relationship in the New Testament is love, but it might be more adequately rendered in 20th century idiom as friendship. The fact that the I/Thou¹ relationship is something fundamentally different from the I-it relationship has escaped notice—as it was well-nigh bound to do—during the years of individualism. From the humanistic, egocentric point of view, alike of Kantian, Utilitarian, Stoic and Epicurean it cannot really be perceived. Other people are never really persons to any scheme of rational ethics but rather means whereby the individual realises himself or abstract values for himself. In the Kantian system the whole of mankind is more or less a means for the realisation of an abstract principle. This I-Thou relationship, which ought to be friendship, or love, and is so, apart from sin, is itself an ultimate experience. We can describe the phenomena which accompany it, but it is not itself capable of definition, any more than truth, beauty, or goodness are capable of definition.

If this is true, then it means that the law of love can never be translated into a series of principles which can be appreciated when abstracted from the human situation. I cannot act towards my small son who evinces a desire to play with my razor as I act towards a friend who is staying with me and who has left his at home, if, in each case, I want to act

¹ See Daniel Lamont, *Christ and The World of Thought*.

rightly. That is because the "good" is not the same for both of them. This does not violate the conviction that my neighbour's good is basically the same as my own because, in estimating that good, I take into account what I see to have been my good when in the circumstances in which I find my respective neighbours.

Does this not, however, lead us into an unbridled individualism in which every man attributes to his own convictions an absoluteness which he denies to his neighbours by invoking the idea of sin? Quite obviously this is a very real danger, but it must not be over-estimated. Mary in breaking the pot of ointment over the Master, was acting in accordance with the dictates of friendship, while Judas in condemning her action did so on the grounds of an abstract principle. The Master did not deny the validity of Judas' statement but He approved Mary's action because of its relationship with a person. Was He not right? Is it not better that deeds should be done for the sake of others than that they should be done in accordance with some principle? Or consider the case of the woman taken in adultery. The Master does not defend her action, but He does say to her "Go and sin no more," that is to say, He considers the good of the person and acts towards her as a friend. On the other hand, the woman at Samaria's well He treated differently, uncovering her sin. It was this very attitude which scandalised the Pharisees, whose attitude was dictated by a belief in the priority of principles over persons. It is because of this that the Christian frequently appears to the rigorist to be a hedonist, while at the same time the hedonist considers him a rigorist. The Master, however, had, we suppose, that absolute knowledge of goodness which is denied to us who are sinners. Yet even if this be granted, it remains true that an honest consideration of the good of the other person, in the light of what we believe to be our own good, is likely to lead us to do those acts which accompany goodness—that is to say, that approximation to goodness of which we alone are capable.

Having established the priority of persons over principles, however, we must acknowledge that we are, in fact, guided by principles. The difference is that the Christian ethic conceives the principle as guiding action which is rightly related to a person, whereas rational ethics always conceives the person as raw material upon which the good is practised. Emil Brunner has several extraordinarily suggestive chapters in this con-

nection. The goal of human life cannot be sought in the individual himself and to seek it there involves the denial of the New Testament principle of love. "There is only one self-end in the sphere of possible experience, and it is this: personal life, or community between persons." This differs from the traditional humanism in that it is rooted in God who wills community, and not in the individual as autonomous. This Christian Humanism is concerned with "my neighbour," not with "humanity," with the concrete individual who confronts me, not with an abstraction which I myself shape. Similarly, values are only values because "through divine appointment certain things are due to, necessary or useful for life: such things are values, but nothing else at all. All values, by the will of the Creator, are subject to persons." I may be a great artist but if consideration of my helpless parent means that I must take a more remunerative job, then the realisation of beauty must be subordinate to the claims of the person who needs me.

As already indicated, there are many principles laid down in the New Testament and elsewhere which aid us in the interpretation of this basic "law" that we must relate ourselves rightly to others, even our enemies, in friendship, but none of them can be regarded as absolute, without qualification. One thing alone is absolute and that is the will of God and the will of God is supremely that relationship between men which is love. The New Testament is not afraid to leave ethical conduct to the guidance of this principle. "Love worketh no ill to his neighbour, therefore love is the fulfilling of the law. . . ."¹ but at the same time it does not neglect to interpret this command in specific concrete instances because man, being a sinner, is always misinterpreting it in his own wrongly conceived interest, or even in the wrongly conceived interest of his neighbour. Yet, when those rules of conduct, which man has found do normally accord with the law of love, have been enunciated, it remains for the individual, in the light of them and from the standpoint of his own consciousness, to do that thing to his neighbour which he would wish done to himself. The Christian ethic is based squarely on this personal, I-Thou relationship and on the conviction that its ethical meaning derives from the God who made all.

It is therefore equally wrong to speak of either an autonomous

¹ Rom. xiii, 10.

morality, which must lead, as it led the Greeks and Aquinas, to a moral law which is either alongside of or else above God, or of an autonomous religion, for there is no service of God which is not at the same time service of man, and therefore ethical conduct towards man, nor any true service of man which is not, in some sense, service of God. "He that loveth is born of God, and knoweth God. . . ." It is only when man realises that he exists not to do good to his neighbour that he may establish his own righteousness but, on the contrary, that he may obey the will of God that there is the possibility of true service of his neighbour. It is no true service by one person to another if that person does good things for his own sake, even though they result in good for the other, because selfish conduct fails to establish the truly personal relationship. "To love a human being means to accept his existence as it is given to me by God and thus to love him as he is. For only if I love him thus, that is, as this particular sinful person, do I love *him*. Otherwise I love an idea, and in the last resort this means that I am merely loving myself."

WRITTEN COMMUNICATIONS.

MR. A. CONSTANCE wrote: I feel deeply indebted to the author of this paper for a penetrating analysis of what is surely the basic problem of Christian faith. I wish, however, that he had made some reference to Kierkegaard's position in this field of Christian thought, for the Danish theologian, with his emphasis on "the individual," has much to say that is vital and relevant—particularly in his books *Training in Christianity* and *The Works of Love*. (O.U.P.)

I fully agree with Mr. Petty's premises, but feel that he prejudices his own case as he comes to the core of the matter, in his very unfortunate choice of a key example: "I may be a great artist, but if consideration of my helpless parent means that I must take a more remunerative job, then the realisation of beauty must be subordinate to the claims of the person who needs me."

This is, it is true, a choice between a principle and a person—but it is no choice between a *spiritual* principle and a person, the choice which is implied in the earlier part of the paper. Mr. Petty should have emphasised the varying qualities of conflicting princi-

ples. Here he instances a mere æsthetic one. Compare this with the conscientious objection conflict of the First World War, as postulated by Tribunals: "What would you do if a German attacked your mother?" There you have the true conflict between principle and person. How would Mr. Petty answer such a question—apart altogether from its non-resistant or pacifist implications? I feel that Mr. Petty's example is one which implies *his advocacy of a principle*, this principle being that one should always choose the person, if principle and person are in conflict. In thus advocating a *principle* himself—an ethic for all circumstances—Mr. Petty is inconsistent. I conceive no Christian ethic of universal application to be practical. Guidance is given by God to each believer as an individual, and may vary widely, ethically and qualitatively, according to the peculiar circumstances of individuals.

A communication was also received from Miss L. Bush.

AUTHOR'S REPLY.

Mr. Constance's conclusion appears to me to be the negation of ethics, and indeed of the idea of the righteousness of God. If there is any consistency in God, then it is hard to see how God can will conflicting ends for His creatures, and that would seem to me to be involved in the idea of "guidance varying widely, ethically." My conviction is that guidance may *appear* to vary widely, ethically, but that is because ethics and guidance are wrongly conceived. The will of God, I hold, is always in harmony with a true ethic, being the ground of that ethic, or, in other words, God is righteous and wills righteousness. No one has a perfect knowledge of God's will, or a perfect understanding of the Christian ethic (least of all myself!), and the purpose of my paper is not to enunciate as final any set of ideas, but to indicate the direction in which, it seems to me, we should travel. In that I use the plural "we," it is clear that I cannot accept Mr. Constance's position, and must therefore defend my own.

If the second great commandment is a principle, then I certainly hold it as **THE** principle of the Christian ethic. It does not appear to me, however, to conform to the usual character of a principle, because its unchanging aspect is not in the "rational" realm, but

in the personal one, and therefore it cannot be stated as an universal principle in logical terms. Mr. Constance's comment seems to recognise this, for what exactly does "one should always choose the person" mean?

(In the particular instance which he quotes, my reply would be that the convictions of mother and son, and consequently their wishes for each other, would be a factor in deciding the issue, which is, of course, not as simple as it seems, since it involves one in apparently conflicting duties to two people. This situation results from sin, and in the meantime we are so deep in sin that it appears to involve us in evil whatever we do. I should say myself that my aim would be to defend the attacked without killing the attacker. Probably both of us would be killed in that case. . . .! Yet I think it might be worth trying.)

I agree that a better example than that which I chose could have been given. I wish also to repeat that I am not opposed to principles. *Right* principles will agree with the command of love, but they will never be universal. My real contention is that a fuller understanding of that command is not to be sought so much in the study of principles and in adherence to them, but rather in yielding to the urge of Christian love in our attitude to others.

(This paper was not read before the Institute, but was circulated in proof form).

PERSONALITY.

By R. T. LOVELOCK, A.M.I.E.E.

SYNOPSIS.

The claim that personality exceeds the physical world and contacts some transcendent reality is reviewed. While it is admitted that there is evidence for phenomena irreducible to the laws of modern physics, it is stressed that such phenomena are neither good nor bad intrinsically, but that identical psychological experiences are found in all creeds and among all religions, including some of the least desirable pagan cults.

The life of Jesus is examined as an example of the true way of approach to God, and in particular His use of Scripture is noted. On this basis the mystical approach is seen to be dangerous and misleading when sought as an end in itself.

The changes in the values of life which result from the concept of a personality allowed to contact God and transcend time through such association are noted. When such a concept is viewed in relation to the known universe it is found to be an element harmonious with the whole and in no way contradicting it.

THE EXTERNAL WORLD.

THE history of human philosophy has been that of man's search for *reality*. Behind the world of sensory experience he has always suspected an unseen basis and striven to grasp this underlying reality. In classical times men sought by the exercise of pure reason to deduce these truths, while in our era the emphasis has been placed upon experiment. With the first victories of experimental science the search seemed hopeful, and we began to understand that behind our world of perception there did indeed lie an unseen universe in which clouds of whirling particles replaced our ideas of solid substance. Further advance however has led us to suspect that this second world of moving particles is no more *real* than our normal perceptions: both systems are our conceptual interpretation of certain stimuli, the one of our sensory data, and the other of a set of

pointer readings.¹ We have but progressed from the numerology of Pythagoras in a full circle back to the numbers of Eddington.

The present position of metaphysics has been examined with depressing clarity by a modern writer² and our sheer inability to progress in an unaided search for reality has been demonstrated. We might liken ourselves to a man who sits in a darkened room, whose only connection with the outside world is a number of telegraph wires. He may plug his sounder into any combination of wires in succession, but must learn to interpret that world in terms of a series of clicks. For him there exists neither the noisy activity of a city street, nor the song of a bird in the quietness of the countryside. We, it is true, have five differing sounders giving five types of "clicks," but we are just as isolated from the reality of the universe around us. It would be nice to think that the transcendent reality is identical with our concept, but if it were so the coincidence would be very great, while it is impossible to demonstrate that there is any direct relationship whatever between the two. It is usually assumed, however, as a working hypothesis, that there is a rational principle behind all nature, and that we are not cruelly deceived by our percepts. If this be granted, the most that we may claim is that our concepts are an *analogy* of the system responsible for our percepts; we shall find in our later considerations that this principle of inherent truth is only of limited application, and must be accepted with reserve.

In developing his general geometry Eddington has demonstrated³ the probability that the universe contains many more independent variables than we are able to contact with our senses. If he is correct it is possible for two entities to differ in an infinite number of ways, yet to appear identical to our senses providing their contracted tensors are identical. Unless, therefore, the additional terms deduced by Eddington are all zero, identical percept does not imply identical stimulus, and our assumption that concept is inherently true is of limited application, as indeed psychological research has demonstrated. The existence of that which does not affect our senses raises the stimulating question—"have we a sixth sense which might allow

¹ Karl Pearson, *The Grammar of Science*. Everyman, 1937.

² Dorothy M. Emmet, *The Nature of Metaphysical Thinking*. Macmillan, 1945.

³ A. S. Eddington, *The Mathematical Theory of Relativity*. 2nd Ed., Cambridge, 1937, pp. 226-228.

us to contact other aspects if it were developed?" The Bible is insistent that a *real* "spiritual" world does exist, and that, though unseen, God has provided us through His word with a channel whereby we may make contact. We shall also see later that we have other means of contact, but that they are deceptive, and apart from God's revelation we have no reliable guide in this matter. The scientist's progress is a series of "discontinuous leaps": from a preliminary examination of data he formulates an hypothesis, on the basis of which a further search is made by experiment that an improved hypothesis might result. So Richardson has sought to establish¹ that all types of human judgment are based on an act of faith in alignment with the scientific method. The Bible defines the approach to God (Heb. xi, 6) as based on the hypothesis of His existence, and that He is a Personality interested in our actions and rewarding our service.

THE HUMAN WILL.

Many people are deceived by the popular meaning of "cause and effect" into thinking that when the physicist has analysed his world into such a series, he has *explained* it. The scientific idea is purely one of time-sequence. Any two events which have always occurred in the same sequence within all human experience of which the observer is aware are dubbed cause and effect, without implying any explanation of the underlying *why*. In some cases it is possible to trace an event backwards through a chain of cause and effect until a particular type of discontinuity is reached—an act of the human will. Many rationalists, recognising the uniqueness of this phenomenon have striven to prove that the human will is but the result of chemistry within the brain, and but another step in the physical chain. The apologetics in this direction are multitudinous, but the case is far from proved, and most philosophers recognise many unexplained factors in the "free-will" of man.

It is because only a few of the many physical sequences terminate in human volition that some feel that will-power does not constitute a fundamental *cause* in a different category from all others. The Bible however claims that all existence originates from this phenomenon, but would replace the puny human will with that of an ultra-personality—God, Himself. In God's will

¹ Alan Richardson, *Christian Apologetics*. S.C.M., 1947.

lies the ultimate cause of all nature, and the personality of man is but a dim shadow of the Creator. Kant recognised the difference when he declared that *good* and *bad* had no significance as applied to inanimate nature, but were functions of the will. A thing was either good or evil according to the purpose which lay behind its use: the terms are descriptive only of motives and moral relationship. When God addressed Cyrus, the "fire-worshipper" who considered all nature to express a warfare between good and evil principles, He told him of his error. God was responsible for the existence of all, whether good or evil, and it was man's use which differentiated between the two. So Jesus traces back the idea of Mosaic uncleanness from object to motive, and from act to thought, in which process he is followed also by Paul and James.

Perhaps the most striking point about will power is the great intensification which can occur due to relationship between many personalities. One writer has demonstrated that the highly complex instincts of man may be resolved into the simpler reactions of animals,¹ but that almost without exception they are all concerned with "social relationships." So, while the history of man may be that of a few outstanding personalities, it is only so because they have been able to control the emotional power of many thousands. Just as the living organism is much more than the sum of atoms which constitute its physical form, so a crowd with a single mind is more than the sum of individual personalities, and a recent writer has suggested² a "super biology" which shall consider, not an organism built from atoms, but one built from personalities. The social unit is a living creature of an unique type, and just as the human will transcends the brain, so personalities in union transcend the individual units.

Like the inanimate world, this mass emotion is inherently neither good nor bad, but may be used in either sense. Even the sacred ties of family life are things of evil in the hands of some. A pointer to the importance of association is found in that between Father and Son, and it was not to a life of seclusion that Jesus called us, but to "God's family" with all its blessings and responsibilities. In ancient Israel God's messengers ploughed a lonely furrow, but their fate was bound up

¹ W. McDougall, *Social Psychology*. Methuen, 24th Ed., 1942.

² Salvador De Madariaga, *The World's Design*. Allen & Unwin.

with that of an apostate nation, though their attitude was different. We all, as Adam's race, face a corporate condemnation¹ and the obverse of this has been advanced by another writer² who demonstrates that our hope for the future is bound up with the identification between our personality and that of Jesus.

A much stranger relationship between individual personalities is that existing under hypnotic influence. While the deep sleep or wakeful immobility under the direction of another is the extreme form of which most people think, the phenomenon is also very common in a much milder form. Many people can place themselves in a semi-hypnotic trance by unwavering attention to one object for a considerable period: the success of the modern "thought-curing" systems is obtained by suggestion under a self-imposed hypnotic state: the swelling harmony of a church organ, the glowing colours of a stained-glass window, or the dim light among the soaring stone, all these add vitally to the atmosphere of a cathedral by inducing a mild hypnotic effect upon the strained attention of the worshipper. Most popular orators owe their success more to the hypnotic effect of flowing periods or expressive eyes, than to the content of their message.

When a mind is thus under the control of another, it is capable of exercising powers over its own body which are normally latent. Thus a blister may be raised on the skin such as is normally produced only by physical stimulus. Driesch has pointed to a similarity between this power and our natural muscular control;³ if we wish to raise our arm, we visualise it rising, feel confident that it is doing so, and behold! it obeys; so under hypnosis, a confidence is induced and the effect follows. It may be argued that a network of nerve fibres connects the brain and muscles, but we are still unaware how an act of *will* sets the machinery in motion.

As in other cases noted, this fantastic effect is amoral. Though dangerous, it can be beneficial as a healing agent. As a source of amusement on the stage it can wreck the nervous system of those foolish enough to practise it. As an assistant to religious devotion and worship it may be a blessing, but as an agent seducing to the worship of false gods it has been of incalculable

¹ S. Kierkegaard, trans. Lowrie, *The Concept of Dread*. Oxford, 1944.

² R. C. Moberley, *Atonement and Personality*. Murray, 1901.

³ Hans Driesch, *Man and the Universe*. Allen & Unwin, 1929. Trans. Johnston, pp. 110-127.

harm in past ages. We are faced with a vital point: just because an agent is from the "beyond" it is not necessarily good. So many people have only to be convinced that an effect is supernatural to think that it comes from God, and many illogical claims to validity of worship have been built upon that basis in the past. Jesus persistently laid emphasis, not on the fact, but upon the nature of miracle: it was because He worked the works of God that men ought to believe, and He countered the claim that He was agent to Beelzebub, not by claiming supernatural powers, but by insisting that *His* miracles were good instead of evil.

THE NUMINOUS.

Otto coined the term "numinous" to describe the feeling of "wholly other" experienced by man when thinking of deity, and he describes it acutely as *Mysterium tremendum et fascinans*.¹ An appreciative but critical study by Brabant² deserves to be read in this connection. Whereas Otto would limit the term to the irrational elements of Deity, Brabant shows that the term covers our whole conception of God, thus destroying Otto's ontological proof. It is not necessarily caused by God, but is the natural reaction of mind when extending its conception from relative to absolute. It is essentially religious only in so far as it is concerned with goodness in the absolute, but may not be so caused. It can be generated suddenly by a glimpse of fantastic rocks, or by the deepening gloom of an ancient forest. This also is not necessarily good, but may also be evil. It was generated by the flickering lamp-light of the tabernacle, but was also associated with the dim majesty of Egyptian temples.

Through exceptional personal circumstances many people have been driven to religion with a new intensity of feeling arising from a strained psychological state. James³ has recognised two types of personality, the *once-born* and the *twice-born*. The former are the imperturbable optimists, seeing nothing wrong with life, whose perpetual aim is fine physique, good health, and living for the day. Of this type were many of the ancient Greeks, and the same outlook lay behind the Nazi philosophy, which accomplished much for its people, but led them eventually into beastliness. The twice-born tend to pessimism and suffer

¹ Rudolf Otto, trans. Harvey, *The Idea of the Holy*. Oxford, 1943.

² F. H. Brabant in *Liturgy and Worship*. S.C.M., 1932, pp. 12-22.

³ W. James, *The Varieties of Religious Experience*. Longmans Green, 1928.

from a tender conscience. Perpetual strain in their life has intensified until breaking point was reached, and through crisis they passed into a condition similar to the tranquility of hypnosis. Paul describes his own experience as closely approaching this pattern. (Rom. vii, 7-viii, 17).

The experience of *conversion* is not confined to the Christian religion, but is found in all the great systems, and even outside religion altogether; it too can be either good or evil. Thouless cites Benvenuto Cellini¹ as an example of one who could feel the emotions of a saint while living the life of a debauchee. This case proves that conscience, even within the Christian Church, is no infallible guide. So conversion, the crisis of conscience, has been as common among the followers of Allah as among those of Yahweh.

All of the abnormal states previously mentioned are embodied in part or whole within the life of those termed "mystics," and are there directed towards the development of the religious life. The theories advanced to explain the phenomenon are various, and Evelyn Underhill² has codified the many facts concerning it. If we believe that there is a God, we must automatically believe that all which is transcendent in personality is designed to be directed God-ward, even though we have the power of diverting it, and since the mystics claim that their discipline develops this transcendent part by opening a direct channel of communication with God, the subject is of primary importance. One point becomes embarrassingly clear as we proceed—all the great religions have numbered mystics among their members. Furthermore, it is no solution to claim that all religions have contained an element of truth, since the only difference between mystic and practiser of black-magic lies in motive, and not in mental states. The man who passes into a trance at Mass, and the one raising the Devil in evil ritual have much in common from a purely psychological viewpoint. Though possessed of an inner certainty which no experience could shake, each famous mystic has been an orthodox follower of the system in which he was nurtured, Teresa a Catholic, Boehme a Lutheran, the Kabalists orthodox Jews, and the Sufis good Mohammedans. The one common factor was that they each sought the

¹ R. H. Thouless, *An Introduction to the Psychology of Religion*. Cambridge, 2nd Ed., 1936;

Benvenuto Cellini, *Memoirs*. Everyman, 1942, pp. 109-111, 181-197.

² Evelyn Underhill, *Mysticism*. Methuen, 16th Ed. 1948.

God of their ancestors with a selfless love of burning intensity, whereas the ancient Egyptian or modern Rosicrucian seek for control over the forces of nature for narrow selfish ends. Paganism had its own miracles; the magicians of Pharaoh were able to follow Moses in some of his signs, while even Paul describes the power behind the idol as a Demon.¹

THE APPROACH TO GOD.

Since the crude dividing line between magic and mysticism is seen to consist of personal motive, the question of acceptable attitude in the sight of God may well be raised. In God's mercy the way to Him has been revealed to all; it was Jesus who said—"I am the way . . . no one cometh unto the Father but by (or through) me." An acceptable way of life has been lived by Jesus, and he assures us that it is also a necessary way. The mystic way has often ended (as with St. Francis) in self-less service to others, but it frequently begins with a selfish seeking after the serenity and comfort expected in the presence of God; motivated truly by a love for God, yet the love for the individual's neighbour falls woefully short of that for his own personality. The "kenosis" of Jesus provides a striking contrast to holiness sought by fleeing the world in a monastery. The mystic may use a hair shirt, a bed of nails, a lash for self flagellation, and thereby educate his body to bear indescribable torments. Jesus also disciplined his to bear the tearing agony of blunt nails driven through feet and hands, but he adopted a different system of mortification—the spending of self in the service of others. The mystic has often forsaken all possessions that he might escape the distracting love of that which is less than God; Paul laboured through the night to earn money—that he might spend it on the eternal good of others.

The way of Jesus may be the longer method of acquiring tranquillity, but it is God's way, and "no man cometh . . . but by me." Jesus showed much of the psychological phenomena common to mystics, the long nights in prayer from which he emerged strengthened, the voices and visions experienced, the tranquillity of soul which on the eve of Calvary could speak of His *peace*, all agree with the stage of introversion which opens the

¹ E. J. Dingwall, *Some Human Oddities*. Home and Van Thal, 1947, ch. 1 and 6.

mystic life. May we in reverence suggest that the mysterious cry—"My God, My God, why has Thou forsaken me?"—may coincide with entry into "the dark night of the soul" which follows the opening phase? If this be so, he proceeded at a slower pace than many orthodox mystics, detained by the self-sacrificing method of renunciation adopted for our sakes.

The certainty that they had received a revelation from God was one of the insidious dangers of mysticism, and the more sober members of the fraternity were ever suspicious of their detailed visions: the *unconscious* carries over into the hypnotic state the ideas of normal theology, and on emergence from hypnosis they have acquired a new emphasis. While the personality in this condition may be in touch with the transcendent, it would appear that a knowledge of God must come through other channels. Of the vision word and dream by which God's message came in Old Testament days we know little, and must rest upon the assurance of Jesus that it was "the word of God." Accuracy of prediction was suggested by God (Deut. xviii, 21-22) as a secondary test, but at times even a false prophet could give an accurate forecast (Deut. xiii, 1-5) and consistency was the primary standard—to speak in the name and character of Yahweh. Thus at a later date a prophet was adjudged worthy of death (I Kin. xiii) because he failed to reject the message which he knew to be inconsistent with the word of God through him. Writing to Corinth, Paul recognised that "glossolalia" had been also manifested in them during pagan worship¹ and suggested a check by consistency of their spirit gifts—did they acknowledge Jesus as *Lord*, and walk in His footsteps? John also commands the "spirits" to be tried by the same method, and finally, in the last message, commends Ephesus for so doing and reproves Pergamum for harbouring false prophets of the Balaam type. Throughout the early days described in *Acts* perpetual appeal is made to consistency with Yahweh's way as revealed in scripture. Controversy does not rage between the word of Moses and that of Jesus, but rather as to whether Jesus was the Messiah promised by Moses, and both sides are content to abide by scripture once its meaning can be established.

In stating both that the just shall live by faith, and also that

¹ K. Lake, *The Earlier Epistles of St. Paul*. Rivingtons, 2nd Ed., 1914, pp. 241-252;

J. H. Moulton and G. Milligan, *The Vocabulary of the Greek Testament*, H. and S., 1930. Article "apago."

Jesus was tempted in all points as we, the New Testament indicates a drastic restriction to the "supernatural" knowledge of Jesus. So also in the statement that he *learned* by his experience a finite horizon to knowledge is implied, and a modern writer has given an interesting discussion of the point.¹ Jesus always refers to the Old Testament as authoritative, suggesting that it was also His source of knowledge. The "Spirit" which dwelt within Him enabled him to read beneath the surface that which was not apparent to the uninterested, and he promised also to his disciples that the Spirit should dwell with them to this same end. On the resurrection day disciples were chidden for failing to believe the scriptures previously expounded, and while Paul points out that only the Spirit of God can comprehend the things of God, Jesus by parable taught that our heavenly Father would freely give Holy Spirit to those who asked. A development of this teaching may be found in Swete's treatise.² If therefore we seek by mystical hypnosis to give psychological certainty to the scheme already in our minds, it is imperative that we first fill our minds with God's truth, lest we forge a chain of lies which shall hold us in bondage all our life.

Jesus taught that God gives only to those who ask and desire earnestly. It is the humble approach seeking guidance not otherwise available which elicits response. Of such Jesus promised they should know truth, but of those who willingly forsake God, Paul says that God will send a strong delusion that they should believe a lie. Even so, in Old Testament days, a spirit of error was said to go forth from God to deceive a king. Those thus seeking God are spoken of as unity, Jesus desires that they may be *one*, even as He and God were one, and Thornton has compiled an interesting study of this common life.³ This is the "good" for which union of personality was intended, but several writers have noted the opposite "evil" to which man has prostituted it as forming a unity in the Devil.⁴ From this viewpoint evil is the non-submission of the personality to God, and the Devil is the unity of those in that state. Thus also, the temptations of Jesus may be viewed as the interaction between

¹ Forbes Robinson, *The Self-Limitation of the Word of God*. Longmans Green, 1914.

² H. B. Swete, *The Holy Spirit in the New Testament*. Macmillan, 1910.

³ L. S. Thornton, *The Common Life in the Body of Christ*. Dacre Press, 2nd Ed., 1946.

⁴ e.g., Theologica Germanica ch. 36, 40, 47, 49, and Theresa—*The History of Her Foundations*, ch. 5, 6, 8.

his personality and that of those around him. They, with their false scale of values, mis-use of the scriptures, and seeking for signs in accordance with their warped ideas, presented a severe temptation to him who was about to proclaim the Kingdom of God. The mental disease known as "Demon possession" would appear to be due to unhealthy mental attitude, and fled before the light of Christianity.

LIFE.

Darwin, Spencer and Haeckel led a school of thought which considered life to be but an unsolved chemical reaction, and it was Bergson who initiated the break-away from this rationalist position with his doctrine that life was a continuity, using the physical universe and moulding it to its own purpose. The Bible indicates that this is but a half truth, a halt half-way between the error of scepticism and the actual facts. Life, we are told is a spirit sent from God, belonging uniquely to Him, and breathed by Him into the inanimate body; should He withdraw it, "all flesh would perish together." But life, though a unity extending through vast vistas of time and manifest in microbe and man, is itself impersonal force, and it is suggested that as the physical exists for life, and life is the energising force, so also life exists for personality, and personality is the power through which it is conscious. We are faced therefore with an ascending ladder; the physical exists in great prodigality that life may propagate in some small corner of the universe; life spreads in multifarious forms over the earth that personality may be conscious in a few million bodies; personality exists that it may progress into union with God, and by analogy above we might expect to find only some small percentage so doing. The analogy is strengthened when we see only a small portion of a season's seeds germinating and reaching maturity, our ponds swarming with frog-spawn to produce a few adults, and the earth filled with people who are indifferent to religion.

Our view of life is necessarily modified by our ideas of *time*. The meaning of time is largely relative to the context; for the physicist it is extension with warped scale; to the living *organism* it is extension with a rapidly contracting scale due to the accumulation of toxins in the blood,¹ and where this contraction is absent, as in laboratory-propagated cellular tissue, a semi-

¹ Du Nouy, *Biological Time*. Methuen, 1936.

immortality is enjoyed. Temple has shown¹ that for personality there are two possible schemes, that of "past and future" as now experienced by the organism, and that of the eternal present associated with freedom from time in God. Peter points to the fact that time is meaningless to God, and when we speak of immortality or eternal life, it is this type of life, as centred in God, which is meant. Thus Paul says that only God is immortal, yet speaks of men as called to immortality and life in its fullest sense, that is, to union in God.

Keith has summarised² the biological argument that our consciousness is a function of chemical reactions within the brain. While admitting dependence on this process, an attempt has been made in this paper to show that human personality has in some form a contact with the transcendent and thus differs from animal mental experience. During recurrent periods of sleep, when some of the vital mental processes are suspended, we are entirely unconscious, and while our body lives, it is as though that portion of the time extension were non-existent for our personality. It is logical therefore to argue that during the longer suspension in death a similar hiatus in consciousness occurs. Both Old and New Testaments alike agree in frequent reference to death as a "sleep" and while the whole teaching of the Bible is self-consistent, a gradual extension of detailed revelation is to be found in its pages. The hope of a further life after death is centred on a resurrection (or standing again) of the body with a time scale which is not contracting, and in consequence an eternal existence; thus the Bible visualises an organism to provide the mechanism for personal self-consciousness. The doctrine of man's *unity* has been well expounded by Laidlaw.³ When Paul spoke of Jesus as "the first fruits of them that slept," he presented a picture of our hope of personal survival.

In our ideas of personal survival we are often deceived by false analogy with the living organism. For a particular organism hiatus of life spells eternal dissolution (apart from resurrection in Jesus), but our experience in sleep demonstrates that this is not so with personality, since every morning on awaking our memory serves to establish connection with previous

¹ W. Temple, *Christus Veritas*. Macmillan, 1926, ch. 5 and 11.

² A. Keith, *Darwinism and What it Implies*. Watts, 1928.

³ J. Laidlaw, *The Bible Doctrine of Man*. T. and T. Clark, 1895.

days. It is this function of memory which constitutes the continuity of personality, and in teaching that Jesus was tried in all points as we, the Bible indicates that as *man* He had no pre-existence, but "grew in knowledge." As the risen Lord however, he is immortal, has passed out of all personal relationship to time even as God exists, and in reference to Him thus the term "pre-existence" has no meaning. We also, at the resurrection, hope to so pass from time to eternity in the terms of the great oath (Rev. x, 5-7).

There is an independent way in which personality may be said to have continuity of existence, even when not self-conscious—in the minds of other personalities. Thus Socrates enjoys an immortality in the minds of other men, though dead for many centuries. This type of existence is only semi-immortal however, being dependent upon the continuity of other personalities in which to reside. For the Christian there is true continuity, since he exists in the mind of God, and, as Jesus has said, "all live unto Him." This is the figurative "book of life" in which is inscribed the names of those to enter into eternity. Thus baptism into the Christian community was described as a "new birth" in which a fresh start was made as "new-born babes" to develop a personality which should be acceptable to God and reside in His memory. That man is not necessarily immortal is shown by Jesus' readiness to answer the question, "What shall I do to inherit eternal life?" Swete has well shown¹ that our future personality is a function of that suspended at death, and while the resurrection body may be new, and be made incorruptible, it is only if our present personality is worthy of survival in union with God that it will enter that age. C. S. Lewis has argued in figurative language² that we are created for union with God, and in personal refusal of that union we create our own hell—the corruptible state of being "without God."

WRITTEN COMMUNICATIONS.

Mr. W. E. LESLIE wrote: *The External World*.—Mr. Lovelock opens his paper with a destructive criticism of the means by which we try to obtain knowledge of the world around us. Against this uncertainty he says "the Bible is insistent that a real *spiritual*

¹ H. B. Swete, *The Life of the World to Come*. S. P. C. K., 1917.

² C. S. Lewis, *The Great Divorce*. Bles.

world does exist," and that through God's word we may make contact with it. This seems encouraging, but Mr. Lovelock had not noticed that the Bible is a phenomenon of the external world, our knowledge of which he considers so uncertain. Our sensory percepts are the first link in a chain of which the contents of the Bible are later links. A chain cannot be stronger than its weakest (in this case its first) link. From this point of view the teaching of the Bible can only be relied upon when supported by direct revelation to the individual.

The Numinous.—Is Mr. Lovelock quite sure that Otto's argument is strictly "ontological"? As to James's "twice born," surely they are troubled with pessimism and a tender conscience *before* their second birth. To say that their later state is similar to the tranquility of hypnosis is quite inadequate. Why should the fact that there have been mystics in all religions be "embarrassing"? The tendency to connect mysticism and black magic is, I fear, due to an uncritical (sometimes almost superstitious) approach. Compare the attitude of Dean Inge with that of Miss Underhill. Surely Paul is a famous mystic who did not remain a follower of the system in which he was nurtured.

The Approach to God.—What has the *kenosis* (emptying) of Jesus to do with holiness? I know of no indication in the New Testament that he disciplined his body to bear the physical pain of crucifixion. Surely he suffered as did the thieves. It is interesting that while so many sober mystics mistrusted their detailed visions, Paul, who was surely a sober member of the fraternity, did not. Surely the testing of spirits was done by a special gift of discerning of spirits. The words "Jesus is Lord" were an ejaculation in an ecstatic state—the question of "walking in his footsteps" is not introduced.

Life.—In the first of the four paragraphs in which Mr. Lovelock discusses the nature of life, he states that it is a spirit sent from God and breathed into the inanimate body—presumably into the inanimate bodies of microbes and plants as well as man. I find this suggestion less convincing than others in the paper.

Dr. BASIL ATKINSON wrote: This interesting and very readable paper seems to have been written from a Unitarian point of view. Thus the writer says that the Bible indicates that as *man* Jesus

had no pre-existence. If this means that the Second Person of the Trinity had no *human* nature until His conception in the womb of the virgin, it is almost a truism. If it does not mean this, it appears as it stands to deny the doctrine of the Trinity, and to place the Lord's pre-existence on the same plane as our own post-resurrection external condition. Is this consistent with the statements made in John i, 1-2? A Unitarian position seems also to be indicated on p. 24, where the word "Spirit" is placed between inverted commas and the expression "Holy Spirit" occurs without the definite article. There seem hints elsewhere in the paper that the writer's viewpoint is not simply Unitarian. I suggest that the background of the paper might be more clearly understood if the writer would develop further his view of Trinitarian doctrine.

Mr. A. CONSTANCE wrote: To that fascinating, almost terrifying, territory which we term "personality" Mr. Lovelock proves himself an unreliable guide: an explorer who ignores the experience of the most notable adventurers in this region of human philosophy, and one who has only a few byways and insignificant places to show us. For he makes no mention of such indispensable authorities as Myers, Bradley, Sturt, Bosanquet, Brugmans, Carington and others whose writings are surely vitally relevant to a paper of this kind. Even less excusable is his neglect of those problems which are the main areas and mountain peaks of his subject. For his incredibly complacent omission of any reference whatever to such subjects as Professor Dunne's *Serialism* discoveries, Ogden's *Semantics*, J. B. Rhine's experiments in extra-sensory perception, Upton Sinclair's telepathic experiments, the work of G. N. M. Tyrrell, Hettinger, S. G. Soal; Jephson, the Estabrooks, and that of Professor Fukurai and other Eastern students of human personality, is quite unforgivable. He presumes to write of a subject which cries aloud for reference to these competent authorities and relevant subjects, yet is content with threadbare ideas and trivial quotations. He is as one who would presume to lecture on Tibet, yet would make no mention of Lhasa, the Himalayas, or the characteristics of its people. There is no word in his paper of personality in its historical implications, nor of any of the association theories, nor of the K-ideas, of the personality theories of spiritists, of the Psychon systems and sub-

systems. He uses a thousand words or so to introduce his subject, vaguely and uncertainly, and then reveals the fact that he has an axe to grind—a rusty axe which has had many name-handles during the past nineteen centuries, but one which is still recognisable for what it is: a two-edged weapon, and one which has been laid again and again to the roots of our Christian faith. Its two edges are unitarianism and conditional immortality; and the fact that the roots remain, vitally sound and unassailable, is due to no lack of energy on the part of those who have wielded the axe—in recent times the Millennial Dawnist Pastor C. T. Russell, the Christadelphian writer Robert Roberts, in his book *Christendom Astray*, and others. Mr. Lovelock chooses his sentences carefully, but his intentions are all too evident. It is quite evident that he has no appreciation of the real nature or need of the human personality. For if the Divine Personality of our Lord was merely derived through a series of human personalities as the natural son of Joseph, the Christian message is false, we are yet in our sins, and the world is without hope.

Mr. Lovelock speaks of an “identification” between our personality and that of Jesus. But his paper as a whole shows that he does not mean what orthodox Christians mean when they speak of the Atonement. Our Lord is quite evidently an “elder brother” and no more. He has no supernatural authority, according to Mr. Lovelock—for this is implicit in his reference to miracles. It is truly amazing that he can refer to miracles like this, yet blind himself to the truth expressed by our Lord Himself as He did many of His miracles—that He had an even greater power, *the power to forgive sins*, and that this power, when proved by implication in the working of any associated miracle, was absolute and undeniable evidence that He was God. For Mr. Lovelock must surely admit that none can forgive sins save God Himself. In another passage Mr. Lovelock says that “the man who passes into a trance at Mass, and the one raising the Devil in evil ritual have much in common from a purely psychological viewpoint.” This statement is perilously near blasphemy, and it is demonstrably quite untrue. It is the kind of thing that is published with approval by the Rationalist Press Association. One does not expose the fundamental error of the Mass by linking it with “raising the Devil”—such a mental

association merely exposes the muddled thinking of the mind that conceives it. Again, Mr. Lovelock speaks of the *kenosis* of Jesus as a striking contrast to holiness sought by fleeing the world in a monastery. Yet our Lord rejected the world more consistently than any monastic recluse. That He did not seek monastic seclusion evidences a stronger sanctity that is not in opposition to the spirit of the recluse, but rather a firmer and fuller expression of it. Mr. Lovelock fails to see that there are degrees of holiness, but that these are not in opposition to each other but to the spirit of the world. But Mr. Lovelock has no reverence for the Author of personal holiness—he speaks of the Holy Spirit as an impersonal influence. This is consistent with his unitarianism, but not with the numerous references to the Personality of the Holy Spirit in Holy Writ, in which He is spoken of as guiding and comforting, reproving and (in short) acting as only a *person* can act. It is not surprising that Mr. Lovelock goes on to say that “we must fill our minds with God’s truth.” Yet we might as well speak of creating ourselves, saving ourselves and sanctifying ourselves! To such passes do men come who deny the truth of the Triune Nature of God. Mr. Lovelock speaks of demon possession as “mental disease.” As one reads of our Lord expelling demons this is quite obviously untrue. Our Lord could hardly have spoken to a disease and commanded it to come out of a man, and received a spoken reply from it. Nor could He have referred to demons and demon possession as He did, again and again, if He had been speaking of diseases. All instances of demon possession require indwelling personalities. My own experiences in psychical research, with prominent mediums, during a time of my life when I was actually a spiritist and before I came to Christ, convinced me that the mediums, with their distorted faces and writhing bodies, were demon-possessed. My reading of the concentration camp horrors of the last war, and more recently of those in Soviet Russia, confirms this fact of the reality of demon possession. Mr. Lovelock says that “personality exists that it may progress into union with God.” This is in direct conflict with the Scriptural truth that the human personality must undergo a drastic and revolutionary change to come into union with God—that it must be re-born. Not by progress, but by surrender so absolute that it is likened to death does

the personality find union with God. To be saved from sin and its consequences through Christ involves nothing less than the death of the old personality. The result is a new personality quite distinct from the old, and a sanctification which is so far removed from being a "progress of the personality" that it might better be described as a series of deaths. For this is at once the paradox and the truth of Christian experience: that the soul which has come to see our Lord Jesus Christ as God and Saviour (and the terms are inseparable in the experience we call "conversion") can only escape spiritual death by spiritually dying, "spiritual death" being separation from God, and "spiritually dying" union with Him. From the surrendering adoration of "My Lord and my God," the personality passes, timelessly and deathlessly, to the "eternal-now" position of "Not I, but Christ."

Mr. TITTERINGTON wrote: I have read this paper through several times, as carefully as I knew how, but have been unable to discern what is the thread connecting together the various sections of which it is composed, unless it be that it is an attempt to provide a philosophical basis for the doctrine—quite clearly enunciated in the concluding section—of conditional immortality.

There are many other things in this paper, too, that give rise to serious misgiving, especially in relation to the doctrine of the Trinity. Mr. Lovelock's references to our Lord prompt the question whether he believes, as a Christian must believe, that He is very God of very God, the Son from everlasting. Thus when he says: "As the risen Lord . . . He is immortal, has passed out of all personal relationship to time even as God exists, and in reference to Him thus the term pre-existence has no meaning," does he accept our Lord's claim, "Before Abraham was, I am"? or again: "And now, O Father, glorify Thou Me with Thine own self with the glory which I had with Thee before the world was"? and many like passages. On this fundamental issue the paper seems very ambiguous.

Then again, the speculation concerning our Lord's supposed mystical experiences on page 22 I find both dubious and distasteful. His experience of oneness with the Father was a far deeper, more intimate matter—far more vital—than any that a mere man may know.

When Mr. Lovelock says "Jesus . . . taught that our heavenly Father would freely give Holy Spirit to those who asked," why does he omit the article? Does he deny personality to the Holy Spirit?

On pages 24 and 25 he quite definitely denies the personality of the Devil, and the reality of demon possession. He accuses those holding other views of "misuse of Scripture," but what a misuse of Scripture is it when he says: "The temptations of Jesus may be viewed as the interaction between His personality and that of those around Him." The only ones around Him, as St. Mark tells us, were the wild beasts, and Mr. Lovelock is scarcely referring to these!

And lastly (though there is much else on which one could comment), Mr. Lovelock's view of conversion seems far distant from the Christian concept. If "conversion, the crisis of conscience, has been common among the followers of Allah" (a very doubtful statement in any case), it can have nothing to do with what the Christian understands by the term; for it means a transformation of the whole life and being, resting on the finished work of Christ through the blood of His cross, and resulting in a personal relation to Him. Apart from Christ there can be no conversion.

Mr. R. E. FORD wrote: In the paragraph commencing "In stating both that the just," etc., I take great exception to the statement that the words "tempted in all points as we" indicates a drastic restriction of the supernatural knowledge of Jesus. It is vital to us, as Christians, to be extremely careful how we expand statements in the New Testament concerning the person of Christ, as it is impossible for any human mind to solve, or fully understand, the mystery of the Incarnation. In fact, the statement "drastic restriction to the 'supernatural' knowledge" is, of course, a contradiction of terms. Knowledge that is "supernatural" cannot suffer drastic restriction. Further, Mr. Lovelock goes on to make the statement that: "He learned by his experience, implies a finite horizon to knowledge." How can there be a finite horizon in one who is infinite? It would appear from this and other passages that Mr. Lovelock denies the Deity of Christ. The great mystery of the incarnation is shown many times in such incidents as the Saviour being thirsty and unable to draw water at the well of Samaria, and yet the next minute reading the secrets of the woman's

heart. Also one minute weary and asleep in the boat and the next minute stilling the waves and storm, and again one minute standing weeping as a powerless man outside the Tomb of Lazarus and the next moment calling forth the dead in resurrection power. There are many, many similar incidents in the Gospels which will come to everybody's mind. To come to hasty deductions from any of these would lead to great error concerning the Lord's person—in fact, if Mr. Lovelock's reasoning is valid in the passage he quotes from Hebrew v, 8, where he says "a finite horizon to knowledge is implied," then we can also imply that the Lord was imperfect from the following statement in verse 9, whence we read "and being made perfect." In fact, we have no right to infer, deduce or imply anything from Scripture which is not plainly stated, most especially concerning the miracle of the Incarnation and Person of the Blessed Lord. There are other statements on page 27 about the pre-existence of the Lord which are most distasteful. It would appear from this passage that Mr. Lovelock does not believe in the Eternal Sonship; again he seeks to lay emphasis only on the manhood of Jesus. This, as I have sought to show from the instances given already, is impossible and dangerous.

A communication was also received from Mr. R. E. Hamilton, in which many of the criticisms raised in the above communications were again made.

AUTHOR'S REPLY.

I would like to express thanks for the many comments which various members have forwarded on my recent paper, "Personality." In particular I would like to thank Mr. Leslie for his list of Press corrections, of which I have made full use. In the following sections an endeavour is made to acknowledge briefly the major points raised.

To the rather violent charge of omitting the principal authorities which is levied by Mr. Constance, I can only reply that this paper was compressed from a longer version, and had, perforce, to eliminate much: as to which authorities are most important, however, a difference of opinion is to be expected, and it is doubtful whether a census taken round the Victoria Institute would reveal a unanimous choice.

Several members have questioned inferences on the subject of the Godhead. Two are mistaken in supposing that I wrote with a Unitarian bias—in fact, their own abhorrence of this blasphemy cannot be any greater than is my own. Neither have I any sympathy with the teaching of Arius, though having some predilection towards a few of the points made by Paul of Samosata. In connection with missing capitals when referring to our Lord, I am very sorry if the usual practice of the Institute has been violated. I have used capitals where emphasis was on Jesus as Son, but not where reference was to his human personality as representative of that which we ourselves experience. The reality of this human side is well emphasised by Du Bose in *The History of the Oecumenical Councils*. In reply to Mr. Titterington's comment on the nature of Jesus, it is apparent throughout the Scriptures that although bearing the authority of the Father, that authority was distinct in being delegated; for an expansion of this point may I refer to H. R. Mackintosh, *The Person of Jesus Christ* (T. & T. Clark, International Theological Library), where the incontrovertible teaching of 1 Corinthians xv, 28 is dealt with.

Mr. Titterington asks why I omitted the article when quoting Luke xi, 13, and the answer is simple, because it is omitted in the original: there are many places where the article is contained, and if a list of the two usages be compiled a general difference will become apparent. This point answers several additional matters raised by others. A second objection made concerning the physical isolation of Jesus during the temptation seems to miss the point; we, as children of our age, are influenced by the general outlook and code of values held by our human ambient, and even in isolation on the mountain side our personalities are still partly a product of many others. No more than this influence of the world in which He increased in stature and favour with God and man was intended in my reference.

There is not space to reply to the many detailed points, but Mr. Leslie's fundamental criticism must be noted. The Bible is certainly a phenomenon in the "outside world," but it is a stage nearer to our own personality than a tree or table. If we take the extreme view that all percepts are illusory, then we are without any hope whatever; if, on the other hand, we believe that there is some

rational relation between percept and stimulus, then the Bible as a series of words becomes a mechanism for transferring thoughts from one mind to another, whereas the table is still a series of stimuli with unknown relation to the concept. We are faced in the Bible with *thoughts* not *things*, and the task is to decide whether they are human or Divine thoughts.

879TH ORDINARY GENERAL MEETING.

HELD AT 12, QUEEN ANNE'S GATE, LONDON, S.W.1, AT 5.30 P.M.
ON MONDAY, FEBRUARY 28TH, 1949.

KENNETH G. GRUBB, Esq., C.M.G., IN THE CHAIR.

The Minutes of the previous Meeting were read, confirmed and signed.

The following elections were announced:—F. J. D. Syer, Esq., M.B.E., B.A., Fellow; P. S. F. Rowden, Esq., Fellow; Roy E. Hamilton, Esq., Fellow; G. E. Barnes, Esq., Fellow; Rev. E. H. Steele, Fellow; J. B. Nicholson, Esq., Fellow; Rev. W. S. Ridgway, M.A., Fellow; Rev. Hugh C. C. McCullough, Fellow; M. H. Knott, Esq., Fellow; E. H. Trenchard, Esq., B.A., Fellow; B. C. Martin, Esq., A.C.I.I., Fellow; James Turnbull, Esq., Fellow; Pastor L. W. Boone, Fellow; Rev. Alwin R. de Alwis, Fellow; F/Lt. Rev. Alan Macleod, Fellow; F. F. Stunt, Esq., Ll.B., Fellow; Dr. Chas. L. Feinberg, M.A., Th.M., Th.D., Ph.D., Fellow; B. E. McCormick, Esq., Fellow; D. Geary, Esq., F.N.S., M.R.S.L., Fellow; V. D. K. Conway Ross, Esq., Fellow; C. E. A. Turner, Esq., M.Sc., Fellow; Miss Mary E. Waters, B.Sc., Fellow; H. G. Goddard, Esq., Fellow; C. Hartley, Esq., M.A., M.B., B.Chir., Member; Miss Betty L. Neel, Member; N. Forbes Palmer, Esq., Member; F. Foulkes, Esq., M.Sc., B.A., Member; D. Russell, Esq., Member; A. F. Forbat, Esq., M.B., B.S., Member; Rev. G. A. Scott, Member; H. R. Minn, Esq., M.A., B.D., Member; Rev. Graham R. Delbridge, A.C.T., Th.L., Member; C. J. F. Upton, Esq., Member; Miss Louie Bush, Member; Rev. Martin F. Argyle, M.A., Member; Rev. Robt. A. Cressy, A.B., B.D., Member; R. H. Kipping, Esq., M.B., Ch.B., Member; Mrs. Ellen J. Watkins, Member; Mrs. Dorothy Beach, Member; L. E. Buckley, Esq., A.O.S.M., Member; Jas. van Sommer, Esq., Member; D. J. Whitney, Esq., B.Sc., Member; D. C. Cameron, Esq., Member; P. H. Nielsen, Esq., Member; Rev. Alex. Barkley, B.A., Member; Rev. R. Strang Miller, Member; J. H. Wellington, Esq., M.A., Member; H. F. Maton, Esq., M.I.M.E., A.M.I.P.E., M.Inst.Metals, Member; Rev. G. H. Heaslett, B.A., Member; Rev. G. I. Francis, Member; D. I. Frost, Esq., B.Sc., Member; H. Owen, Esq., Member; J. M. Gage, Esq., M.A., Member; P. W. Petty, Esq., B.A., Member; Rev. D. MacLean, Member; E. C. Staddon, Esq., A.M.I.E.E., Member; Rev. E. W. L. May, M.A., Member; W. Bennet, Esq., M.A., Member; E. F. Witts, Esq., Member; Rev. H. F. MacEwen, B.D., B.A., Member; M. Williams, Esq., Associate; P. M. Tankard, Esq., Associate; K. H. Marr, Esq., Associate; K. W. Campbell, Esq., Associate; H. Butterley, Esq., Associate; N. Chynoweth, Esq., Associate; H. J. Edwards, Esq., Associate; H. Rogers, Esq., Associate; R. Weir, Esq., Associate; N. Bathgate, Esq., Associate; E. Buckle, Esq., Associate; R. Gibson, Esq., Associate; J. S. Elliot, Esq., Associate; D. G. McCraw, Esq., Associate; A. J. Gerlach, Esq., Associate; K. Grisdale, Esq., Associate; G. V. Prosser, Esq., Associate.

The CHAIRMAN then called on Ernest H. Trenchard, Esq., B.A., A.C.P., to read his paper, entitled "Spanish Mysticism."

SPANISH MYSTICISM

By ERNEST H. TRENCHARD, B.A., A.C.P.

SYNOPSIS.

The word mysticism is used in two senses—for an appreciation of an invisible spiritual world and for a technique (often non-Christian) for effecting direct contact with the Infinite.

Mysticism in its second sense arose in Spain under Philip II. The works of the better-known Spanish mystics are described with special reference to Santa Teresa and St. John of the Cross. It is concluded that ascetic practices result in a wearing down of natural desires—in the “dark night of the spirit” (St. John of the Cross) there is death even to spiritual delights.

Contrary to the opinion of Allison Peers, it is impossible to justify mystical theology as a valid interpretation of New Testament teaching. Nevertheless, mystic writers have often fascinated Christians, and the reason for their appeal is examined.

A SATISFACTORY definition of “mysticism” is so hard to come by, that Dean Inge lists scores of them at the end of his standard work, “Christian Mysticism,” many of which are mutually contradictory. In its widest sense it is the appreciation of spiritual and eternal Reality—the Absolute of the philosopher—behind the screen of phenomena and temporality, the attempt to gaze “not at the things which are seen, but at the things which are not seen; for the things which are seen are temporal, but the things which are not seen are eternal.” In this sense the spiritual content of Christianity itself is mystical. The spiritual Christian, however, is generally content to recognise the fact that his senses cannot give him ultimate reality, while he seeks to “invest” the temporal and phenomenal, in accordance with the Master’s directions, in order to “lay up treasure in Heaven.” The mystic, in the special sense of the word, feels himself to be imprisoned in the dimensions of space and time, and is not content to wait for the moment of Christian promise, when the *σῶμα ψυχικόν* will be raised a *σῶμα πνευματικόν*. He feels that life has no object unless he can tear down the enclosing walls, and he can find himself face to face with God, and absorbed in God. The search is both outward to the heart of the cosmos, and inward to find the “spark of the soul,” the remains of the original divine creation, which, he conceives, alone can be purified and refined so as again to unite with its like in the Nature of God. The process by which this is accomplished is curiously alike in all ages, in different races and cultures, and even in different religions; for it must be remembered that there are Indian and Moslem, as well as Christian, mystics. The first stage of the journey to Reality is the “Purgative Way” of discipline and self-denial, by which the pilgrim seeks to “wear down” the flesh, and to

annihilate the senses. Then he seeks to centre his thought by the action of the will on the realities within and without, by a process which is technically termed "recollection." In Christian mysticism the outward reality is Christ the "Beloved," whom the ardent and purified soul seeks after with the passion of a lover. The pilgrim is rewarded with glimpses of reality and of divine light, so that this stage is called the "Illuminative Way." Verbal forms of prayer, and the workings of the intellect, become less and less significant, and, as we shall see, St. John of the Cross speaks of even the "Dark Night of the Spirit," when the soul dies even to spiritual blessings, before she passes on to the final "Unitive Way," variously called the "Beatific Vision" or the "Spiritual Marriage." The motive power is Love; the guiding power is the Will; the atmosphere is sanctity. For Evelyn Underhill, the mystic who has attained these heights is a man of spiritual genius, "in whom the transcendental consciousness can dominate the normal consciousness, and who has definitely surrendered himself to the embrace of reality . . . he lives at different levels of experience from other people, since the world as we know it is the product of specific scraps or aspects of reality acting upon a normal and untransfigured consciousness."¹

The mystics have been divided into different "schools"—speculative, psychological, symbolic, etc.—according to the different emphases placed on certain aspects of their teaching and practice; examples from all these schools can be found among the Spaniards of the "Golden Age" of Mysticism, which was also the "Golden Age" of literature.

The pure fountain of true Christian mysticism is found in St. Paul and St. John. This, with no advantage to itself, was soon mingled with the Judaic mysticism of Philo and his school, and with the neo-platonic variety of Plotinus, who is the pagan "father" of the technique of Christian mysticism, and whose teachings entered the Church through the Alexandrian theologians, and the Pseudo Dionysius. It was associated with scholasticism in such writers as Bonaventura and Gerson, who mapped out the Mystic Way as thoroughly as Aquinas tabulated the Universe. With Eckhart, whom Dean Inge considers to have been the greatest of the speculative mystics,² the stream

¹ *Mysticism*, p. 90.

² *Christian Mysticism*, p. 148.

passed to Germany, and was expounded with depth and power by Tauler and Ruysbroek.

Although ascetics abounded, as we would expect from the realism and stoicism of the Spanish character, we find no outburst of mysticism in Spain until the XVI century. In the early part of the century the reign in Spain of the Emperor Charles V had given the country a wide, European outlook, which led to the influx of Italian neo-platonism, and the spread of Erasmian ideas among enlightened ecclesiastics. The accession of Philip II determined a strong movement in exactly the opposite direction. The Renaissance failed to get a grip on Spain, and she became the champion of the Counter-Reformation. Angel Ganivet believed that the fierce energies which the Spaniards had directed against the alien Moors were, after the Reconquest, turned inward against herself in a new fanaticism, while mysticism was "as it were the sanctification of sensuality," a kind of sublimation of southern eroticism.¹

The stream of medieval mysticism entered Spain through three pious friars of the first half of the XVI century, Orozco, Laredo and Osuna. Osuna's *Tercer Abecedario espiritual* has the distinction of being the book which first guided Santa Teresa's feet along the Mystic Way. The work of these forerunners of Santa Teresa and St. John of the Cross, and their interpretation in Spain of the profound thought of the medieval—and especially the German—mystics, must be taken into account when any estimate is made of the "originality" of the great figures we are later to consider.

It is tempting to devote considerable space to the "quasi-mystics" of the great period 1550 to 1580, for their saner and less technical progress toward Reality makes them more attractive and more helpful to the evangelical student who has kept close to the text of the New Testament. We must be content to notice the general significance of two outstanding figures: Fray Luis de Granada and Fray Luis de León. Fray Luis de Granada (1504-88) was a voluminous writer and an eloquent preacher, whose works, in translation, became popular even in England, despite the strong anti-Spanish and Protestant tendencies of the later Elizabethan period. He was an ascetic who reached great heights of prayer, but seems to have taken little notice of the orthodox stages of the Mystic Way. He is,

¹ *Idearium Español* (Colección Austral), pp. 18, 19.

above all, a symbolic mystic. Far from wishing to annihilate sense, he rejoices to the end in God's great and wonderful gifts in Nature, and, like Blake, saw "all eternity in a grain of sand." Nature was the fringe of the garment of the glory of God, leading him to seek the face of God in prayer which was, at the same time, mystical and intelligent. I am indebted to Prof. Allison Peers for the following fine quotation: "Prayer is an uplifting of our hearts to God, whereby we become united and made one with Him. To pray is for the soul to rise above itself, and above all created things, and to be joined with God, and engulfed in that ocean of infinite sweetness and love. Prayer is the issuing of the soul to receive God, when He comes in His abundant grace. . . . Prayer is the standing of the soul in the presence of God, and of God in the presence of the soul. . . ." ¹ Granada was content to leave the final mystic union as a hope to be realised in Heaven.

Luis of Granada was popular, sentimental and eloquent to the point of being wordy and florid. His namesake and younger contemporary of León was restrained, balanced, scholarly; his work has a classical proportion and polish not at all common amid the exuberant thicket of Spanish literature. And yet there was more in common between the Andalusian preacher and the Salamancan professor than is at first sight apparent—more, perhaps, than the Luis of León would have cared to admit—for they both understood deeply that Nature pointed beyond herself to the glory of God, and they both rejoiced in the Person of Christ revealed in the Scriptures in which they were deeply versed. "Christ lives in the fields," exclaims Luis de León in a characteristic phrase. But if the country charmed him, still more so did the fields of heaven. He was steeped in Platonic philosophy as well as in the Scriptures, and the star-lit sky not only spoke to him in the clearest language of the glories of the Creator, but also stirred within him that deep desire to get to the heart of all things, to the innermost sphere, to the centre of life, which was characteristic of his philosophy. As he listened to the music of his blind friend Salinas, he seemed to pierce air and space, and to discern, in the highest sphere, imperishable and uncreated harmony. He condensed such thoughts into the compass of a brief, but intense, body of verse, which is one of

¹ *Libro de la Oración y Meditación*, Bk. I, Ch. 1. Quote and trans.: Allison Peers, *Studies of the Spanish Mystics*, Vol. I, p. 42.

the highest peaks of Spanish lyricism—surely that on which the reader can breathe the purest air, and find himself nearest Heaven.¹

Of Fray Luis's important prose works, we can only mention the justly celebrated *Los Nombres de Cristo*. This is one of the few works of Spanish Catholicism which belongs to the Church Catholic in the true sense and, despite obvious differences of setting and expression, the student of Scripture finds himself very much at home in these pages in which three monks, in a peaceful arbor of the monastery garden, near the flowing waters of the Tormes, discuss the significance of the prophetic names given to Christ in the Old Testament. The atmosphere is biblical rather than mystical in the narrow sense. His language approximates to that of his mystical contemporaries in the chapter on the "Bridegroom," but he is describing the work of grace in the heart which brings about a true union with Christ in every believing heart. There may follow further experiences, in which the soul enters more fully into the meaning of the union, and even moments of rapture, but Fray Luis does not go beyond revelation. Even in his beautiful prayer: "Thou art Life and Light, fulness of rest, Infinite Beauty, endless wealth of sweetness; grant Thou to me that I may be undone and transformed wholly into Thyself," he does not indicate a finality, but a deep desire to "apprehend that for which he had been apprehended"²—the unceasing movement of the derived finite on to and into the underived Infinite.

For most people with a nodding acquaintance with the subject, Santa Teresa, the little grey Carmelite nun of Castile, incarnates the spirit of Spanish mysticism, and no serious student would deny her a place apart, with St. John of the Cross, on the highest heights reached during the XVI century. Her originality is not that of thought, however, but of personality and expression. She is very Spanish, and very human, and, with Fray Luis of Granada, the most accessible of the mystics, combining in her own person depths of womanly tenderness with masculine determination and initiative. The saint of the many raptures and the celebrated "transverberation" was also the practical woman who exalted the role of Martha in the fine words: "Take note, my daughters, that the Lord walks even among the cooking vessels."

¹ *Oda a Francisco Salinas* in *Oxford Book of Spanish Verse*, 2nd Edit., p. 108.

² Allison Peers, *op. cit.*, Vol. I, p. 338.

Teresa gives us a spiritual autobiography in her "Life," which must take high rank in the literature of "Confessions." It was not until 1562, when she had already been a nun for nearly thirty years, that she attempted the reform of the "Mitigated" Carmelite Order, and founded the first "Discalced" or Reformed Convent. The following years were full of journeys, foundations, struggles with the rival order and with worldly ecclesiastics. The years preceding and following, roughly when she was between forty and fifty years of age, also mark the period of the most numerous "favours" and the greatest progress along the Mystic Way. This time of life may have psychological, and even physiological implications which cannot detain us here.

The saint's own understanding of her spiritual experiences are conveyed mainly in the *Life* already mentioned; in the *Moradas* (*Mansions*), her main attempt at systematisation, and in the *Way of Perfection*. She makes no claims to specialised theological knowledge, and, like all the Spanish mystics of the period, was subject to her confessor and identified in spirit with the Counter Reformation. Systematising was not natural to her, and her literary merit consists precisely in the natural flow of racy Castilian, which is really a monologue, complete with digressions and self-corrections, transferred to paper. If everything else is forgotten, her illustrations, drawn from the background of the normal Spanish life of the period, are bound to remain in the memory: In the *Life* the stages of mystical blessing are compared with the different processes of watering a garden, passing from the laborious "rope and bucket" method to the final stage of receiving abundant rain direct from Heaven. In Book V of the *Moradas*, the way in which the soul gathers herself in, in the process of "recollection," until she dies to self and emerges as new life, is compared with the way a silk worm prepares its cocoon, dies itself, and emerges as a gladsome butterfly. The whole of *Moradas* is an allegory of the "pilgrim's progress" along the Mystic Way, under the similitude of a series of concentric mansions, of which the outer ones represent the initial stages of purgation, the middle ones the different stages of illumination, leading to the "Spiritual Betrothal," and the innermost ones the final "Union" or "Spiritual Marriage."

The subject of Teresa's many visions, locutions and ecstasies is a fascinating one, but would need a paper to itself, and far more knowledge of the history and data of such psychic

phenomena than I can lay claim to. Whatever account we give to ourselves of their nature, we cannot doubt their reality to Teresa, and her honesty in recounting them. She also recognised the dangers of deception, and adopted some rough and ready rules to "test" the visions and to guard against the machinations of the Devil. Neither she, nor any other major mystic, conceded any great importance to these "favours," which might be withdrawn at a higher level of spiritual experience.¹

A sketch of the life of St. John of the Cross would be a help to the understanding of his significance in Spanish mysticism, but we can only state that he was a scholar and a theologian, weak in body but saintly in life, who, as a younger colleague, collaborated with Santa Teresa in the reform of the Carmelite Order. He was persecuted, imprisoned and maltreated by ecclesiastics of the "mitigated" Order, and suffered in his later years through divisions in the Order he had done so much to reform. He died at the age of 49, weakened by his sufferings and the extremes of his ascetic practices.

Strangely enough, his mystical prose works are cast in the form of commentaries on three brief, but intense, poems. These are unsurpassed lyrics in the order of religious eroticism, and constitute John of the Cross as one of the greatest Spanish poets of all time. It is one of the strange paradoxes of his life that the man who wrote so drastically on the "Night of the Sense," and detachment from every natural object, was commenting on poems written by himself which give evident signs of acute æsthetic perception, and a supreme mastery, only to be acquired by careful study and practice, of a special poetical form—the "lira" of Garcilasso. The resulting prose works are: *The Ascent of Mount Carmel*, with *The Dark Night of the Soul*; *The Living Flame of Love* and *The Spiritual Canticle*. The first is mainly ascetic; and the associated *Dark Night of the Soul* expresses the doctrine of "detachment" more drastically than any other mystic work. The joy of illumination and union is the theme of the other two. The originality of John of the Cross is to be found in his great stress on the "dark night of the spirit." The pilgrim is considered to have purged his soul from all attachment to things of "the sense" by the "dark

¹ Discussed by Abbé Rodolphe Hoornaert in *Saint Thérèse, écrivain* chaps. 3 and 4, by Americo Castro; *Santa Teresa y otros ensayos* and many more.

night of the sense," and to have been illuminated. But all this is common to beginners. The proficient must press further on until the blinding light shows him all the spiritual weakness attached even to spiritual delights, and it is only when he has died to them also that he is ready for the "Mystic union." This night is dreadful to self, but blessed in its results, as is indicated in the following typical stanza from "Canciones del Alma":

¡ Oh noche, que guiaste,
 Oh noche amable mas que la alborada,
 Oh noche, que juntaste
 Amado con amada,
 Amada en Amado transformada !

O night that didst lead thus,
 O night more lovely than the dawn of light !
 O night that broughtest us,
 Lover to lover's sight,
 Lover with loved in marriage of delight !

(Trad., Allison Peers.)

It would give an unfair picture of St. John's teaching did we fail to note that the ecstatic joy of fulfilled spiritual love is as prominent a feature in it as is the dreadful process of complete "detachment." The figures which express it are drawn largely from the Song of Solomon, and sometimes amaze us by their boldness.

After centuries of neglect, St. John of the Cross has, in recent years, been read with keen interest, and a number of biographies and studies have resulted. In some cases, cold neglect has been followed by somewhat intemperate praise. Five years ago, Prof. Allison Peers, who has done such great work in bringing the wealth of Spanish mystical literature to the notice of English readers, attempted to interpret St. John of the Cross for the edification of the "genuine Christian" in his little volume, "Spirit of Flame."¹ He realises the difficulties of his own undertaking, and devotes two chapters at the end of the book to "Stumbling Blocks," which might hinder the English Christian from appreciating the saint's teaching, but repeatedly throws down the challenge to the reader to show that St. John's teaching is not in accordance with the Scriptures. The "Christian" he has in mind seems to be rather a formal one,

¹ *Spirit of Flame. A Study of St. John of the Cross.* S.C.M., 1943.

and might well benefit from the saint's teaching, but one wonders what would be the reaction of a devout and scholarly Christian, steeped in an exact textual and contextual knowledge of the Gospels and the Epistles. He would certainly find that St. John was a devout student of Scripture, and would meet with quotations from the Vulgate on most pages of his works, but, with his joy at perceiving gleams of truth, there would be mingled a great deal of uneasiness, issuing at times in distaste and horror. The jewels would be there, but in such a strange setting that they would lose their true value. Light would be there, but so refracted by the medium as to be, at times, as dangerous as a wrecker's beacon.

The first distortion is caused by the monastic setting. No one can claim that monasticism is contemporaneous with Apostolic Christianity. Our Lord's life among men was so normal that the calumny, "A Man gluttonous and a winebibber, a friend of publicans and sinners," was malicious without being ridiculous, while apostolic exhortations pre-suppose active, loving fellowship in the Christian family; normal and pure family relationships, and such contact with the "world" as should allow for clear, understanding and loving testimony, as well as for spiritual separateness. The intense activities of Santa Teresa and St. John are often pointed out as indicating that their mysticism was free from passivity and quietism, but it must be remembered that this activity had to do only with the affairs of their monastic order, and their ideal for the laity was to save souls by winning them to the sterile "death in life" of the convent or monastery. In these circumstances, the words of Scripture may be true, while their application may be entirely false.

Further distortion is produced by the blindness to fundamental doctrine caused by the Roman Catholic position. A man is a "Christian" if he has entered the Church by baptism, and continues to be one so long as he lives in obedience to her. The process initiated by the mystic's "new birth" is one of purification for the "élite." There is little appreciation of the glorious completeness of redemption by the atoning death and triumphant resurrection, in which all believers share in virtue of their living contact with Christ by faith. There is no understanding of an already complete sanctification, which believers are exhorted to appropriate and express in the power of the Holy Spirit. It follows, therefore, that the Mystic Way, with its stages of "Purgation," "Illumination" and "Union", cannot correspond

in fact to the Biblical Way of Sanctification taught in Romans vi to viii, Colossians iii, etc. Many of the quotations, then, are lifted bodily out of their context, and applied quite arbitrarily to mystical theology.

Another point which creates a necessary reserve, in the evangelical Christian at least, is the fact already noted that the technique of the Mystic Way is not peculiar to Christianity, but is also used with success by Indian and Moslem "saints." Are we to understand that the teaching of Christ and of the Apostles can be improved on, and that there is another "Way," other than Christ received by faith, which will lead us to God? In terms of psychology, the mystic is "tapping" reserves of subliminal powers in order to effect contacts with external spiritual reality, and thus he gets very near the enemy territory of magic and spiritism.

The great point of contact with the New Testament is the truth which the mystics proclaimed with almost strident accents—that time and sense are vanity, and that only the spiritual is real. It is this, with their claim to the hidden "γνώσις" which made them so attractive to Berdyaev in our own times. They also proclaim, with admirable sincerity and fervor, that, of all the links between God and man, the greatest is Love, although the application of love among men is distorted by the monastic background, and the principle of total "detachment." Spanish evangelicals are very attracted by the mystics' independence of external aids to devotion in a land where the opposite tendency has largely turned religion into a superstition—some have even gone to the length of claiming the mystics as "protestants"! John of the Cross considers that external aids are "lawful and even expedient for the beginner," but reminds his readers that our Lord, for His private prayers, used to choose "solitary places . . . places that lifted up the soul to God, such as mountains . . .," and quotes John iv, 23 to 24.¹

This individual freedom of contact with God, with no intermediaries, is so foreign to official Roman Catholicism that it explains the historic change in the attitude to mysticism. Worldly ecclesiastics looked askance at Teresa and John of the Cross in their day, and even persecuted them; but, at the height of the Counter Reformation period, the Church was in

¹ *Ascent of Mount Carmel*, III, xxxix. *The Works of St. John of the Cross*. (Trad. Allison Peers.)

very great need of spiritual power and of every possible auxiliary, so finally decided to adopt them and canonise them. Later, when the strength of both Reform and Counter Reform had been spent, and the positions were more or less stabilised, there was no need to be kind to those who sought to make their own spiritual contacts heavenward, so that Molinos was condemned, and Madame Guyon persecuted.

This freedom has been variously interpreted. Dean Inge thinks mysticism "appears as an independent active principle, the spirit of reformations and revivals."¹ Evelyn Underhill, on the other hand, points out that nearly all the mystics have unquestioningly accepted the symbols among which they were brought up, and have sought to express their experiences in the light of them.² The real position is that the mystic is ready to accept the symbols at hand, because, in the last analysis, they are supremely unimportant to him, for he claims to reach a region where communication with God is direct to the point of being independent even of speech.

For the rest, there are few of the Biblical quotations of John of the Cross which do not seem to be distorted in some degree or another because of the postulates and technique of mysticism. The "New Birth" is not the regeneration of John iii, but the moment in which the nominally "Christian" soul awakes to a desire to seek the goal of union. The Christian doctrine of "total depravity" teaches that all parts of the being of man are affected by the Fall, and that new life must be received from God by an act of faith. The mystic believes that there is a "ground," "apex" or "spark" of the soul which can be refined and purified by a given process and finally brought into union with God. It is granted that the power is thought to be that of the Holy Spirit in Christian mysticism, but the terms and the postulates are not those of the New Testament.

Prof. Allison Peers believes that the stern "detachment" teaching of St. John of the Cross is no more than the natural application of the exhortation to "seek those things which are above," and even such a sane writer as Jacques Maritain defends it by references to our Lord's words: "For whosoever will save his life shall lose it, and whosoever will lose his life for my sake shall find it," and quotes: "If any man cometh unto

¹ *Op. cit.*, pp. 5, 6.

² *Op. cit.*, 115.

me and hateth not his father, and mother . . . he cannot be my disciple," and maintains that the "relativity" of the Gospels is seen in John of the Cross also.¹ But is the fine balance of Scripture evident in the following advice to a girl who desired to become a discalced Carmelite nun? : "With regard to sins . . . it is well that . . . in order not to fall in them . . . you have the least possible to do with other people, and shun them, and never to say more than is necessary upon any subject. . . ." ² How different St. Paul—"Among whom ye shine as lights in the world" . . . "All things are yours, whether Paul or Apollos . . . or things present, or things to come . . ." "God hath given us richly all things to enjoy" !

And what of the mystics' goal, the Union with Deity, the spiritual marriage? The danger of an heretical "deification" is obvious, and this word has often been used by mystics, although John of the Cross, as a theologian, seeks to maintain the distinction of substances while using language which would well lend itself to the same error. We are not called upon to doubt the true devotion of the Spanish mystics, or the reality of their experience of meeting with the Beloved, but we do question the relevancy of the verses generally quoted. They are mainly from John xvii, and apply the words which teach the mystic union of Christ with His own, the Church, to the individual purified soul, who is now the "bride," against the usage of Scripture, which reserves the beautiful symbol to the Church Catholic, and, in a secondary sense, to the local church.³

The Spanish mystics are so well known, not because they have added anything to the theory of the Mystic Way, but because of the striking, strongly marked Castilian personalities through which the "Way" was expressed. Their abundant writings— attractively human and popular in Teresa and intense and complete in St. John—provide the most accessible means of studying this fascinating mystical psycho-religious experiment, but it is doubtful as to whether they can be of much help to the "genuine Christian" of to-day. If a soul has failed to find help in the divine clarity of the New Testament she is unlikely to perceive the path amid the ascetic misconceptions, the confused symbolism and the specialised technique of the writings

¹ *Saint Jean de la Croix* : P. Fr. Bruno. Préface, pp. 17-21.

² *The Works of St. John of the Cross*. (Allison Peers.) Vol. III, p. 277.

³ *Eph.* v, 22-33, *Rev.* xix, 7, *II Cor.* xi, 2.

of Santa Teresa and St. John of the Cross. But we may all heed their trumpet call which witnesses to the vanity of time and sense, and we may all seek for a purer and more selfless devotion to the "Beloved." All our hearts thrill to the great saying of Boehme: "I sought only for the heart of God in which to hide myself," and all our hearts assent to John of the Cross's searching reminder: "At eventide they will examine thee in love."

DISCUSSION.

The CHAIRMAN (MR. KENNETH G. GRUBB) said: You would wish me, I am sure, to thank Mr. Trenchard for the range and content of his paper.

The subject is one that some time or other every serious Christian is compelled to give attention to.

The "Memorabilia" gives a moving account of the contact of Socrates with Diotima the prophetess; one of the most moving experiences of mysticism in pagan literature. The Bhagavad Gita is also a great expression of Indian mysticism, and some of us will have had contact with Sufi mysticism. Is, or is not, this a recurrent sense of a fulfilment, if only partial, of union with Him Who has come as the Light of the World?

To come to the paper, mysticism, and Spanish mysticism in particular, is a protest against formalism; against a petrification of the *credo*, and of vital belief. There may be also, but not necessarily, distortion.

The other great strain in the modern mystical outlook is the assertion of the individual against the society of his time: ecclesiastical, or political, or mixed systems both ecclesiastical and political, such as the Roman Catholic Church. There is a sense of frustration: the influence the individual can exercise on the order of society seems so small as to be insignificant. Mysticism thus appears as the assertion of the individual.

I propose to ask also: Is there a modern problem of mysticism? Is it widespread to-day? Is it in advance of the Gospel, or a retreat from evangelical Christianity? Can any church provide a home for mystical experience, or does the World so affect the church that it can no longer afford such a home?

Dr. E. WHITE said : We are much indebted to Mr. Trenchard for his very interesting paper.

There has been a considerable revival of interest in mysticism during the last few decades, due to the writings of such authors as Baron Von Hügel, Evelyn Underhill, and the book entitled *The Perennial Philosophy*, by Aldous Huxley. This last book contains a very good summary of the teachings of the mystics of various religions, Christian, Mohammedan, and Hindu.

The study of the lives and writings of the mystics shows that they are of two types. Firstly, the extravert, who translates his experiences into good works and saintly living in the service of his fellows. William James in his book, *The Varieties of Religious Experience*, lays stress on the practical value of this type of mystical experience. There is, however, at the opposite pole, the introvert type, where the mystic vision becomes an end in itself, an ego-centric quest of the soul after the Beatific Vision. It is worthy of note that in the visions recorded in the Scriptures, *e.g.*, the vision of Ezekiel, and of St. John in the Apocalypse, such visions were followed by commands to active service—to go, to prophesy, to write.

It occurs to me that there are three great dangers in mysticism which I think we should realise.

1. The danger lest mysticism should be merely a psychological phenomenon. The methods adopted open the conscious mind to the unconscious or sub-liminal forces. This may lead to visions productive of disintegrating effects on the ego.

2. Another danger is that mysticism may lead to a search for the God within, rather than to the transcendent God of revelation. As G. K. Chesterton said : “When Mr. Jones seeks to find the God within Mr. Jones, he ends by worshipping Mr. Jones.” We cannot find God by looking within.

3. A third danger is evident from the perusal of Aldous Huxley’s book, *The Perennial Philosophy*. Even Evelyn Underhill discovered the danger of this as she progressed in her experience. It is the danger that sinful man may believe that he can find God, and have direct communion with Him without any necessity for the atoning work of Christ. Our Lord stated emphatically that “no man cometh unto the Father but by Me.”

We must not therefore condemn mysticism completely. As

James said: "We cannot dismiss the experiences of mystics as mere phantasies if we find that such experiences bring forth fruit in saintly living." This might be called the pragmatic test of the truth and value of all mystical experience. In the case of the Christian, it may be the road by which he enters into closer communion with God, and so obtains more power to lead the Christian life.

The paper has been submitted to DON ADOLFO ARAUJO, a well-known leader in evangelical circles in Spain, who kindly forwarded the following comments:

In general, I think that Mr. Trenchard is right in his appreciations, but we must make allowances for the extremely changed conditions of living prevailing in our days, with advantage or disadvantage to us.

In regard to the conventual background of Spanish mysticism, it is well to note that there were lay persons in the days of St. Teresa who were seeking to lead the mystic life in their homes, and who passed through the same "sequedades" (periods of spiritual barrenness), and were favoured with the same "consolations" as the nuns and the friars. In general, the Christian feeling of our mystics never suffers complete eclipse, though it does not always prevail.

I find, as many must have found before me, that the poems of St. John of the Cross are a most delicate and effectual way of expressing the ineffable. And the mystic experience is, *par essence*, unutterable. To be able to *suggest* is a great attainment, and this our mystic does admirably, rising the while to great heights of lyricism.

Where I think that John of the Cross has come nearest to the lyrical expression of "assurance of faith," even though mystical theology enters considerably into it, is in the poem beginning:—

Que bien sé yo la fonte que mana y corre,
Aunque es de noche.

(How well I know the fount that springs and flows
Although 'tis night.)

Here all believers are mystics with John of the Cross. This blending of assurance with darkness carries us to such Biblical expressions as: "Who . . . walketh in darkness. . . ? Let him trust. . .," or St. Paul's: "We walk by faith, not by sight."

WRITTEN COMMUNICATIONS.

MR. A. CONSTANCE wrote : I am deeply indebted to Mr. Trenchard for his excellent paper, and especially for the way he combines penetrating wisdom with gentle tolerance in his treatment of this profoundly important subject. I have no criticism, but would like to submit two quotations which present the real problem which lies at the root of this question. My first is taken from Evelyn Underhill's preface to the twelfth edition (1930) of *Mysticism*, in which she says :

“ Were I, now, planning this book for the first time, its arguments would be differently stated. More emphasis would be given (a) to the concrete, richly living, yet unchanging character of the Reality over against the mystic, as the first term, cause and incentive of his experience ; (b) to that paradox of utter contrast yet profound relation between the Creator and the creature, God and the soul, which makes possible his development ; (c) to the predominant part played in that development by the free and prevenient action of the Supernatural—in theological language, by ‘ grace ’—as against all merely evolutionary or emergent theories of spiritual transcendence. I feel more and more that no psychological or evolutionary treatment of man's spiritual history can be adequate which ignores the element of ‘ given-ness ’ in all genuine mystical knowledge.”

My personal conviction is that this word “ given-ness ” is the key or clue to all mysticism, indicating the vital truth that there cannot be *two* volitional “ sides ” to it, but *one* only. It is “ all or nothing,” all of God and His grace, and so implying no “ search ” for Him or “ struggle towards Him,” but rather an entire elimination of searching and struggling, and so surrender and acceptance *only*. *He gives* the mystical experience, and so absolutely that it is scarcely legitimate even to concentrate on an acceptance of it in any egoistic sense. This thought seems essential in St. John of the Cross, and is continually stressed in all Spanish Mysticism. I find it in *The Third Spiritual Alphabet*, in *The Secret Paths of Divine Love*, in *The Book of the Lover and the Beloved*, in *The Book of the Twelve Bequines*, and in fact in all mystical literature. Yet—and here is my second quotation—it is possible to conceive Mysticism as something

essentially different, indeed as something completely alien to this fundamental position! This is the amazing thing to me—that this “given-ness” can be violently rejected, as the absolute and unique essential of mystical experience. Yet note what Professor Bosanquet says in *The Principle of Individuality and Value* (p. 80):

“To say that reality is only to be found in the given and not in its extension and interpretation through thought is surely the vicious folly of naive realism. If thought had a point of departure foreign to existence, then it would be idle to speak of either generating the other. But the connection of thought and existence, whatever it may be, is not so simply disposed of as this.”

I can only express my firm adherence to the truth of the Evelyn Underhill quotation, as a believer in the personality of the Holy Spirit, and in His absolute power and wisdom in Christian experience. “Every thought of holiness is His alone.” Yet the conflict is there, expressed more or less clearly in all mystical literature. My view is that all that is of the intellect, of the spirit of man, in mystical experience, is pollution, adulteration, a clouding of the light of the soul. In so far as any of the mystics used their own wills, their own intellects, to “seek” God, to “interpret” Him, they lost Him. This is the basic error in asceticism. The flagellant, the torturer of the flesh, is all too conscious of himself, and so loses that absolute surrender, that selfless rest in God which is essential to receiving Him. The problems of mysticism are inseparable from the problems of human personality. They are dissolved rather than solved as the human personality dies in God; dies utterly, losing individuality, will, desire and viewpoint. In this death is eternal life, the Glory of the Infinite, the God-man Absolute in the man who surrenders to God.

AUTHOR'S REPLY.

It is most natural that Sr. Araujo, in common with all well-read Spanish Evangelicals, should be attracted by the mystics, who offer a spiritual oasis in the midst of the general barrenness of age-long formalism and bigotry. As is clear from the paper, I share Sr. Araujo's admiration for the exquisite poetry of St. John of the Cross, and fully recognise the reality of the spiritual experience behind it. At the same time, it is easy for the Evangelical Christian to read his

own spiritual experience into the poetry, whereas John of the Cross interprets it, at great length and detail, in relation to the technical "mystic way," which we have seen to be that of ascetic discipline, "recollection," the dark night of the soul, illumination, the dark night of the spirit, and "spiritual marriage," a process very different from the mysticism of St. John and St. Paul, as expressed in the New Testament.

Mysticism may certainly be considered as a protest against formalism, as Mr. Kenneth Grubb indicates, but it is unconscious and individual, not official and corporate, for, as we have seen, it is content to accept the current religious symbols of the place and time of its manifestation. It was successful in so far as it spread by "contagion," and many persons brought into contact with the mystics sought direct contact with God under their influence. It was unsuccessful because of its submission to official forms, and in its intense individualism. Individuals escaped from the prison of formalism by an intense and personal elevation of the spirit, but there was no *attack* on the imprisoning force, so that the strong shell of petrified religion remained intact.

In regard to the mysticism of St. Paul, we must again make the distinction between a general mystical attitude, which seeks for reality behind phenomena and temporality, which is the essence of the Christian faith, and the special technique, which was a psychological process by which subliminal powers were tapped. Did Paul go beyond the former?

There certainly seems to have been something of the typical mystical "rapture" when he was caught up to the third heaven, not knowing whether he was in or out of the body, and heard unspeakable words which it was not lawful for man to utter (2 Cor. xii, 1-4), but the general pattern of his life and practice seems to have been very different from that of the "special" mystic. They, for example, had little use for vocal prayer and petition, and engaged in orisons which were direct and ineffable. Paul, following his Master, repeatedly practised the intelligent expression of prayer, and exhorted to clear presentations of petitions. Characteristically he exclaims: "I will pray with the spirit, and I will pray with the understanding also." This provides (among many others) a limit and a check to what we may understand by St. Paul's mysticism.

Dr. White's reminders of the dangers in the recent revival of interest in mysticism are very timely. Emphases vary in the different "schools" of mysticism, but characteristically the mystic is both an extravert and an introvert. He seeks both the transcendental God without, and the immanent god within. The latter, with the idea of a pure "spark of the soul" which grows to the point of "deification," is definitely heretical in tendency, and, as we have seen, the doctrine of total depravity is by-passed.

As regards works, nearly all the great mystics, apart from the extreme quietists, have been active workers. But the work outwards, towards others, in Spanish mystics at least, is directed almost entirely to getting them out of the "world," *i.e.*, out of normal social life, and into the convent or monastery, where the mystic experience might be sought without distractions.

The dangers which Dr. White has indicated in the modern interest in mysticism are very real, and Evelyn Underhill has a considerable section in which she shows that the only differences between the technique of mysticism in its special sense, and of magic, is the motive that leads to the attempt at tapping subliminal forces.

In the mystical "recollection," complete detachment is sought from all external distractions, and the powers of the whole being are concentrated on one "point." The technique is that of self-hypnotism. The forces of the unconscious are released, and the subject is rendered particularly liable to external spiritual influences. Most mystical writers speak of penning their works under constraint, without the working of the intelligence, *i.e.*, automatic writing. We may suppose that if the conscious mind has fed revealed truth into the unconscious, and if the great desire of the soul is God-ward, the Holy Spirit may use this state for special manifestations of power. Perhaps we have something to learn here of power for witness in an increasingly alien world. But the constant exhortation of the New Testament to "try the spirits" shows that evil spiritual powers may use the hypnotic state for their own ends, with disastrous results. The interest in mysticism can only be healthy if it is accompanied by a genuine and complete adherence to the Word of God. We must always cry: "To the Law and to the Testimony." Mr. Constance's quotation from Evelyn Underhill, which emphasises her later and most mature thought, is valuable, and shows the

danger of a mere process by which the "inward spark" is developed.

We seem to be on debatable ground in the last few sentences of Mr. Constance's reply, and I am left in doubt as to whether they express his own view, or whether they represent his summing up of the mystical position. Surely the goal that Scripture points us to is that of *transformed personality*, not that of the utter death of personality. The death of the old nature is a very different matter.

880TH ORDINARY GENERAL MEETING

HELD AT 12, QUEEN ANNE'S GATE, LONDON, S.W.1, AT 5.30 P.M.
ON MONDAY, MARCH 14TH, 1949.

PROFESSOR R. O. KAPP, B.Sc., A.M.I.E.E., IN THE CHAIR.

The Minutes of the previous Meeting were read, confirmed and signed.

The following elections were announced:—H. K. Airy Shaw, Esq., Fellow ; L. F. Tucker, Esq., Fellow ; W. Wagland, Esq., M.R.C.S., L.R.C.P., Fellow.

The CHAIRMAN then called on R. J. C. Harris, Esq., A.R.C.S., B.Sc., Ph.D., A.R.I.C., to read his paper, entitled "The Origin of Life."

THE ORIGIN OF LIFE.

By R. J. C. HARRIS, A.R.C.S., Ph.D.

SYNOPSIS.

The current belief that the nature and origin of life must ultimately be completely explicable in physico-chemical terms is discussed in the light of history, and of contemporary knowledge of the structure and function of the cell and of its components. The theories of Oparin and Beutner are examined, with particular reference to auto-catalysis, and the properties of enzymes and of viruses, which have too often been put forward as "living crystals" or "the boundary of the living."

The conclusion is reached that "life" is a property of the intact cellular system, and that no cell component can be considered as a primal living unit.

INTRODUCTION.

IN September, 1912, Professor Schaefer¹ delivered a lecture on this subject to the British Association and, by chance, I was fortunate enough to find it. Very properly the Professor began by saying that he ought to give a definition of "life," and why he found it almost impossible to do so. The dictionary definition "the state of the living" or that following Claude Bernard, "the sum total of the phenomena common to all living beings," were obviously inadequate; of the same character, in fact, as the definition of an archdeacon as "a person who performs archidiaconal functions." It was found impossible, too, to draw an exact definition from considerations

¹ Schaefer, *Brit. Med. J.*, 1912, 589.

of the usual manifestations of life, since many of these, such as growth, assimilation, reproduction, irritability and so on, may be imitated, to a more or to a less degree, as we shall see later, by manifestly non-living systems. Attempts have also been made to get away completely from a cellular concept of life, which these imply, by isolating and identifying components of cells as the primal living matter. Alexander¹ believes that a living unit or entity is one that can direct chemical change by catalysis, and, at the same time, reproduce itself by autocatalysis, i.e., by directing the formation of identical units from other, and usually simpler, substances. This view has been disputed by Wilson,² among others, on the grounds that, since the cell contains a very large number of units which may be defined in this way, it becomes impossible to single out any one particular component as the living-stuff *par excellence*; and, also by Gowland Hopkins,³ who wrote "we cannot, without gross misuse of terms, speak of the cell life as being associated with any particular type of molecule. Its life is the expression of a particular dynamic equilibrium which obtains in a polyphasic system. Certain of the phases may be separated, but life is a property of the cell as a whole, because it depends upon the equilibrium displayed by the totality of co-existing phases." This conception of life was taken even further by Bohr.⁴ "The existence of life must be considered as an elementary fact that cannot be explained, but which must be taken as a starting point in biology, in a similar way as the quantum of action (which appears as an irrational element from the point of view of classical mechanical physics) taken together with the existence of the elementary particles, forms the foundation of atomic physics."

The consensus of opinion among biologists to-day, however, would almost certainly be that, despite the admitted complexity of the simplest cell, life and the origin of life must ultimately be completely explicable in physico-chemical terms. Increasing knowledge, some of which we shall consider later, of the structures of cell components and of viruses, they would say, confirms our belief that the simplest living organisms originated

¹ Alexander, *Life, Its Nature and Origin*, 1948, p. 79.

² Wilson, *Science*, 1923, 57, 1471.

³ Gowland Hopkins, quoted in *Colloid Chemistry*, 1928, 11, p. 21, ed. Alexander and Bridges.

⁴ Bohr, *Nature*, 1933, 131, 421.

gradually, and by a long evolutionary process, from simple chemical substances. It is this belief, and the evidence brought forward in support of it, that we have to consider to-night.

SPONTANEOUS GENERATION.

From an historical point of view, the earliest theories put forward were those of spontaneous generation. Thales, a philosopher of the Ionian school, believed that living things developed from structure-less sea slime under the influence of heat. This idea accords well with, and definitely antedates, that of the Russian who recently claimed that mixtures of amino acids, subjected to pressures of several thousand atmospheres condensed to form protein molecules. In nature, pressures of that magnitude would be found on the sea bottom at depths of a few miles. The marine origin of life was also postulated by Anaximander (611-547 B.C.) who held an almost evolutionary hypothesis, in that each living thing had passed through a succession of developmental stages. Democritus put forward a similar thesis. The organic world had an aqueous origin, in which the atoms of lifeless, moist earth met by chance, and united with, atoms of "live, energizing fire." Aristotle (384-322 B.C.) substituted "form—the entelechy or soul of living things" for the fire of Democritus, but retained the idea that living things were produced by the union of a passive principle, "matter" with an active principle, "form." Aristotle even believed that such creatures as crabs and mice could arise spontaneously. Some historians maintain that St. Augustine (354-430 A.D.) was influenced by Aristotle in his argument that, just as God usually makes wine from grapes, but, on occasion, directly from water, so, in the case of living creatures He can cause them to be born either from the seed or from non-living inorganic matter which contained invisible seeds, "*occulta semina*."

The doctrine of spontaneous generation was especially popular in the Middle Ages. We may briefly recall such myths as that of the vegetable origin of geese, which survived until the eighteenth century; of the "vegetable lamb"—travellers' tales of plants and whole trees whose melon-like fruits contained fully-formed lambs; and of the "homunculus"—embryo of the little man—who originated in A.D. 100. Paracelsus (1493-1541 A.D.), who gave an exact recipe for homunculus—"mix

passive female principle with active male principle"—was a confirmed protagonist of the theory of spontaneous generation. Van Helmont (1577–1644 A.D.) believed, too, that mice could be obtained from wheat kernels with human sweat as the generative principle. The recipe was to place a dirty shirt in a vessel containing wheat grains and to return after twenty-one days, when there were invariably mice present!

In spite of a few experimental facts to the contrary, these beliefs persisted and both Descartes (1596–1650 A.D.) and Newton (1643–1727 A.D.) appear to have accepted them.

It was not until 1862 that Louis Pasteur was able to refute the doctrine with his convincing experimental evidence, that initially-sterile nutrient solutions remained sterile in the absence of air-borne micro-organisms. The invention of the microscope, which came into use in the latter part of the seventeenth century, had revealed a hitherto invisible world of living creatures, and it was scarcely surprising, therefore, that the spontaneous generation theory had chosen to concern itself with these rather than with mice, in the two centuries between Descartes and Pasteur.

COSMIC PANSPERMIA.

The other important theory, from an historical point of view, need not detain us for very long. *Cosmic panspermia* postulates the continuity of life in the Universe; life becomes an eternal existent and it is, therefore, meaningless to talk about its origin. As far as this planet is concerned it must be assumed that life could have been arriving continuously from space, and was successful in propagation when the Earth's physical and chemical state became suitable. Thompson¹ believed that the first germs of life could have been brought by meteorites. According to Dastre,² this idea was first suggested by de Salles-Guyon, and it certainly received the support of von Helmholtz.³ Search in meteorites, however, has revealed no sign of living matter, and the fact that some millions of years would probably be required to transfer a meteorite from the nearest stellar system to our own, cannot be said to support the hypothesis. Even the transfer from the nearest planet would take about a hundred years, and

¹ Thompson, Presidential Address to the British Assoc., 1871.

² Dastre, *La vie et la mort*, trans. Greenstreet, 1911, p. 252.

³ von Helmholtz, *Über die Entstehung des Planeten-systems*, 1884.

the heating involved in the passage through the Earth's atmosphere would almost certainly be sufficient to kill any living cell. A similar hypothesis, that life may have existed indefinitely in association with the cosmic dust of the inter-stellar spaces, was first propounded by Richter.¹ Such dust could fall slowly to the Earth without undergoing the heating experienced by a larger body. Arrhenius² calculated that bacterial spores with a diameter of about 2×10^{-4} mm. would travel in inter-stellar space with very great speed under the force of light pressure. Once separated from the Earth, for example, such spores could thus pass beyond the limits of our solar system in about fourteen months.

If the spore should become attached to another particle of greater size, gravity would overcome the light pressure and the spore particle would then return to Earth. Arrhenius discussed the factors of heat, cold and absence of water and of oxygen, which the spore would have to endure but, omitted, apparently, to consider the question of its possible inactivation by radiations.

The resistance of bacterial spores, and even of seeds, to extremes of time and of temperature is well known. It would probably not be wise to believe all the stories recorded of the germination of wheat obtained from the tombs of Egyptian kings. Guides have been known to replenish the stocks with more modern varieties! Nevertheless, other examples are recorded in the scientific literature. Lipman^{3,4} claimed to have isolated viable bacteria from the interior of adobe bricks from old Spanish missions, and from Aztec and Inca ruins, as well as from coal samples taken 1,800 ft. below the surface. He also claimed to have found an autotrophic bacterium in petroleum oil from a well 8,700 ft. deep. Confirmation of such claims as these must, of course, be sought, but there is little doubt that wheat, for example, may be stored under optimum conditions for many years.⁵ Proof that the first living cell dropped on to an Earth fitted to nourish it can never be found, and the majority of biologists who have thought about the problem have usually assumed that an environment which could support life, could also have produced it spontaneously. Moreover, although it may be philosophically

¹ Richter, *Schmidts Jab. ges. Med.*, 1865, 126; 1870, 148.

² Arrhenius, *Worlds in the Making*, trans. Borns, 1908, p. 221.

³ Lipman, *J. Bact.*, 1931, 22, 183.

⁴ Lipman, *Science*, 1932, 75, 79, 230.

⁵ Whympster and Bradley, *Cereal Chemistry*, 1947.

convenient to banish the cell's origin to a remote corner of the Universe where it is scientifically inaccessible, this is a comfort rather than a help in the main problem.

If cosmic panspermia is irrelevant, and if Creation is rejected, the philosopher and the scientist are left with one variant or another of abiogenesis. There have been many objections to this on the ground that even the most simple, organised living things possess a very complex, delicate and perfect protoplasmic structure. Vital processes apparently depend upon the integrity of this and upon perfect functional differentiation. It seems to some biologists highly improbable that such a complex apparatus could have arisen fortuitously (cf. Preyer¹ and Kostychev²).

To this plea, as we shall see, the evolutionary biologist replies—all that would be required are the simple, chemical building bricks of the living cell, and the time for a protoplasmic organisation to be formed from these by evolution.

CELL MODELS.

The possibility of constructing a mechanical model which would perform some, if not all, of the functions of a living cell has appealed to many, especially in the nineteenth century. The data derived from these has to a very large extent been misused by a tendency to regard the model as a living cell, and by the attempts which have been made to postulate a possible mode of origin of the first cell as a result. It must be obvious that such models have a value only in so far as the phenomena they manifest are based on the same physico-chemical processes which determine the phenomena in living cells—and not vice-versa.

Traube demonstrated osmotic forces, by which the cell takes up nutrients and excretes unwanted products, by placing a small crystal of copper sulphate in an aqueous solution of potassium ferrocyanide. A semi-permeable bag of copper ferrocyanide is formed at the crystal surface. The osmotic pressure within this bag increases as the crystal dissolves and, finally, the membrane tears, and the solution leaks out to form a fresh membrane, and so on. Others have sought a similarity between the growth

¹ Preyer, *Die Hypothesen über den Ursprung des Lebens*, 1880.

² Kostychev, *The Appearance of Life on the Earth*, 1921 (in Russian).

and reproduction of cells and of inorganic crystals. In most cases, for crystals as for living organisms, there is an upper limit for growth which is not exceeded, and further accretion of material results, not in an increase in size, but in crystal or cell multiplication. There is one striking difference, however, in that the cell itself controls both its rate of growth and its rate of division, whereas in the crystal this is controlled solely by the environment. The processes of mitosis, too, which lead to the production of two identical daughter cell nuclei from the single parent nucleus, may be imitated in a solution of common salt containing a suspension of carbon particles, which are claimed to arrange and re-arrange themselves in a manner indistinguishable from the movements of the chromosomes (Leduc¹).

The peculiar logic by which the part becomes the whole is well illustrated by a book written by Beutner.² The "delicate forces of crystallisation" are held by him to be influenced by the "mysterious forces of development in plant life, and even in animal and human life." Beutner quotes in support of his thesis some observations by Pfeiffer of "frost-flowers" forming on shop windows during cold weather. Pfeiffer observed irregular pictures at a butcher's shop while at a florist's shop there were "delicately-developed patterns of great beauty." The explanation advanced was that minute amounts of plant or animal "extract" deposited on the freezing window affected the "delicate forces." On such a basis, Beutner concludes (p. 28), that "a relation of some sort must exist between the growth of a crystal and that of a living thing," and further (p. 45) that "living tissues themselves are made up of diminutive crystalline elements."

We may well hope that this is an extreme example of this type of argument. It had the maximum force when scientists felt confident enough to say, as Schaefer³ did, that "a body so important for the nutritive and reproductive functions of the cell as the nucleus—which may be said, indeed, to represent the quintessence of cell life—possesses a chemical constitution of no very great complexity, so that we may even hope some day to see the material which composes it prepared synthetically" and further ". . . a similar anticipation regarding the probability of

¹ Leduc, *The Mechanism of Life*, 1911.

² Beutner, *Life's Beginning on the Earth*, 1938.

³ Schaefer *Brit. Med. J.* 1912, 589.

eventual synthetic production may be made for the proteins of the cell substance."

Few will be found who will be willing to make such assertions to-day, but there are many who cling tenaciously to theories of the origin of life which have similar chemical and physical implications.

LIFE FROM COLLOIDS.

Buffon (1707-1788) supposed that living matter consisted of "organic molecules," or particles which united with each other in kaleidoscopic combinations. He was, of course, unaware of the existence of the amino acids, and of the thousands of different proteins which they unite to form; but with the discovery and characterisation of many of these proteins, and the realisation of their relationship to living matter, from which alone all are, and have been, derived, Buffon's statement contains, to-day, an even larger proportion of the truth. Pflueger, too, identified proteins with the vital processes, and distinguished "live" (protoplasmic) protein from "dead" (storage) protein. The object of the majority of those who, in recent years, have sought to find a solution to the problem of the origin of life, has been to discover the way in which such proteins were first synthesized. We shall not have the time to discuss all of these, but I should like to give a brief description of the most popular account of the origin of fatty acids and amino acids, and then to consider the nature of proteins, the enzymes which they also constitute, and the present trends of biochemical thought.

It would obviously be impossible to determine now what was the chemical and physical constitution of the atmosphere and of the surface of the Earth, at a time when cooling had proceeded sufficiently for a separation of these to have occurred. There are, however, data available for the other planets in our solar system. This is largely spectroscopic evidence, but, from it we can gain some idea of the nature of planetary atmospheres. Jupiter, Uranus and Neptune are large planets, but far away from the Sun. Their surface temperatures are, therefore, very low, of the order of -135°C. to -250°C. Methane and ammonia, either liquid or solid, are the main constituents of the surfaces.^{1,2} Mars, the next nearest planet, has only a very thin atmosphere,

¹ Adel, *Physical Reviews*, 1934, 46, 902.

² Russell, reviewed in *Nature*, 1935, 136, 932.

whereas Mercury, although close to the Sun, is too small to hold an atmosphere at all. Venus, which lies between the Earth and Mercury, most closely resembles the Earth. This planet has an atmosphere, with heavy water-containing clouds in which an abundance of carbon dioxide has been detected, *but* there appears to be no free oxygen. The clouding is so heavy and continuous that no observations of the surface of Venus have been possible. On Mars, however, patches of "vegetation" have been claimed. It is generally assumed that the original atmosphere of the Earth contained no free oxygen,¹ and this must be most significant for the hypothesis under discussion. Of those elements, carbon, nitrogen, hydrogen and oxygen, required for the synthesis of amino and fatty acids, carbon probably existed in combination as metallic carbides with some small amount of carbon dioxide of volcanic origin; hydrogen and nitrogen were provided, if at all, in the form of water or steam, and ammonia respectively. Some geochemists maintain that even the nitrogen of the air must have had a biological origin.²

Oparin³ was able, with these very doubtful starting materials, to give a most plausible description of the further mode of origin of some of the essential chemical "precursors" of the living cell.

Hydrocarbons were derived from the metallic carbides by the action of either superheated steam or solutions of salts leached out of the rocks. Ammonia either existed, or was built up from nitrides or free nitrogen. The mixture of hydrocarbons, steam and ammonia, declared Oparin, would then condense to give alcohols, amines, amides, ammonium salts, amino acids, fatty acids and so on. These reactions may or may not be repeatable under controlled experimental conditions, and, if they are not, well, it was always possible that they required a long time, or that the reagents existed in high energy states. Further, when this "soup" of simple compounds was just allowed to stand for many, many years, we must assume, said Oparin, that the dissolved substances "undergo reactions of condensation and polymerisation, as well as of oxidation and reduction; in other words, every type of chemical change occurring in the living

¹ Arrhenius, *Life History of a Planet*, 1923 (in Russian).

² Vernadski, *Problems of Biogeochemistry*, *Acad. Sci. Ed.*, 1935, quoted by Oparin (*see* 3).

³ Oparin, *The Origin of Life*, 1938.

cell. As a result, numerous high molecular weight compounds, similar to those present in living cells, may appear in the aqueous solutions . . . on long standing."

Two assumptions, at least, are involved in this account of early creation. First, that the postulated starting materials did, in fact, exist, and second, that the chemical reactions could have proceeded in the required direction. The proponents of such hypotheses know well that neither of these contentions can ever be proved rigidly to be either true or false, and, of course, "time was not a matter of great consequence."

Oparin was also aware (p. 136) that a conglomeration of fatty and amino acids, or even of fats and proteins themselves, was still a long way off, from the point of view of organisation at least, from even the simplest living cell, and he had recourse, therefore, to the principle in colloid physical chemistry of coacervation—or formation of colloidal liquid aggregates. By this means the homogeneous "soup" might have become an inhomogeneous suspension of "points of concentration." From a consideration of the surface forces involved it is probable that such coacervates would have had a "structure" in so far as the components would have a definite orientation with respect to the suspending medium. It is equally probable, too, that they would be most unstable! They must have been formed by the action of random physical forces, and hence they would probably break-up and reform continuously. It was at this stage that the "soup" had to be given an added, and evolutionary flavour; "only the most dynamically stable colloidal systems secured for themselves the possibility of continued existence," which is to say, the more stable coacervates were more stable! Moreover—and here the cell model analogies are found to be useful—"a coacervate droplet could grow by assimilation and, sooner or later, surface tension forces or external mechanical forces would cause it to break up into separate droplets" (Oparin, p. 193). This would apparently be favourable from the point of view of further growth of the coacervate, since it would establish a more favourable relationship between surface and volume, and thus increase the rate of absorption. Thus "a coacervate droplet endowed with an ability (sic!) to divide had a certain definite advantage over other droplets." For these postulations to lead to a stable colloidal "species" a further assumption must be made, namely that the daughter droplets should have a physico-chemical organisation similar to that of

the parent droplet. The astounding primary assumption is, of course, that ability to grow should be *favourable* and *advantageous* to the droplet. The droplets could equally well have continued to form and to break-up for ever in such a system. A completely new and scientifically illusory principle has been thrust upon them, a principle which has been applied, hitherto, to living organisms only, that of "struggle for existence." How, and in what respect, can non-living matter be said to struggle?

From uniform dividing droplets of fats and proteins it was a simple further step to postulate that the growth requirements of the droplets must have become specific and that droplets containing chemical systems capable of providing them with the specific "nutrients" should again have been "selected." Finally, stated Oparin (p. 250), "a peculiar selective process had thus come into play, which resulted in the origin of colloidal systems, with a highly developed physico-chemical organisation—namely the simplest primary organisms." But, lest his readers should feel that he had "solved" the problem too easily, he continued, "even those primary organisms were not living cells." For this "the colloidal systems, in the process of their evolution had to acquire properties of a still higher order, which would permit the attainment of the next and more advanced phase in the organisation of matter. In this process, biological orderliness already comes into prominence. Competitive speed of growth, struggle for existence, and finally, natural selection, determined such a form of material organisation which is characteristic of living things of the present time."

When the laws which govern the inanimate world suffice, Oparin cites them. When they do not, he cites instead the so-called laws of biology, but applies these to still inanimate matter!

This coacervate hypothesis put forward by Oparin may be the most plausible, but it is not the only way of bridging the gap between simple chemical substances and living cells. Beutner,¹ to whom reference has already been made, preferred lightning flashes for the synthesis of more complex compounds from the more simple. He stated (p. 81) "among the countless substances formed by the lightnings, enzymes appeared and, still later, self-regenerating enzymes. Some of these were also washed into the

¹ "Beutner, *Life's Beginning on the Earth*, 1938.

ocean, where inert organic material (also, formed, one must assume, by the "lightnings") was already piled up. Eventually, enzymatic chemical reactions started in the sea." The first two or three enzymes formed in this way must have had a very lonely time, for Beutner went on to state "millions of years must have passed before some of the enzymes formed . . . encountered a substance which they could attack."

It is possible to apply statistical analysis to the type of "lightning-flash" syntheses described by Beutner. Enzymes are proteins in nature and usually contain at least four different kinds of atom, carbon, hydrogen, nitrogen and oxygen. If we may consider Beutner's "enzyme" to have a molecular weight of about twenty thousand and to consist of carbon and hydrogen only (which really introduces almost ludicrous simplifications) it may readily be shown that even if we assumed that there were 500,000,000,000,000 lightning flashes per second, the time needed to form ONE such disymmetric molecule from material contained in a volume equal to that of the Earth would be about 10^{243} thousand millions of years.¹

Estimates from radio-activity measurements, however, indicate that the older rocks of the Earth's crust solidified about two thousand million years ago.

We may not, of course, declare that for this reason alone no such "protein" molecule could have been formed but only that this figure gives the probability that *one* such molecule should have come into existence.

It is a habit with such authors as Beutner to introduce entities such as enzymes and viruses, to describe them as the forerunners of living cells, and to dismiss them without any attempt to examine them further. Let us now enquire more closely into their function, and relationship to living organisms.

ENZYMES.

The components of every living cell undergo complex cycles of chemical reactions by means of which energy is made available. This energy is used by the cell for the performance of mechanical work—as, for example, in movement and in cell division, for the synthesis of growth materials, for work against osmotic forces, and so on. In the laboratory the chemist is rarely able to synthesize even one chemical compound from its precursors in a

¹ du Nouy, *Human Destiny*, 1947, p. 33.

yield of one hundred per cent. Side-reactions occur and by-products are formed. Many reactions in the living cell require some twenty or thirty individual chemical steps and so it is obviously desirable that the by-products, which turn up in test-tube chemistry, should be avoided and that each chemical stage should proceed rapidly to completion in the required direction.

Catalysts—substances which take part in a chemical reaction without being changed, and which greatly increase its speed—have long been known to chemists. We may take an example from chemical industry.

Under normal conditions, hydrogen and carbon monoxide do not readily interact, but when a suitable catalyst is provided, which is usually a finely-divided metal, or metallic oxide, these gases form methyl alcohol, together with other higher alcohols. A large lump of catalyst is of very little use and a large area of surface is required, such as would be provided by fine-division. The theory of catalysis is that molecules of the reacting components attach themselves to the catalyst surface at active points; in their "activated" states they may now combine with each other, and the compound thus formed dissociates from the surface of the catalyst, and leaves the way clear for the next reacting molecules. A small amount of catalyst, therefore, can bring about the synthesis of a large amount of end-product. Catalysts, too, may be "poisoned" and the theory explaining this, states that the molecules of the "poison" stick tightly to the catalyst surface and prevent the other normal molecules from getting to it.

In biological systems, the essential energy-providing reactions are brought about, and maintained, by enzymes. These are essentially catalysts of very complicated composition, consisting of proteins of very high molecular weight which, in turn, are often dependent upon co-enzymes, or activating catalysts, containing very small amounts of metals such as iron, cobalt, copper, magnesium or manganese. Many of the vitamins function in the cell as co-enzymes. Apart from the chemical differences in complexity between enzymes and inorganic catalysts, and the fact that the cell itself makes its own enzymes, the most fundamental difference is that enzymes are "specific." By this we mean that one enzyme has one job in the cell and usually one only. A single cell, therefore, with all its complicated chemical reactions must contain hundreds of enzymes—

although each one need be present in minute amounts only. For example, in many cells hydrogen peroxide is produced. In high concentrations this may be poisonous to the cell and an iron-containing enzyme, *catalase*, exists which breaks it down to water and oxygen. The activity of this enzyme is such that a single molecule of it will decompose 42,000 molecules of hydrogen peroxide every second.¹ We believe, too, that an enzyme works in much the same manner as an inorganic catalyst, i.e., by providing an active surface upon which the reaction which is catalysed can occur. Therein lies, too, the explanation of the specificity of enzymes, in that this surface is "shaped" in such a way as to "fit" exactly the molecules towards which the enzyme is specific. So close and so important is this "fit," that very small changes in enzymes may render them inactive. Enzymes may be poisoned, too, in much the same way as inorganic catalysts, and many of the hypotheses concerning the action of drugs, such as the sulphonamides, on micro-organisms show that the drug may "poison" an enzyme system in the organism which is vital to its existence.

Troland,² in 1917, stated his conviction that the concept of specific catalysis, i.e., of enzyme action, "provided a definite general solution for all of the biological enigmas . . . what we call life is fundamentally a product of catalytic laws acting in colloidal systems of matter throughout the long periods of geologic time." We have already seen that Oparin has postulated a mechanism for the production of proteins from possible chemical precursors. Proteins, in their natural or "native" state, consist of long chains of linked amino acids which are often folded up into globules. Langmuir and others^{3,4} have shown that such proteins will unfold at phase boundaries, e.g., the boundary between air and water, and will then spread out. The films thus formed are so thin that they are almost two-dimensional, in fact they are about one molecule thick and cover an enormous area, in some cases as much as 1,000 square metres per gramme. These discoveries by Langmuir paved the way for yet another theory of protein formation. The initial postulate is again a "soup" of amino acids and fatty acids. In the bulk of the mixture, the concentration of the amino acids

¹ Baldwin, *Dynamic Aspects of Biochemistry*, 1947, p. 107.

² Troland, *Amer. Nat.*, 1917, 41, 326.

³ Langmuir, *Proc. Roy. Soc.*, 1939, 170A, 1.

⁴ Gorter, *Trans. Farad. Soc.*, 1937, 33, 1125.

may be too low "for the rapid, direct (sic!) synthesis of proteins." At a phase boundary, however, which could exist between the surface of the "soup" and the atmosphere, or, conceivably, between the "soup" and the liquid droplets (co-acervates) suspended in it, the concentration of amino acids would probably be higher and, under the activating conditions of interfacial forces, a protein of random constitution and size might be formed.¹ The protein would then have to be removed out of the surface, either by being "rolled up by a puff of wind" or by the disappearance of one of the phases. The surface would then be prepared for the next synthesis. The assumption must also be made that one at least of these proteins has self-regenerating properties. There are some difficulties in this hypothesis. First, the spreading of native, globular proteins brings about their denaturation. The initially-soluble protein is converted into an insoluble coagulum of denatured protein. Second, even if the proteins thus synthesized were re-folded subsequently into a native state, or could be rendered soluble by a different mechanism, such a soluble protein would immediately compete with the amino acids for adsorption at an interface. It is for this reason that dilute solutions of proteins are unstable.² Third, proteins could only be formed in a random manner unless the surface was specially prepared. This is much easier to postulate than to demonstrate, but Langmuir and Schäfer³ have suggested that the molecules already present on the surface could act in such a manner as to regulate the formation of more, identical molecules. Many experimental attempts have been made to test the feasibility of this "film" hypothesis of protein synthesis but, to date, no verification has been obtained.

Another more general difficulty which arises with any "soup" hypothesis is the fact that not only do many enzymes and their co-enzymes depend for their catalytic activity upon traces of metal ions but they are correspondingly sensitive to the presence of other metals and even anions. For example, an enzyme activated by magnesium ions may be inactivated by citrate ions. It is inconceivable that a "soup" formed by any of the mechanisms hitherto propounded should not have contained

¹ Robertson, *Austral. J. Exp. Biol. & Med. Sci.*, 1926, **3**, 97.

² Adams, *J. Gen. Physiol.*, 1948, **31**, 417.

³ Langmuir and Schäfer, *J. Amer. Chem. Soc.*, 1938, **60**, 1351.

anions and cations of all types, and difficult, therefore, without making even more assumptions, to see how active enzymes could have been built up. There is, of course, an "orthodox" answer to this difficulty, in general, if not in particular. Oparin believed (*loc. cit.*, pp. 174-5) that the first enzyme catalysts must have been chemically simple and not very active and that these primitive "enzymes" evolved to their present complexity.

It was Troland's original contention,¹ and that of Alexander and Bridges,² too, that the primal living unit was a "catalytic particle of dual activity, a particle, which can, on part of its area, conduct a continuous (*hetero-*) catalysis . . . and can, on another part of its area conduct a reproductive (*auto-*) catalysis, and to suppose that the substances formed by the continuous catalysis, together with those existing in the milieu, are the very ones needed in the reproductive catalysis." Troland believed that the gene (the ultimate particle of genetic material in the cell nucleus) was primarily autocatalytic—so that each daughter cell formed by cell division from the mother cell should contain a replica of each parent gene—but that some of the genes, at least, should be capable of sustaining specific heterocatalytic reactions as well.

This concept appears to have been well in advance of its time, and supporting experimental evidence has only recently been revealed.³ The mould, *Neurospora*, when grown "wild," normally synthesises its own growth-factors. Some variants of the "wild-type" are known, however, for the complete growth of which, some of these factors must be provided in the culture medium. This means that these deficient strains have lost the capacity to perform one or more enzyme reactions by means of which the "wild" type is able to provide itself with these factors. There appears to be no doubt that the variants are genetically different, too, i.e., the deficiencies are hereditary. It seems, therefore, that each enzymatically-catalysed step in the synthesis of these factors from simple precursors is dependent upon the direct participation of a different gene. In this organism, therefore, the genetic material of the cell nucleus must be directly responsible for the synthesis of the cell's enzyme systems. This is what was referred to earlier when we said that each cell provided its own catalysts. If the gene is,

¹ Troland, *Monist*, 1914, Jan. 1, 42.

² Alexander and Bridges, ed. *Colloid Chem.*, 1928, 11, p. 17.

³ Horowitz, *Proc. Nat. Acad. Sci.*, 1945, 31, 153.

in this sense, the fore-runner of the enzyme, and if each reaction chain, involving perhaps twenty or thirty enzyme-catalysed steps, would equally require twenty or thirty genes in the nucleus, the sum total of cellular organisation must be enormous. Years of "geologic" time may well have been required for its synthesis.

Moreover, no gene is known which can retain its property of hetero- or of auto-catalysis when separated from its nuclear environment. In fact, no one has ever seen a gene, and its existence is inferred from what it does. Attention has, however, been focussed upon *viruses* which seem to possess some of the properties of the genes. These resemblances are largely chemical and it is even doubtful now whether the virus is actually auto-catalytic.

VIRUSES.

Since 1901, hundreds of the diseases of man, animals and plants have been found to be caused by viruses. The distinction between bacterium and virus as a cause of any particular disease was, at first, based on size alone. The viruses were able to pass through filters which would retain known bacteria. Viruses, as a group, are smaller than bacteria, but they form an unbroken series with respect to size. Certain of them, such as vaccinia virus, are larger than many accepted organisms while others, such as foot-and-mouth disease virus, are smaller than some protein molecules.

From the standpoint of physics and chemistry, the plant viruses, such as that which produces mosaic disease in tobacco plants, have been more carefully investigated than animal viruses. In 1935, Stanley¹ obtained tobacco mosaic virus in the form of needle-like crystals. Of particular interest were the facts that these crystals were quite devoid of water and of any heterocatalytic activity. This lack of water, together with the crystalline structure, would appear to preclude the existence of a metabolism of the type usually associated with living organisms; and yet when these crystals are introduced into the cells of susceptible plants, they increase in quantity and the plants show all the external symptoms of mosaic disease. The virus appears to interfere directly with the normal enzymatic reactions occurring in the cells.

¹ Stanley, *Science*, 1935, 81, 644.

All viruses have not been obtained as crystals, and there is no valid reason for supposing that they all ever will. They all have in common, though, the ability to reproduce and multiply when within the cells of susceptible hosts. No virus has yet been discovered which will multiply under any other conditions, i.e., viruses cannot be cultured, like bacteria, in artificial media. It is probable, too, that in the infected cell the synthesis of the virus does not differ markedly from the synthesis of normal proteins and enzymes. The virus, therefore, behaves as an obligate parasite, and "persuades" the cell to provide the material for its own synthesis. In view of their chemical properties as proteins, their crystallizability (and many enzymes have also been obtained in a crystalline form) and their alleged autocatalytic reproduction, the chemist and biochemist tend to regard viruses as nucleoprotein or liponucleoprotein *molecules*, whereas the biologist and pathologist have, on the other hand, considered them to be small living organisms. Green¹ has suggested that viruses are simplified fragments of living protoplasm, arising from organisms by a process of retrograde evolution under parasitism, which involved loss of function and of associated substance, and that this process may vary in degree, resulting in forms varying from single protein molecules to entities almost indistinguishable from ordinary living organisms. Laidlaw² has concluded, too, that viruses probably arise by a gradual loss of substance, and of such functions as enzyme systems (which would explain why viruses would require to "borrow" the intact and functioning enzyme systems of their host cells).

Others maintain that viruses are "living" particles and thus provide a bridge between the non-living enzymes and the cell itself. It is difficult to distinguish and to disentangle these views, but until fresh facts come to light it would certainly not be true to say that the virus was the precursor of the cell, or that the cell nucleus ever passed through a stage when it existed only as a colony of elementary, virus-like living units. Pirie³ quoted recently a statement of J. W. Beard, an American authority on animal viruses, "viruses are said to be living molecules, and autocatalytic enzymes and are likened to genes and mito-

¹ Green, *Science*, 1935, 82, 443.

² Laidlaw, Rede Lecture, London, 1938.

³ Pirie, *Brit. Med. Bull.*, 1948, 5, 329.

chondria—in short, a fabric of concept has been woven of a plethora of woof with a paucity of warp!”

Despite the apparent ineligibility of the autocatalytic enzyme or virus for the rôle of the primal living unit, there are still those who maintain that living substance is probably being produced constantly in one form or another, but that it must fail to make itself apparent because existing living organisms would assimilate it.¹ The suggestion has even been made that it might be a crucial experiment to sterilise completely several acres of ground, to provide a “soup” similar to that which we have already considered, and, taking care to avoid contamination by extraneous living matter, to await, confidently, the eventual appearance of primitive life.

We have seen some of the difficulties involved in the synthesis of the first protein molecule. It is simple to postulate such a substance and the action of the forces of “evolution” upon it. Each tissue of each species of plant or animal, microbe or man, is able to synthesize its own special proteins, and these may be specific, not only to the species but even to the organ. It is probable, therefore, that millions of different proteins exist. Moreover, the synthesis of these proteins by the cell is controlled by enzymes, which are themselves, as we have seen, specific proteins, and the enzymes, in their turn, are probably synthesized through the activities of the genes, which again, are specific proteins. The possible chemical mechanisms by which the cell itself can synthesize its proteins have recently been reviewed by Northrop and his colleagues.² Without regulation, these mechanisms would only give a non-specific protein of random composition. It is difficult to assume that not only each enzyme, but each cell protein, is formed autocatalytically, because an autocatalytic reaction requires at least one template molecule of the product to be present at the beginning, and even the combined sperm and ovum of an animal would probably be too small to hold one prototype molecule for each protein of the ultimate adult animal.

The problem which has still to be solved is that of the source of the energy which the cell requires for the synthesis of protein molecules from simpler precursors. In the intact living cell, this can be provided by a “coupled” reaction, i.e., a reaction which

¹ Allen, *Rep. Brit. Assoc.*, 1896.

² Northrop, Kunitz and Herriott, *Crystalline Enzymes*, 2nd Edn., 1948.

proceeds side by side with the synthesis of protein and from which energy may be transferred. It is significant that this energy may be provided by respiration processes in the cell.

The three fundamental reactions upon which all life depends have not yet been shown to be separable from *intact cells*. These are *photosynthesis*, *protein synthesis* and *nitrogen fixation*. This almost certainly means that these processes depend upon a precise structural organisation of "coupled" enzyme systems in the cell and it is very difficult to see how, for these processes, such linked enzyme systems could have "evolved," since the presence of but a single component enzyme would have conferred no "survival value" upon the organism.

The conclusion is inescapable that life is a property of the intact cell, that no cell component can be considered as the primal living unit and that, stated in these terms the problem of the origin of life becomes that of the origin of the first living cell—a problem that must escape a solution at least until we are able to demonstrate the structure of a single cell. Some idea of the magnitude of the task may be gained from the following summary of the synthetic ability of the bacterial cell.¹

"Cells of many kinds of bacteria, furnished only with water, salts, glucose and simple sources of carbon and nitrogen, can synthesize proteins, complex carbohydrates, lipids, ribose and desoxyribose nucleic acids, vitamins and enzymes; all organized into characteristic and reproducible protoplasmic systems. The bacterium can reproduce itself and divide within half an hour at body temperature. These feats of chemical synthesis and organisation, which cannot be duplicated by the finest chemical laboratories in existence, are accomplished within a cell a few microns in length and less than half a micron in diameter."

We may feel that it will ultimately be possible to discover the exact structure of the living cell, and even to duplicate in the laboratory many of the chemical feats performed by it. We may even believe, with Beutner, that when we have been able to synthesize the first autocatalytic protein we shall know the secret, and the origin of life. Until that time comes, if in the wisdom of God it ever does come, we must conclude, with Hopkins,² that "life is a property of the cell as a whole, because

¹ Mudd, *Nature*, 1948, **161**, 302.

² Gowland Hopkins, quoted in *Colloid Chemistry*, 1928, **11**, p. 21. ed. Alexander and Bridges.

it depends upon the equilibrium displayed by the totality of co-existing phases"; and that the origin of this first cell is completely unknown and, probably, in terms of the concepts of science, unknowable.

DISCUSSION.

The CHAIRMAN (PROF. KAPP) said: A great deal of research and careful thinking must have gone to Dr. Harris's excellent paper. The most relevant comment that comes to my mind on this account of 2,500 years of theory spinning is that every one of the theories, including those put forward by contemporaries, and in the name of science, collapse like card houses at the first faint zephyr of logical analysis. Everyone may not be able to formulate the objections as neatly and concisely as Dr. Harris has done, but surely those scientists who are authors of the most recent theories would see the objections to them soon enough if they could bring themselves to exercise any self-criticism at all. I am sure that they reason more conscientiously when they are concerned with their own special fields of study. Dr. Harris's documentation confirms, what my own reading had already proved to me, namely that many quite eminent scientists do not consider it necessary to think quite seriously when they are propounding their views about "life." In their handling of the subject one can detect three major offences against scientific method.

The first is a use of words so loose as to conceal the question under discussion, and this loose use is not remedied by a pretence at seeking definitions. When there is mention of the need to define the word "life," for instance, these authors do not trouble first to decide in which of four possible senses the word is to be understood.

(i) Sometimes one has to gather from the context that the word is used as a collective noun for all living things, just as the word "ironmongery" is used collectively for certain types of metal ware. Confusion would be avoided if we always said "living things" or "living substance" instead of "life" when we mean this.

(ii) At other times the word is used to denote a property or collection of properties. Life is said to be this or that property of the living cell, for instance, but no one would say that ironmongery was the property of knobblyness or hardness. One would say,

instead, that these properties were characteristic of ironmongery. We would avoid the confusion if we said "the characteristics of living things" instead of "life" when we mean this.

(iii) At yet other times the word is used to denote the process of living. Gowland Hopkins is quoted as having said that we cannot speak of the cell life as being associated with any particular type of molecule, but that its life is the expression of a particular dynamic equilibrium. He does not say that the *cell* is an expression of this, but that its *life* is. It would have been better to have said "vital processes" instead of "life."

(iv) Lastly the word may mean an agent or influence, an entity that causes matter to assume the structure of living substance and to follow specific structural changes in specific time sequences. This, I venture to suggest, is the only use of the word that can be scientifically justified. The word is used in that sense in any discussion as to whether there is such a thing as life or not. Vitalists would say yes. Their opponents, no. This straight discussion is confused and the arguments used in it become ambiguous when the word *life* is sometimes used as a collective noun, sometimes as a set of properties, sometimes as a process and sometimes as an agent.

The second very common offence against scientific method is a failure to formulate the problem to which the theory that is being presented claims to provide a solution. These theory spinners, and I am glad to see that Dr. Harris is not one of them, do not like questions; they prefer answers. This second offence is coupled with the third one, which is a passionate desire to prove that "life and the origin of life must ultimately be completely explicable in physico-chemical terms." When one reads most of the authors whom Dr. Harris has quoted, and many others as well, one cannot avoid the conclusion that the theory spinners are more concerned to prove their faith true than to find answers to any questions of scientific importance. As good evolutionists they postulate one, or a very few, original ancestors to all living things, but they are less interested to know at what time, in what place and by what process, an original ancestor came into existence than to find a theory by which to explain the occurrence without the need of anything but physical laws and the properties of matter.

Hence all the theories that have been carefully classified in Dr.

Harris's paper (there are six) are really different disguises of the theory of "spontaneous generation." The theories differ only about the nature of the spontaneously generated organisms. Some have said that mice or maggots can thus be generated. Some that it can only be single cells, some that it can only be viruses, some that only single protein molecules can be spontaneously generated. And as Dr. Harris's quotations show, the theory spinners are as much concerned to prove that living substance is spontaneously maintained as that it is spontaneously generated.

What we have to ask before we can begin to spin theories about the origin of living substance is whether those can justify the word "completely" who say that life and the origin of life must be ultimately *completely* explicable in physico-chemical terms. Let me formulate the question in the following simple terms: Is living substance created and maintained as a result of the unaided action of matter on matter?

Mr. RONALD MACGREGOR said: We have the highest authority for knowing when and how life came into the world where we live.

Almighty God has told us in His word, in Genesis i, how "God said," "God created." By His word creation took place, and what was said in Genesis i—that there were animals, fish, birds, etc.—holds true to-day. Animals remain animals, birds remain birds, fish remain fish. And He created Man out of the dust, and breathed into him the breath of life—man was made in the image of God. One of our late Presidents of the Victoria Institute, the late Sir Ambrose Fleming, and very distinguished with regard to the wireless, so disbelieved in Evolution that he founded a Society to oppose this theory. Science changes from century to century, and it is my belief that when science comes to a final conclusion, it will be found to agree with Genesis i (and ii), because the Author of the Bible is the Author of Creation.

Mr. G. E. BARNES said: In view of the Chairman's remarks concerning accuracy of terminology, I should like briefly to discuss the use of another word which appears to have been used loosely and with different meanings by the various authors quoted by Dr. Harris. I refer to the word "cell."

This diversity of meaning is not surprising, since biologists them-

selves have given the concept more than one extension. Even to-day there exist two schools of thought on the use of the word, so that it is necessary that I should define the way in which I shall use it. I consider (and I think that this is probably the preponderating view now) that a cell is a mass of specialised protoplasm under the control of one nucleus. If this definition be accepted, the protozoa must be regarded as non-cellular organisms. This obviates the unwarranted assumption that the protozoan energid is homologous with the metazoan cell.

Now, in the days when biology was concerned more with structure than with function, the cell came to be regarded as the unit of both structure and function. To-day, however, as a result of the great increase in knowledge of the physiology of the metazoa, biologists have been forced to the conclusion that, while it still may be legitimate to regard the cell as the unit of *structure*, it is no longer possible to regard it as the unit of *function*. The unit of function is the whole organism, and not the cell.*

Furthermore, it is obvious, and Dr. Harris has assumed it throughout his paper, that the first form of living material must have been a functional unit, and not merely a structural unit. Hence, it follows that those who try to account for the origin of life solely in terms of physico-chemical phenomena must be prepared to explain the origin, not merely of a mass of unspecialised protoplasm, nor of "the simplest living cell," but of a complete organism.

These remarks, of course, add no further facts to those already discussed in the preceding paper, but they do, I think, state the problem in accurate terms. Those whose irresponsible guesswork Dr. Harris has been examining this evening might have been less bold in their published speculations if they were fully aware of the exact nature of their problem.

WRITTEN COMMUNICATIONS.

Mr. H. K. AIRY SHAW wrote: What has been said concerning the atmosphere of Venus does not seem quite to square with the account given by the Astronomer Royal, Sir Harold Spencer-Jones, in his

* For a discussion of the relation between the cell and the organism, see Lester W. Sharp, *Introduction to Cytology*, 3rd edition, 1934, pp. 20-24, 435-436.

recent little book, *A Picture of the Universe*, 1947, pp. 45-48. He says: "Attempts to detect water-vapour in the atmosphere of Venus have been unsuccessful; there can be no oceans on Venus; if there were, there would be enough water-vapour in a world as warm as she is to be easily detected. This gives the clue to the conditions prevailing on Venus. The pall which hides her surface is a pall of dust over a desert world, and not a pall of cloud" (pp. 45-46). ". . . plates sensitive to the short wave-length ultra-violet light reveal cloud markings, which must be at a high level in her atmosphere . . ." (p. 45). ". . . the vagueness of the cloud formations (which, incidentally, cannot be clouds of water-vapour but which, it is thought, may consist of formaldehyde) makes it difficult to determine the length of day on Venus" (p. 48). ". . . there is a very great abundance of carbon dioxide in the atmosphere of Venus" (p. 46).

Secondly, while it is probably strictly true to say that "no one has ever seen a gene" (I am not enough of a cytologist to dispute it), I wonder whether the statement might not be modified slightly in view of the elaborate chromosome "maps" that have been published, *e.g.*, for *Drosophila* by Morgan, Dobzhansky and others. These "maps" purport to plot the exact *situation* of the various genes on the chromosomes, and the markings give the impression that they intend to indicate schematically the actual genes. See, for example, Dobzhansky, *Genetics and the Origin of Species*, 1937, pp. 110-111.

Mr. JOHN BYRT wrote: Although my understanding of this subject is too limited to permit any very original observations, I might just draw attention to an article by Professor Linus Pauling, entitled "Antibodies and Specific Biological Forces," appearing in *Endeavour*, April, 1948, p. 43. Dr. Pauling here presents in simple terms the theory that complex biological molecules, such as viruses and genes, are reproduced through the intermediate stage of a complementary, or "template" molecule, which would itself serve as a template for the production of a replica of the original molecule. This appears a very plausible explanation of the mechanism of reproduction, given the original complex molecule, and an environment sufficiently complex to permit the building up of the template

molecule under the influence of van der Waal's forces. It accounts for the fact mentioned by Dr. Harris that "no virus has yet been discovered which will multiply under any other conditions" than within the cells of susceptible hosts. However, it brings us no closer to a "natural" solution of that profound mystery of the origin of the first complex protein molecules, and while it would be unwise to declare the problem incapable of such a solution, it is certainly true to say that the invocation of the power of the Deity provides the most reasonable solution at the present time.

Dr. Harris comments on the extreme specificity of the proteins synthesized by plants and animals. Pauling cites an interesting example of this, even in the case of the relatively simple hæmoglobin molecule: "the hæmoglobin of cold-water fishes liberates its oxygen at lower temperatures than does that of warm-blooded animals." One who can accept the chance production of protein molecules from inorganic matter will have no difficulty in explaining this in terms of its evolutionary "survival value," but to the Christian it provides just one of numberless examples of the overruling wisdom of the Creator.

A communication was also received from Mr. A. CONSTANCE, who drew attention to the enormous difficulties confronting any who would speculate on the origin of life, and to the need for humbleness of mind in dealing with such topics.

Miss L. BUSH also commented upon the paper.

AUTHOR'S REPLY.

Mr. Airy Shaw is correct in his statements concerning the atmosphere of Venus, and I must confess to having failed to check my own early reference against a later. Wildt,* however, rejects the polyformaldehyde nature of the clouds, but confirms that oxygen is very scarce, that water is absent, and that carbon dioxide is present in great abundance (a concentration one hundred times greater than in the Earth's atmosphere). Wildt, too, has some interesting remarks to make about Oparin, viz., "the astrophysical data on which Oparin has based his speculations are largely obsolete and often incorrectly interpreted."

* Wildt, *Rev Modern Physics*, 1942, 14, 141.

I cannot accept the point about the "visibility" of the gene. Chromosome maps have certainly been drawn which purport to show the location of individual genes. Equally, X-ray diffraction data can give maps of the location of atoms in a crystal lattice—yet the atom remains invisible and its *ultimate* nature remains obscure. Sonneborn,† the American geneticist, has stated "the classical gene may be specified by its action, properties and location. Like the ultimate particles of physics, it is invisible and is recognised by its effects. The observable effect of a gene is on the trait or traits which it determines or influences."

If Mr. Barnes means that, because there is no evidence to support the hypothesis that metazoa evolved directly from protozoa, theories purporting to explain the origin of the "first living cell" only take us as far as a protozoon, and not as far as an organism, then I agree with him. However, I fail to understand the relevance of his definition of a cell. Amœbæ, for example, are protozoa, and, equally, consist of "specialised protoplasm" under nuclear control. Moreover, no nucleus has been demonstrable in some bacteria or in the human red blood cell, although, admittedly, this latter has a very different sort of existence.

The tendency has been, as Professor Kapp has so clearly stated, for all the theories to be variants of the theory of spontaneous generation, differing only in the nature, and biological and chemical complexity, of the material generated—single protein molecules, viruses, single cells, maggots or mice. Each theorist has tended implicitly to define "living" for himself in terms of the degree of complexity to which his theory leads him. To-day, the single protein molecule is preferred to the mouse of a less sceptical age, and, in consequence, those who feel capable of demonstrating the mode of origin of a protein are equally capable of defining "living" in terms of the properties of such proteins.

We believe, as Christians, that living organisms were created, and, moreover, are maintained in being, by God. The onus of disproving this declaration rests with those whose "faith" is in the creative action of "matter on matter." The inadequacy and naivety of some of their attempts has been shown here.

† Sonneborn, *American Scientist*, 1949, 37, 33.

881ST ORDINARY GENERAL MEETING

HELD AT 12, QUEEN ANNE'S GATE, WESTMINSTER, S.W.1, ON
MONDAY, 28TH MARCH, 1949.

REV. C. T. COOK IN THE CHAIR.

The Minutes of the previous Meeting were read, confirmed and signed.

The following elections were announced:—The Lord Bishop of Worcester (Rt. Rev. W. Wilson Cash, O.B.E., D.D.), Vice-President; Rev. Principal H. S. Curr, M.A., B.D., B.Litt., Ph.D., Vice-President; Rev. R. R. Neill, M.A., Fellow; A. MacA. Gillespie, Esq., O.B.E., M.D., D.T.M., F.R.C.P., Fellow; Rev. Gordon I. Thomas, Member; R. Schram, Esq., Associate.

The Chairman then called on C. A. E. Turner, Esq., M.Sc., to read his paper on "Puritan Origins in Science."

PURITAN ORIGINS IN SCIENCE.

By C. E. A. TURNER, M.Sc.

SYNOPSIS.

In the middle ages the Roman Catholic church did little to encourage experimental inquiry in science, but favoured traditional views. Later, as a result of the Reformation, the view came to be widely held, particularly among the Puritans, that God's works ought to be explored for His glory and for the good of mankind. In England, Puritan influence was largely to the fore in the foundation of the Royal Society.

Investigation has shown that those holding Puritan views made very considerable contributions to science in the seventeenth century. Among the 24 scientists named, were the naturalists, Grew, Ray and Willughby; the physician, Sydenham; the economists Graunt and Petty; the educationalist, Hartlib, together with the physicists and mathematicians, Boyle, Newton, Briggs, Wallis and Wilkins.

After the Restoration, interest in science for its own sake declined, and increasing interest in its exploitation for gain led to the beginnings of the great divorce between science and religion.

THE BACKGROUND AND FAITH.

THE Schoolmen of the Middle Ages were interested in seeing an integrated universe. Using largely *a posteriori* methods they were content if facts or fictions about the physical world would fit their views. In an age when authorities were

to be accepted, their science was largely non-experimental, but copied from books which mixed truth and fable. The Roman Catholic Church favoured this learning which had been already approved by it, and by which the studies and views of its members were readily checked. This was the learning fostered in the monasteries, where it fitted the ideal of escape from a physical world "inferior, contemptible and reserved for destruction." The free inquiry and accurate observation, characteristic of modern science, if not forbidden were suspect, liable to be regarded as heretical or connected with witchcraft, astrology and chicanery. Consequently the study of science became sterile. Much of the material taught was useless and divorced from reality, as witness the difference between the maps of the monks and those of the mariners.

At the Renaissance in the fifteenth century the situation was not improved. The increased interest in classical literature tended to add the tradition of the ancients to the dead weight of Rome. So the movement was chiefly helpful on the arts side, and even there crystallised into concentration upon style and form rather than upon content and thought.

When the Reformation came, the authority of the Church could be disregarded in Protestant lands, and there was a reaction even to follow an opposite course. Emphasis was now placed on individual knowledge of and faith in God for salvation, rather than on dependence upon the rites and dogma of the Church. This personal responsibility was transferred over to learning. Many were obliged to accept the expansion of knowledge through geographical discovery, and they felt free to examine the world around them, as well as their Bibles, for themselves. In the hands of some the Reformation became a process of secularisation which was never the intention of its pioneers. Luther particularly and Melancthon opposed the new Copernican astronomy as being anti-religious. Calvin frowned upon some scientific work. However, their protestant ethic encouraged scientific inquiry by the removal of man-made prohibitions.

The Puritans are regarded as being the essence of Protestantism, as those whose only authority was the Bible. In it they found encouragement to observe, experiment and discover the contents and secrets of a universe created by God for His glory (Col. i, 16). They read in the poetry of the Scriptures of God "Who made heaven and earth, the sea and all that therein is ;

which keepeth truth for ever" (Ps. cxlvi, 6); of "Him that by wisdom made the heavens" (Ps. cxxxvi, 5); of "His wonders in the deep" (Ps. cvii, 24); Who "hangeth the earth upon nothing" (Job xxvi, 7); that "He telleth the number of the stars; He calleth them all by their names" (Ps. cxlvii, 4). They were called upon to "remember His marvellous works that He hath done" (Ps. cv, 5) and note "that one generation shall praise Thy works to another" (Ps. cxlv, 4). They exclaimed, "I will praise Thee; for I am fearfully and wonderfully made" (Ps. cxxxix, 14); "Thou hast created all things, and for Thy pleasure they are and were created" (Rev. iv, 11).

Their way of life was to be "pure," "in doctrine showing uncorruptness, gravity, sincerity" (Titus ii, 7) based upon personal discovery of truth. Theirs was a serious calling, free from tradition and eschewing ritual and unprofitable amusements. Robert Barclay, the Quaker, in "Apology for the True Christian Divinity" (1675) recommended the study of natural philosophy as a remedy for idleness and spending time on plays and "flesh pleasing." Puritans were taught to be "diligent in business, serving the Lord" (Rom. xii, 11), and were consequently industrious and painstaking, systematic and methodical.

These people knew God as reliable, unchanging and working according to immutable laws, seen on the spiritual side in the law of predestination, of sowing and reaping (Gal. vi, 7) and on the other in the physical laws of matter. Reason was regarded as a divine gift. Richard Baxter thought faith not "rationally weighed" was but a dream or fancy or opinion. John Ray referred to "divine Reason running like a Golden Vein through the whole leaden Mine of Brutal Nature." Order was a rule of life for the Puritans. Things were to "be done decently and in order" as "God is 'not the author of confusion but of peace" (1 Cor. xiv, 40 and 33). It was a law of the material universe where He "worketh all things after the counsel of His own will" (Eph. i, 11). Whitehead says they were also a people with an intense imagination. This was required for seeing the Unseen and was another quality added to those above, which together particularly fitted them for the pursuit of scientific studies.

Nehemiah Grew, in "Cosmologia Sacra" (1701), wrote "God is the Original End and we are bound to study his works." John Ray uses almost as his motto "O Lord how manifold are thy works! In wisdom Thou hast made them all" (Ps. civ, 24).

The glory of God was the transcending purpose of this spiritually-minded people as they walked among the things of earth. God was Creator and actively interested in His work. They were humbly to follow and find Him in the creation which at least partly made Him known (Rom. i, 20).

Coupled with this motive was that of social utility. Loving the neighbour was interpreted as being interested in his welfare, in the care of the poor and weak. Francis Bacon was no Puritan, but he had coined a phrase which Robert Boyle and other Puritans re-echoed as the two-fold object of their scientific activities: "The glory of God and the relief of man's estate." This is written over the work of these men, but with the reservation in many cases that the latter is subsidiary to and included in the former.

It is this kind of people described above that the author has in view in this paper rather than the adherent of a particular sect or party. Consequently it will be seen that the Puritans were not necessarily narrow-minded, but careful observers walking through God's world and admiring His handiwork. They were not confined to one particular type or social class, but among them, as will be seen below, there was a variety, and, what is more, a breadth of intellectual interests. Whitehead describes the seventeenth as the century of genius. For science, it was the century of origins, of dispelling the darkness of the quackery and superstition of alchemists, astrologers and dosers, one of widening, lightening horizons and expanding heavens. In it we find no real conflict of science with religion, but a happy integration of various departments of knowledge, especially in Puritan thought, as all being branches of Divine revelation to God's regent, man.

It will be appreciated that scientific works do not always, or even generally, reveal religious beliefs. Biographers often neglect or fail to appreciate, according to their tastes, the scientific or the religious aspect of a man's life. It is consequently often difficult to discover if a scientist was truly Puritan, or whether or not his religion, if mentioned at all, was merely nominal. This study leaves much more investigation to be done and can only give a partial picture of the work of Puritan scientists. It is confined largely to seventeenth century England. Puritan participation in science is bound up with the history of the whole of that period. The author seeks here to deal only with those who were known to be Puritans or followers

of that tradition, and with their investigations which were original rather than their repetition of others' experiments for amusement or technical application. It will be realised that in addition to these, there were other scientific pioneers who were truly religious, as well as those whose religion, if any, was not known. Such are not included, as they cannot be described as holding Puritan views. The Puritans were also pioneers in both the science of education and scientific education, but this is the subject of another investigation on which the author is engaged and which cannot be included in this short paper.

H. T. Pledge, in "Science Since 1500," indicates the geographical distribution of the scientists. He shows by maps that they were more numerous in the industrial areas of the seventeenth century (which were not always those of to-day) and also where the Puritan and Parliamentary causes proved to be the strongest in England, i.e., in East Anglia and Kent. Similarly on the Continent, apart from brief periods in Italy, the scientists were largely drawn from Protestant lands such as the Netherlands, some German states and Huguenot France. Robert K. Merton in both "Puritanism, Pietism and Science" in *Sociological Review*, XXVIII, Jan., 1936, and in "Science, Technology and Society in Seventeenth Century England" (Osiris IV) confirms this. He shows numerically the preponderance of Protestant scientists from the seventeenth century onwards. C. F. Richardson in "English Preachers and Preaching" (New York, 1928) suggests that the Royal Society, with all its interest in the new and experimental philosophy, began with a small group of learned men who were chiefly Puritan divines. The people to whom he refers were the "Invisible College," which met at Oxford from 1645 and later in London as well, Boyle, Wilkins and Petty being some of its prominent members. Dorothy Stimpson similarly in "Puritanism and the New Philosophy in Seventeenth Century England," in *Bulletin of Institute of the History of Medicine III* (1935), states that only one was definitely non-Puritan, while it is uncertain about two of this group. Of the original members of the Society when granted the Royal Charter in 1662, forty-two (or sixty-two per cent.) were Puritans of the total of sixty-eight. This was in spite of the facts that Puritans were in a minority in England and that the Royal Society was formed in the strongly anti-Puritan Restoration period. It must be remembered too that a number of other Puritan scientists would not care to join this group, which was under Royal patronage.

THE MEN AND THEIR WORK.

Interested in seeing God through His creation, Puritans found much to delight them in the beauties of the biological sciences. It has been suggested that Puritanism began with John Hooper Bishop of Gloucester, who pleaded for a "purifying of the Church from its very foundations." It seems neither unexpected nor inappropriate that one of his contemporaries should be both botanist and Puritan. William Turner (d. 1568), Dean of Wells, was educated at Pembroke Hall, Cambridge, with his friend Nicholas Ridley, who became fellow-martyr with Latimer in the Marian Persecution. During these fiery days Turner, with others, went into exile on the Continent and was further influenced toward Calvinism. On his return he proved himself Puritan in his violent objection to ceremonial, vestments and bishops. While on the Continent he had also busied himself in collecting plants and information for his great work, "A Newe Herball" (London, 1551). He appears to have been a learned and sound judge of scientific matters, and was the first Englishman to make a systematic study of botany. He complained he had found no physician at Cambridge with a knowledge of plants, so his book indicates the coming of a new era for the science.

Nehemiah Grew (1641-1712) was the son of Obadiah, an Oxford man, who was a Parliamentary divine and schoolmaster. The son, educated at Pembroke College, Cambridge, studied plants and animals as that which "came at first out of the same Hand and were therefore the Contrivance of the same wisdom." He was encouraged by his half-brother, Henry Sampson (1629-1700), who became an ejected minister at the Restoration, and, like many others, turned to medicine, producing some original work in papers on morbid anatomy. Grew, like Sampson, went to the University of Leyden, which gladly received Puritans, and there graduated Doctor of Medicine. He contributed papers on botany to the Royal Society, was elected Fellow and became its Secretary. His "Anatomy of Plants" (1682) is perhaps his chief claim to recognition as a scientist. It was printed at the request of the Royal Society and is a systematic and well-illustrated description of plant structure. He made use of the microscope, employed terms such as plumule and radicle, and made observations on acids, salts and flavours in plant bodies. In his dedication to Charles II, he says, "Your

majesty will find that there are Terrae Incognitae in Philosophy as well as in Geography"; and to John Wilkins, then Bishop of Chester, "I hope your pardon if while you are holding that best of books in one hand, I here present some pages of that of Nature into your other: especially since your Lordship knoweth very well how excellent a commentary this is on the former; by which in part God reads the world his own definition of their Duty to him." Grew's interest in the Scriptures is seen in his acquiring enough Hebrew to read the Old Testament in the original. His last work, "Cosmologia Sacra, or a Discourse of the Universe, as it is the Creature and Kingdom of God" (1701) is an argument against Spinoza, the nature of God being deduced *a priori* and *a posteriori* from the necessity of His being and from His handiwork.

Also in the line of Puritan biologists was John Ray (1627-1705). Son of a blacksmith, educated at Catherine Hall and Trinity College, Cambridge, through the generosity of a squire, he became in turn lecturer in Greek, Mathematics and the Humanities as well as a clergyman. At the Restoration he would not conform and resigned his fellowship, becoming a private tutor. Later he educated the orphaned sons of his friend, Francis Willughby. The work of these two is closely connected in various branches of biology. Ray appears to have introduced a common system of classification of plants and animals. In "Methodus Plantarum Nova" (1682) he classified plants by their fruits and in part by the flower and the leaf. He also wrote "Historia Insectorum" and "Historia Plantarum." He studied fossils and suggested their true origin. In other works he divided animals according to their digits and teeth. His "Wisdom of God manifested in the Works of Creation" (1691) was based on lectures he gave in Trinity College when a Fellow there. In it he refers to the works of More, Cudworth, Stillingfleet, Parker and Boyle on the subject. The object of the book was to establish "belief in a Deity," to "illustrate His attributes of power and wisdom and to stir up and increase in us the Affection and Habits of Admiration, Humility and Gratitude." Ray rejected the hypotheses of Aristotle, the Epicureans, of Descartes and even of Boyle. He regarded God as no idle spectator after He had originally set the world in motion. God's wisdom is seen in the multitude, structures and functions of the various creatures he mentions. He quotes numerous scriptures, including his favourite, "O Lord, how

manifold are Thy works! In wisdom hast Thou made them all" (Ps. civ, 24). From this study he suggests we are to learn to be thankful, to take care not to mar God's work, especially the human body, and to use all for God's service, while we are to prize and value our souls inhabiting these bodies. This book became very popular and had passed to its fifth edition by 1709, the twelfth by 1759 and at least the fifteenth by 1827.

The early death of Francis Willughby (1635-1672) at thirty-seven was a great grief to Ray. They had been friends from their days together at Trinity with Isaac Barrow. They had travelled together at home and abroad, observing plants, birds, fish, animals and insects. Willughby came from a titled family and was always very studious, not wasting time even from his childhood. He was one of the original Fellows of the Royal Society. His great works were "The Ornithology of Francis Willughby" and "Historia Piscium." Willughby consented to the printing of the former "considering that the publication of them might conduce somewhat to the illustration of God's glory." Both appeared posthumously, the first in 1678 and the latter in 1686. Ray edited them and was possibly responsible for part of the contents. The Royal Society and Bishop Fell regarded these well-illustrated books of sufficient importance to pay the heavy cost of printing them.

A lesser light is James Newton (1664-1750), a friend of Ray and of the great Moravian, John Comenius. This man was a graduate in medicine who kept a private lunatic asylum. He studied botany as relief from his unpleasant calling and published "A Compleat Herbal" containing descriptions of several thousand plants with plates. He apparently wrote another similar work, remarkable for describing forty varieties of apples.

Adam Martindale (1623-1686), whose Oxford course was abandoned through the Civil War, was tutor, schoolmaster, Parliamentarian army clerk, chaplain and nonconformist minister. He wrote on a variety of subjects, including Christianity. Works on mathematics, buoys, Cheshire salt and particularly on the treatment of land by using salt, marl, lime and burning, were his chief contributions to science.

An interesting character was Joseph Glanvill (1636-1680). Educated at Oxford, he became chaplain to one of Cromwell's lords. He was particularly interested in psychical phenomena, and perhaps approached nearer to the truth than many, in his explanation of some witchcraft being due to supernatural

causes, in "Philosophical Considerations touching Witches and Witchcraft" (1666). He wrote "The Vanity of Dogmatising" (1655), anticipating the possibility of telegraphy and other inventions. It was later published as "Scepsis Scientifica or Confest Ignorance the Way to Science" (1665) which as its title suggests, was an important work in the dawn of a scientific age.

At the Restoration a number of the two thousand ejected ministers and fellows of colleges turned to medicine for a livelihood. Many of these played a humble part in this century from which honest orthodox medicine grew up. Some other Puritans followed the profession as their normal calling and were found among its most distinguished members. Jonathan Goddard (1617-1675) was an Oxford man who became physician-in-chief to the Parliamentary army, a member of the Little Parliament and of the Council of State. He became Warden of Merton College, Oxford, but was ejected at the Restoration. His lectures given in 1648 at the College of Physicians to illustrate the wisdom and goodness of God in the structure of man had made him famous. He became Gresham Professor of Physic, and lived in that College, doing experiments for the Royal Society, while he wrote on chemistry and medicines. Seth Ward, Bishop of Salisbury, spoke highly of him and described him as the first Englishman to make a telescope.

Richard Mead (1673-1754), son of an ejected minister, studied medicine at Leyden. He became a popular physician, attending the Restoration Court, collected coins and formed a large library. He wrote on poisons, the itch mite and the history of medicine. In "Medica Sacra" he gave an accurate account of the diseases mentioned in the Bible.

As he was such an outstanding physician, Thomas Sydenham (1624-1689) was called the "English Hippocrates." Born into an active Puritan family, he saw much service as a captain in the Parliamentary army. Eventually resuming his studies at Oxford while Petty was teaching by the novel practice of dissection, he graduated there in arts and medicine. Sydenham was a man of deep piety, strong religious convictions and independence of thought. Among his manuscripts is "A Short Treatise on Natural Theology." His "Observationes Medicæ" (1676) is considered to be his greatest work. He practised medicine, breaking with tradition and adopting a scientific attitude to make a definite advance in the subject.

Two names are outstanding in seventeenth century science. Of these, one is that of the Hon. Robert Boyle (1626-91). Being of noble birth he had means to travel on the Continent and was apparently converted during his twenty-one months' stay in Geneva, if not earlier. He acquired fluent French, some Italian and studied astronomy. Returning home, he performed various experiments and conducted dissections with the help of Sir William Petty. On settling at Oxford he set up a laboratory in which he employed another famous scientist, Robert Hooke. There the "Invisible College" held its meetings from about 1645. When Boyle moved to London he set up another laboratory with Hooke's aid. On the formation of the Royal Society in this city he became one of the original Fellows, and contributed numerous papers. He wrote among many other things "The Usefulness of Natural Philosophy" (1664) and "The Excellence of Theology compared with Natural Science" (1673). In "The Christian Virtuoso" he states he found few atheists among scientific men and that Christians see more than others of creation. He regarded God as the good Creator of a mechanical universe in which the perfection and intricacy of design showed His glory. Miracles were admissible but infrequent interventions on His part. Boyle's work, all undertaken for "the glory of God and the good of man," shows a great width of learning, of experimental skill and insight.

Remaining an alchemist throughout his life, he did useful work in clearing away much of the debris of the past and became known as "The Father of Chemistry." His "Sceptical Chymist" was published in 1661. He criticised Aristotle's and the alchemists' elements, suggesting instead an atomic theory of indivisible particles of one elementary substance and combination by corpuscles. He was the first to use the term "analysis" in chemistry and employed systematic "wet" methods for it. He separated a number of compounds and the element phosphorus. His study of the chemical effects of heat and of combustion was important. That of gases and vacua led to the formulation of the Pressure-Volume law for gases which bears his name. Thermometry also occupied his attention. He described a box with a lens forming the first camera, which had to wait nearly two hundred years for a film.

Deeply religious, Boyle had a tender conscience which caused him to decline all titles and orders. He refused offers of advancement if he entered the ministry. Because of the oath

involved he would not accept the honour of the Presidency of the Royal Society. His missionary interest was shown in the gift of two-thirds of the income of his Irish estates to Irish Church work and one-third to Gospel work among the American Indians. He became president of the Society for the Propagation of the Gospel. As a director of the East India Company, he was active to promote spiritual work in its distant sphere of influence. He corresponded and wrote voluminously about Christianity and Science. John Evelyn wrote to him about founding a "physio-mathematical" college. Always against Hobbes and materialism, he left an endowment for lectures to be delivered annually to defend the Faith against unbelievers.

John Bainbridge (1582-1643) was educated at Emmanuel College, Cambridge. He kept a school and practised medicine. After studying mathematics and astronomy in his leisure time he was appointed professor of astronomy at Oxford. At first giving in to the popular idea that comets foretold events, he later wrote "Antiprognoticon" against astrology, and thus helped to clear the path for future workers.

Another Puritan from Emmanuel, a hot-bed of the faith, was the young clergyman, Jeremiah Horrocks (1617-1641). He, too, lifted his eyes to the heavens, using crude instruments as a self-taught astronomer. Although dying so young he was distinguished for his observation of the transit of Venus. His study of the moon's motion yielded important information. He appeared to have some idea of the satellite's elliptic orbit and of gravity. Newton acknowledged the value of his work and many scientists lamented his early death.

While Isaac Newton (1642-1727) was no true Puritan, his genuine interest in Christianity, his knowledge of the Scriptures, his ascetic life and integrity, and even his Arianism and dislike of Roman Catholics, make him at least belong to the Puritan type. From a child he showed a taste for science. Educated at Trinity College, Cambridge, he learned mathematics there under the Lucasian Professor. This interesting man was Isaac Barrow, an Anglican and Royalist, who, however, took the Parliament's "Engagement", led a blameless life and wrote against Romanism. He recognised Newton's ability and, in order to give more time to theology, was glad to resign the professorship of mathematics in his favour. Newton's work of discovering the binomial theorem and differential calculus in mathematics, gravitation and the nature of planetary motion in astronomy, with that on

the refraction of light and on the telescope, mark him out as the outstanding British scientist of the century, if not of all time. His "Principia," published in 1687, if imperfectly understood rapidly became world-famous.

Much has been written about Newton's work and religious views. Some suggest he kept his science and religion apart. This is belied by his life and his own words. In his "Optics" he referred to "a powerful everliving Agent . . . able by His Will to move Bodies. . . ." Also in 1692 he wrote four letters "containing some arguments in proof of a Deity" to Dr. Richard Bentley, who was about to deliver the first Boyle memorial lectures in defence of Christianity. In the first he wrote, "When I wrote my Treatise (his 'Principia') about our system, I had an Eye upon such principles as might work with considering men for the Belief of a Deity and nothing can rejoice me more than to find it useful for that Purpose." This may reveal where he found the inspiration for his work. In the other letters the themes of design and the need for a Creator are prominent. The third for example contains "The growth of new systems out of old without the mediation of a divine Power seems absurd." The extent and content of all Newton's work will probably never be known, as he apparently lost or destroyed many of his papers. It is noteworthy that for forty years after the publication of the "Principia" he published no great scientific work. J. W. N. Sullivan says he was a genius of the first order in matters which he did not consider of first importance. He had a mathematical interest in everything and this with his mysticism led him to spend his later years in Bible chronology, prophecy and alchemy. He was Whig Member of Parliament for his university and very successful in conducting the recoinage as Master of the Mint. Fellow of the Royal Society and then its president for the last twenty-four years of his life, he was also the first to be knighted for scientific work.

Among important mathematicians of the century, it is interesting to see Puritan names prominent. John Napier (1550-1617), a Scot educated at St. Andrews University, and a sincere Christian, zealously Protestant, was a pioneer worker on logarithms and the decimal notation. It may be said that his were the first calculating machines. They were in the form of rods and plates and were described as "Napier's Bones." A landowner, he was also interested in soil chemistry. His

spiritual interests are shown in his commentary on the Book of the Revelation.

Henry Briggs (1561-1630), a Yorkshireman educated at St. John's College, Cambridge, became lecturer in physics at Oxford, Gresham professor of geometry and later succeeded Savile as professor of astronomy at Oxford. He was a friend of the staunch Protestant, Archbishop Ussher, so respected by Cromwell. Briggs on several occasions visited Napier in Scotland and they together improved logarithms, changing them to the base 10 for general use.

Henry Gellibrand (1597-1636) was educated at Oxford and became friendly with Briggs, who recommended him for the Gresham professorship of astronomy. He held Puritan meetings in his rooms and encouraged his servant, William Beale, to publish an almanack for 1631, substituting martyrs' names for those of saints. Beale was imprisoned for this but acquitted before the High Commission Court with Laud dissenting to the verdict. Gellibrand published works on mathematics, including trigonometrical tables, on navigation and magnetism. He also completed the manuscript of "Trigonometria Britannica," left unfinished by his friend Briggs.

A lesser light, but a humble godly man, was Ralph Button (d. 1680). Educated at Oxford he became Gresham professor of geometry. With Parliamentary sympathies he was a member of the committee to reform Oxford and became Public Orator. Ejected at the Restoration, he kept a school, and under the Clarendon Code suffered six months' imprisonment for it.

John Wallis (1616-1703) was a scholar of Emmanuel College, Cambridge, and became a man of remarkably wide learning. As well as the usual theology, Greek and Latin, which he wrote and spoke with ease, he knew Hebrew and French, and studied ethics, metaphysics, physics, mathematics, medicine and anatomy. He was interested in arithmetic which his brother taught him during one Christmas vacation, but he regarded it as suitable only for mechanics. He became a noted dialectician, was ordained and became a private chaplain. After deciphering an important Royalist letter he was appointed official decipherer to Parliament and later to William III. Moved by his patriotism and keen sense of humour, using deciphering, he played a practical joke on the Dutch astronomer Huygens about some scientific matter. Cromwell had great respect for him, but Wallis was opposed to the execution of Charles I. He became

an early member of the Royal Society, and was appointed Savilian professor of Geometry at Oxford in 1649. His scathing pamphlets answered the foolish pseudo-mathematical materialism of Hobbes, and included one entitled "Due correction for Mr. Hobbes or schoole discipline for not saying his lessons right, in answer to his six lessons directed to the Professors of mathematics, by the Professor of Geometry (J. W.)".

Born and educated in Oxford, John Wilkins (1614—1672) took orders, becoming a vicar and a chaplain. He married Cromwell's widowed sister, favoured the side of Parliament and became Warden of Wadham College, Oxford, where his rule was mild and beneficent. Deprived at the Restoration, he was given a rectorship and later appointed Bishop of Chester, in which office he showed leniency to nonconformists. He was one of the Invisible College, an original Fellow of the Royal Society and its first secretary jointly with Henry Oldenburg, a German evangelical. Wilkins was a man of wide interests, sympathetic, of considerable ability and possessed of a vivid imagination. He wrote voluminously on mathematics, astronomy and religion. His "Mathematical Magick or the Wonders that can be performed by Mechanical Geometry" (1648) is a textbook of mechanics, describing various machines and discussing, without altogether dismissing, the possibility of aeroplanes and submarines. Ray, Willughby and others helped him with what has been described as his greatest work, "An Essay towards the real Character and a Philosophical Language," published in 1668. His "Principles and Duties of Natural Religion" (1678) anticipates Bishop Butler's celebrated "Analogy of Religion."

Economic science also had its Puritan pioneers. John Graunt (1620—1674) was a London haberdasher and a man of great integrity, who had been brought up as a Puritan and had been captain of a train band for the Parliamentary defence of the city, but became a Roman Catholic in his latter days. Because of his valuable work in social science he became one of the few non-university men elected Fellow of the Royal Society. His great treatise was published in 1661, entitled "Natural and Political Observations upon Bills of Mortality . . . with reference to Government, Religion, Trade, Growth, Ayre, Disease." It had passed to its fifth edition by 1676, and the last was edited by his friend Petty, who was particularly grieved at his death.

The work of Sir William Petty (1623—1687) is also outstanding,

as he wrote "A Treatise on Taxes and Contributions," and on vital statistics in his "Essays on Political Arithmetic." After a chequered early life in England, at sea and on the Continent, he reached Oxford and studied medicine, joining the group there that eventually formed the Royal Society, of which he was a founder member. Interested in mathematics and mechanics from childhood, he contributed various papers and produced a number of inventions, including a double-keeled ship and a means of mechanical propulsion in a vessel. He was a fellow of Brasenose College, Oxford, and deputy to the professor of anatomy during the Commonwealth. A Protestant with broad views, he became Cromwell's Physician-General in Ireland. While there he conducted a survey and produced an accurate map of the country.

When only twenty-five he wrote "Advice of W. P. to Mr. Saml. Hartlib on the advancement of some particular parts of learning," a tract in which he advises a break with classical education and its "rabble of words," and advocates the founding of a hospital and college of mechanics, a kind of technical university, to advance science by research and publications. The effects, he suggests, would include there "not being so many unworthy preachers of Divinity, pettifoggers in Law, quack-salvers in Physick, . . ." and "Divines having so large a Book of God's works added to that of his word, may the more clearly from them both, deduce the wisdom, power and goodness of the Almighty."

He refers to the "most excellent Idea" of John Pell (1611-1685) about mathematics, written to Hartlib. This suggested the erection of a mathematics library, the librarian to note and "give testimonial after examination to all sorts of practisers as Pilots, Masters, Landmeters, Accomptants." Pell had been educated at Trinity College, Cambridge, and was apparently a fine all-round scholar. He corresponded with Briggs, and Cromwell appointed him mathematics lecturer and then his agent to the Protestant cantons of Switzerland.

Samuel Hartlib (1600-1670), a Puritan and son of a Pole, is worthy of note here, as he persuaded several to write on education, science and religion. Among his own works on these subjects, he advocated "erecting a College of Husbandry Learning" (1651). He acted generally as a clearing house for various ideas making for progress in Protestant Christian unity, promoting education and fostering useful arts and inventions.

CONCLUSION.

The investigations of R. K. Merton mentioned above, included a study of vocational interests. He found that the peaks for both natural science and medicine were reached at about 1650, after which the graphs remain level. Interest in religion from this point shows a distinct decline. It is particularly interesting to find this occurring after Puritanism had become established and before its political defeat at the Restoration. It is also after the beginning of the Invisible College and before the founding of the Royal Society, containing Cavalier elements, at the beginning of the reactionary period. R. H. Tawney in "Religion and the Rise of Capitalism" and G. N. Clark in "Science and Social Welfare in the Age of Newton," both see Puritanism as a main driving force in scientific investigation and application. None can blame it for the ills of the Industrial Age which developed as religion declined. Some have suggested that the mechanistic interpretation of the universe found in Boyle and Newton led to the rise of eighteenth century Deism. The expressed views of these two men shows that they thought otherwise.

Interest in pure science appears also to have declined at least for a time. Charles II and his court were too often either interested in scientific experiments as toys for the idle or as gain for the avaricious. His Majesty regarded Boyle's weighing of air (1669) as a matter for laughter and the playwrights Shadwell and Butler followed him. At one period the Royal Society was in danger of being dissolved through lack of financial support and poor attendances at its meetings. The position improved toward the end of the century, perhaps as the fame of Newton spread.

Exhaustion after controversy, persecution, counter-persecution and war, together with the suppression of Puritanism under the Clarendon Code, may account at least in part for the decline in religion. The emphasis generally began to shift from "the glory of God" to "the relief of man's estate," and that often interpreted as personal gain. Interest in problems of navigation, war and industry was growing. Engineering science became a major preoccupation as the Industrial Revolution was on its way. The truth is that generations were arising who were no sons of their Puritan fathers. The Royal Society had always excluded theology from its discussions. Science began to be divorced from religion. Although possessed of new knowledge and

powers many scientists began to drift, as they neglected the chart of Scripture, the compass of conscience and the star of Christ.

DISCUSSION.

The CHAIRMAN (the Rev. C. T. COOK) said: J. R. Green, in his *Short History of the English People*, has paid tribute to the manner in which the Puritans shaped the life and character of our nation. They created our love of freedom and broke down barriers which, in other lands, have divided class from class. Their influence in the spheres of commerce and education has also received just recognition. What has not been so generally appreciated is the part they have had in the promotion of scientific study. I feel sure, therefore, that you will agree that Mr. Turner, by his researches into this subject, has rendered notable service to the memory of a religious community to whom we all owe an immeasurable debt. More than that, this paper is a timely contribution to the present conflict between the Christian view of the world and the various trends of materialistic philosophy, whether represented by Karl Marx, Bertrand Russell, Julian Huxley, or Walter Lippmann.

Mr. Turner has made it clear beyond question that scientific investigation finds its best opportunity under the wing of Evangelical Christianity. As he has indicated, the atmosphere of the Roman Catholic Church is not favourable to free inquiry. Copernicus, Galileo, and Descartes, who were Roman Catholics, found themselves hampered at every turn by the harsh rigidity of Romish tradition. Even to this day the Roman system has not succeeded in combining the humblest faith with keen scientific insight. A few apparent exceptions, in actual fact, may be said to prove the rule, for the achievements of Roman Catholic scientists are due to their having persevered in spite of the attitude of their Church.

The Puritan spirit, on the other hand, derived from a lively study of the New Testament, has consistently encouraged men and women to "prove all things," and to "hold fast that which is good." It has laid tremendous emphasis upon personal responsibility, and has encouraged men to bring an independent judgment to bear on scientific problems. To an exceptional degree, Puritanism has been the inspiration of individual initiative.

Then, again, as we are reminded in this paper, full value must be given to the mental illumination which springs from a personal assurance of God. Mr. Turner has told us how Professor Whitehead has described the Puritans as a people "with an intense imagination." In this the Evangelical Christian, as the modern counterpart of the seventeenth-century Puritan, has an advantage over the secularist. He finds in God the inspiring principle of the whole range of his life and thought, and therefore it would seem reasonable to expect that a humble walk with God must bring an element of divine illumination, not only in regard to the interpretation of spiritual truth, but even in connection with scientific research. One recalls, in this connection, a remarkable confession on the part of Thomas Henry Huxley. Huxley was on terms of intimate friendship with Professor Haughton, from whose religious convictions he differed profoundly. One day Huxley remarked to Haughton that though he set little store by the opinions of other religious opponents, he respected Haughton, for he knew how sincerely he believed in the Christian Faith. He then added: "I should very much like to know how it is that you believe what I can't believe." "May I speak frankly?" said Haughton. "Certainly," said Huxley. "Then," replied Haughton, "I don't know how it is, except that you are colour blind." Huxley was much struck, and said: "Well, it may be so. Of course, if I were colour blind, I should not know it myself."

Dr. H. G. Wood has suggested that Puritan hatred of lying, and insistence on absolute truthfulness, have probably not been without effect in developing the scientific temper. Point is given to this observation by recent happenings in Soviet Russia, where some of the ablest scientists have been "purged" because they have not sufficiently subordinated their scientific studies to Marxist ideology.

In conclusion, I venture to suggest that this is a day of exceptional opportunity for Christian witness in relation to scientific problems. Scientific men to-day are not nearly so cocksure as were some of the early advocates of the Evolutionary Theory. Despite everything that may be said to the contrary by Dr. Julian Huxley, scientists are less confident that the scientific method of observation is sufficient to explain the Universe. As Dr. Arnold Aldis declared a

few years ago : "The scientist finds himself on the threshold of the Beyond, where reason cannot take him."

Dr. E. WHITE said : Mr. Turner's paper is important in two respects. First of all it represents a considerable amount of historical research, bringing to our notice details of the life and work of many pioneers in the realm of science and medicine. For instance, Dr. Sydenham was the great pioneer of modern clinical medicine. It was not easy to break away from the long tradition of Hippocrates and the Arab physicians. Dr. Sydenham taught us to make careful clinical observations and follow them up with scientific inferences. In this way he made new discoveries, notably in the disease named after him, Sydenham's chorea.

Secondly, the paper is important in its demonstration that the Christian faith is not incompatible with scientific research and knowledge.

The opponents of Christianity have spoken as though Christian teaching bound the intellects of men, and they have talked about free thought as a pre-requisite for scientific thinking ; but there can be no such thing as free thought. We cannot think that two and two make five. We are bound by the structure of our minds to think along certain lines. The man who excludes God from his mind, and rejects the revelation of God in Christ, is certainly not free in his thoughts. The story of these early scientific investigators, as it has been unfolded to us in Mr. Turner's paper, demonstrates that Christianity and true science are not opposed. The Voice of Nature and the Voice of Revelation are one, for they are the Voice of God.

Mrs. DOROTHY BEACH also spoke, drawing attention to the knowledge possessed both by Isaiah and Pythagoras concerning the shape of the earth.

Lieut.-Colonel P. W. O'GORMAN wrote : Mr. Turner's interest in the Puritan contributions to the history of medicine and the support given by doctors to the foundation of the Royal Society of London is to be welcomed. It is pleasing to observe how religiously-minded were these Puritan scientists. We should do well to have such sturdy upholders of the glory of God now-a-days when we suffer

sorely from a general decline in religion and the advancement of communism and materialism.

Mr. Turner might remember that members of the Roman Catholic Church before the Renaissance were only fellow-pupils of the defective science of their day, which was dominated by Aristotle. Monasteries then, as now, were not mistakenly "fitted for the ideal escape from a physical world, inferior, contemptible and reserved for destruction," whatever that might mean. Nobler motives had their place—the greater glory of God, charity for neighbours, self-education, peace and the conservation of sacred Scripture (the monastic institutions were devoted to the multiplication and embellishment of holy Scripture).

Nor was there any discouragement of science by the Church. On the contrary the dozen existing universities, founded by the Popes, were well advanced. (*See J. J. Walsh, The Popes and Science; The Thirteenth: Greatest of Centuries; Makers of Modern Medicine, etc.*)

AUTHOR'S REPLY.

It is gratifying to note the kindly reception given to the paper in expressions of its value to the Christian faith and also in the helpful comments.

In his remarks as Chairman, Rev. C. T. Cook has apparently answered in unconscious anticipation Lieut.-Colonel P. W. O'Gorman's defence of the part played by the Roman Catholic Church. It is appreciated that this body stands against materialism and for the honour of God and His truth. It is also agreed that some monasteries were the custodians and teachers of the learning, including "the defective science" of their own and past ages, but the schools of the nobles' courts and of the tradesmen's guilds also played a part. The Christian interest in the healing sciences was also preserved by the monks, but it was left to medical men like Sydenham, as Dr. E. White suggests, to go beyond Caius and Linacre, clearing away the debris of the past and making advances for the blessing of man.

Mediæval universities were institutions for teaching and discussion, taking no part in scientific research. The science that was taught lacked the backing of experiment and critical temper. Whatever the official attitude of the Roman church was, the activities of its

officers were often against scientific investigation, as Mr. Cook states. Typical were the superior who refused to observe or believe the sunspots seen through a telescope by one of his monks and the priests who declined to look into Galileo's instrument, while it was 1234 before Pope Gregory IX permitted the teaching of even Aristotle's Physics, and the works of Copernicus remained on the Index of forbidden books until 1822. Discoveries before the Reformation truly were made in spite of, rather than because of encouragement from Rome, and it must be remembered that there had not yet separated a rival body.

The Christian has really nothing to fear from the investigation of the truth of God's creation, but needs to beware of calling theory fact and speculation discovery. As these Puritans showed, it is God's intention that His universe should be explored and understood, His word, as Mr. A. G. Tilney so ably states, encouraging such study. The 1949 Puritan can follow on in the endeavour to see science and religion integrated for God's glory and man's blessing.

882ND ORDINARY GENERAL MEETING

HELD AT 12, QUEEN ANNE'S GATE, WESTMINSTER, S.W.1, ON
MONDAY, 11TH APRIL, 1949.

J. ARMSTRONG HARRIS, ESQ., M.B., B.Ch., IN THE CHAIR.

The Minutes of the previous meeting were read, confirmed and signed.

The following elections were announced :—R. J. C. Harris, Esq., A.R.C.S., B.Sc., Ph.D., A.R.I.C., Fellow ; Francis D. Bacon, Esq., Fellow ; P. T. Heath, Esq., Fellow ; R. A. Beckett, Esq., M.A., Member ; Rev. K. M. Holdaway, Member ; D. A. Penny, Esq. (on Transfer from Associate), Member.

The CHAIRMAN then called upon Ernest White, Esq., M.B., B.S., to read his paper on "Spiritual Factors in Mental Disorders."

SPIRITUAL FACTORS IN MENTAL DISORDERS.

BY ERNEST WHITE, M.B., B.S.

SYNOPSIS.

Mental disorders may be divided into three main groups—the Neuroses, Psychoses of psychogenic origin, and Psychoses due to physical or toxic causes. Discussion is limited to the neuroses.

Man includes a physical body related to his material environment, a mind related to his social environment, and a spirit related to the spiritual environment, which is God. In dealing with a sick person we have to consider his whole personality.

There are many causes of nervous breakdown, and spiritual maladjustment may play a part. Guilt is an important factor. Two illustrative cases are described.

Sound Christian training is an important factor in the production of mental stability.

BEFORE entering upon a discussion of this wide subject some attempt must be made to define and limit our terms, even though definitions are often unsatisfactory because of their incompleteness.

Mental disorders, like all the phenomena of the mind, may be studied from three aspects. First of all we may try to discover and analyse the inner experiences of the individual, to investigate the various emotional and instinctive forces working within his mind. Secondly we may study his behaviour as an individual, using the word behaviour in its widest sense to include the whole of his physical reactions. Thirdly we may observe him in relation to the society in which he moves.

All these three lines of investigation are necessary for the understanding of the personality, and all are concerned in any satisfactory assessment of mental disorder, and we find in fact that mental disorder affects a person in each of these three relationships.

On looking within, we find that his emotional instinctive life is disturbed, and it is there that the earliest signs of mental disorder show themselves. Sooner or later the body is affected in some way, and various physical symptoms appear. Finally the relations of the individual with the society in which he lives undergo alterations, and his inner conflicts become reflected in his outward conduct.

Taking this last factor as our criterion, we may define neurosis as failure of the individual to adapt himself to his environment.

Adler defined the neurotic person as one who failed to achieve success in one or more of the three main tasks in life, which he defined as earning a living, success in social relationships, and marriage. The neurotic breaks down in the effort to fulfil one, two, or all three of these tasks. Neurosis is maladjustment.

Insanity, technically named psychosis, goes further than neurosis. The insane person fails to achieve the normal tasks of life. In addition he creates within himself a world of phantasy and delusion into which he retreats from the harsh facts of external reality. He loses touch with the outer world, and living in an inner world of waking dreams, he becomes incapable of reacting normally to his environment.

For purposes of description we may divide mental disorders into three great groups. Firstly the neuroses, secondly the psychoses of psychogenic origin, and thirdly mental disorders resulting from physical diseases or from poisons circulating in the blood (*e.g.*, the delirium of fevers, alcoholic insanity). I have omitted sexual perversions and crime from this classification, but there are good reasons for including them in the general category of mental disorders.

In this paper I propose to limit the discussion to the neurotic person, and to consider the part played by spiritual factors in neurosis.

In common parlance, the neurotic is the nervous person, as distinguished from the psychotic, the insane person. In the neurotic the disorder is connected chiefly with the emotions and instincts, and usually the intellectual powers are not seriously affected. The psychotic undergoes a disintegration of his whole

personality, and his judgment and reasoning powers become seriously impaired.

In dealing with a neurotic, we are dealing, not with a disease, but with a sick person. This distinction is important, because disease is an abstraction whilst a person is a concrete living reality. We have therefore to take into consideration not merely the symptoms of which the patient complains, but his whole personality. In our present state of knowledge we can perceive only dimly the immense depths of personality. Deep psychological analysis is revealing strange forces at work in the depths of the mind, forces but imperfectly understood. We stand on the threshold of a vast new world of being, the very existence of which was hardly suspected until the beginning of this century. The investigations of analytical psychologists are being supplemented by the discoveries of students engaged in psychical research. Such phenomena as telepathy, clairvoyance, and precognition can no longer be dismissed as unworthy of the attention of scientists.

Evidence is accumulating in support of the belief that man has a mysterious something in him transcending the limitations of time and space. Even the ordinary conscious mental processes seem to be outside space. We can conceive thought as occupying time, but we cannot measure it in terms of space. We can think of a dream as occupying a certain time, but we cannot measure it in inches or metres, or weigh it on any known material scale. In addition to mental processes which occupy time but not space, there are certain phenomena which appear to transcend both time and space. Certain phenomena recently studied give support to the theory that human personality is related not only to time and space, but has, in addition an eternal element, outside the space-time continuum. We must think of a man as containing body and mind related to the material world of time and space, and containing also a spirit existing in eternal relationships, not limited by time and space, or possibly existing in another dimension.

This theory of human personality was taught by Divine revelation thousands of years ago. God, the Eternal, made man in His Own Image. Such a statement implies that there is something of the eternal in man, and brings man into a peculiar relationship with God. It is this relationship which finds expression in man's moral and religious activities. The psychologist who ignores the spiritual aspect of man's nature, or who

assumes indifference or even hostility toward religion, thereby renders himself incapable of dealing with the total personality. He may be able to relieve or cure many mental symptoms, but he cannot hope to bring about a sound integration of personality. Many patients who undergo analysis find themselves at its conclusion like the man in our Lord's parable who found his house empty, swept and garnished—and we know his ultimate fate.

No one who has intimate dealings with men and women such as occur in psychological analysis can fail to discover the important part played by religious questions in the minds of those who consult him. Spiritual factors, that is, factors concerned with morals and religion, and ultimately with a man's relationship to God, must be taken into consideration if we are to deal adequately with any individual who is sick in mind.

A patient who consulted me some years ago had to undergo deep analysis with a Freudian psychoanalyst who was also an atheist, and waived aside or ignored all questions connected with religion. My patient had been relieved of many of his symptoms after treatment lasting over a period of five years, but he told me that he felt himself left high and dry, without any purpose or meaning in life. He felt the need for some religious basis for his life and was anxious to find it, but Freudian doctrine had nothing to offer him in that direction. Neurotic symptoms may be cured by analysis, but something more positive is needed to make a person whole.

How are we to distinguish spiritual from mental factors in dealing with the problem of the men or women who are mentally ill? It is by no means easy to draw the line between the mental and the spiritual realms.

As we have seen, the mind which the psychologist seeks to explore and to understand, has affinity with both worlds. It is related to the world of material things on one side, and to the deeper eternal world of spirit on the other. Man is a unity, but a unity in which are contained both material elements related to the time-space continuum, and eternal elements related to God. Our Lord clearly implied this when He quoted the words, "Man shall not live by bread alone, but by every word that proceedeth out of the mouth of God" (Matt. iv. 4). It follows from that, that when we come to deal with a neurotic, we are dealing not with some abstraction called a neurosis, but with a total human personality, and it becomes necessary to take into

consideration his bodily and spiritual symptoms if such are present, as well as to attempt to discover his mental state.

A good physician, whether he is primarily a physician of the body or of the soul, will seek to discover the seat of the disease and the causes which lie behind the manifest symptoms. It is at this point that divergences of opinion arise in estimating the emphasis to be placed on the various factors which contribute to the onset and continuance of a nervous or mental illness. At one extreme are the materialists who assert that all mental illness is due to changes in the body, occurring either in the glands of internal secretion or in the cells of the brain. If such changes are not found, they argue that with increasing knowledge of the structure and function of the nervous system and the functions of the glands, and with greater refinements of methods of examination, physical changes will be disclosed which are at present hidden from us. Mind is thereby reduced to a function or property of matter.

At the other extreme are those who hold the view that all disorders of mind, apart from those obviously caused by disease or poisoning of the body, are due to spiritual maladjustments. We are not concerned here to discuss the materialistic standpoint : much ink has flowed in the course of that controversy.

Is it true that nervous breakdown is always due to spiritual as distinguished from purely mental causes ? Would it be right to claim, as some have claimed, that if a Christian man is healthy spiritually he will not suffer from any form of neurotic disorder, and that mental ill-health is the result of spiritual failure ?

These are very large questions, and from the point of view of treatment, very important questions, for on the answers we give to them our judgment of causes and our method of treatment will largely depend.

Some leading psychologists have made statements which appear to support the view that neuroses result from spiritual causes. For example, Jung in his well-known book, *Modern Man in Search of a Soul* (p. 64), writes : " Among all my patients in the second half of life—that is to say over thirty-five—there has not been one whose problem in the last resort was not that of finding a religious outlook in life. It is safe to say that everyone of them fell ill because he had lost that which the living religions of every age have given to their followers, and none of them has been really healed who did not regain his religious outlook."

More recently Dr. William Brown, a leading medical psycho-

logist speaking of his own experience of deep analysis has written: "The ultimate result has been that I have become more convinced than ever that religion is the most important thing in life, and that it is essential to mental health."

These statements might be used to support the thesis that mental sicknesses are caused by spiritual or religious defects, and that all individuals who are irreligious or who have in some way departed from their faith are suffering from mental disorder. Furthermore, the treatment of mental disorders would resolve itself into an attempt to restore religious faith and psychotherapy would no longer be necessary. All treatment would have to begin and end on the spiritual level in the belief that mental health would follow automatically. Yet both Jung and Dr. Brown use prolonged deep analysis in their treatment of patients.

It seems to me that such conclusions are not justified by the facts which emerge in the course of analysis, neither are they based on sound theory.

Let us look first at the facts. A large proportion of the men who broke down under the strain of war conditions in the trenches during the 1914-18 war and suffered from acute anxiety neurosis or "shell shock" as it was wrongly called, had a bad family history of nervous or mental disease occurring in near relatives. More recent investigations made by means of the electroencephalograph which registers changes of electrical potential in the brain cells, have shown that many neurotics and psychotics exhibit characteristic variations from the normal. In a book published last year by Eysenck, *The Dimension of Personality*, the author records the results of studies made by a group of psychiatrists and psychologists working together at Maudsley hospital. It is claimed that a specific neurotic factor has been discovered in the mental make-up of a proportion of patients suffering from various forms of neurosis.

All these facts taken together suggest that heredity plays a large part in the genesis of mental disorder. Some people are born with a neurotic constitution which causes them to break down sooner or later under the strains and stresses of life.

In addition to heredity, we discover certain environmental conditions which appear to predispose to nervous breakdown. From my own observations I should place very high on the list of such conditions, lack of security in the home in early childhood due to quarrelling of the parents, separation, divorce, or the death of one or both parents. To this list may be added illegitimacy.

In the analysis of the mental life of nervous patients we find that these hereditary and environmental causes play a large part. There are cases however, where, in addition to these causes, spiritual factors are present, and if the patient is to achieve satisfactory recovery, these factors must be dealt with. Within the limitations of this paper, it is not possible to relate individual case histories in support of this. I have had patients under my care who have been cured of many of their symptoms after a deep analysis, but have found complete release only after some moral or spiritual evil has been dealt with, and there has been true repentance, and acceptance of forgiveness.

A sense of guilt plays a surprisingly large part in the mental life of many people suffering from mental ill-health. It ought to be said that a feeling of guilt has no quantitative relation to the amount or degree of wrong-doing. It depends rather on the degree of sensitiveness and development of the super-ego. It is here that the Christian message of forgiveness following on confession so often proves of great value in the completion of cure.

The problem of guilt has not been satisfactorily solved by modern psychology. Freud attributes it to the Oedipus complex and the conflicts arising therefrom, and associates its origin with the murder of the father by the sons in the primitive family communities. Even if this account of the origin of guilt were true—and it seems to be a far-fetched and improbable theory—it does not explain the intense feeling of guilt. Why should the hypothetical murderers feel guilt at all? It certainly does not explain the intense feeling of guilt so often present in both neurotic and psychotic conditions, nor does it account for the disintegrating effect of guilt on the personality.

The two following cases illustrate the importance of guilt in maintaining neurotic symptoms, and the relief and cure which followed when the cause of the emotion was faced and dealt with.

A business man came for treatment because of a number of symptoms, chiefly phobias, which led to breakdown and inability to continue in business. After some months of analysis he improved, but was not cured. He had lost most of his fears, but was still seized with panic if he travelled in a train. As his circumstances demanded train travelling each day, this phobia was a serious item in preventing his return to work. He was a man with Christian principles and high ideals, and in an earlier

interview he had referred, almost casually, to a serious moral lapse which had occurred three or four years previously. On thinking over his history, I thought it possible that there might be an unresolved conflict associated with this moral lapse. I therefore tackled him directly about the subject, and asked him to think it well over before the next interview. He took it very well, and during the next interview he fully confessed his wrong, and admitted that he had tried to forget that period of his life, and had never really repented. He repented and found the relief of the knowledge of forgiveness. Within a few weeks his symptoms completely disappeared, and he was able to make long journeys by train without discomfort. Several months later he wrote to say that he had remained well.

A professional man in the early thirties became ill with numerous fears and psycho-somatic symptoms, including abdominal pains, headaches, fear of appendicitis, and fear of becoming insane. When I first saw him he had been away from his work for three months, and was obviously very ill. After three months' treatment he was well enough to resume his occupation, but he was far from well and continued with treatment for a further six months. At the end of nine months' analysis he declared himself 75 per cent. fit. By this time we had covered a good deal of ground, and I decided to take a risk with him. At the beginning of the next interview I said to him: "You have told me that as a young man you professed to be a Christian. You were brought up in a Christian home, and took part in Christian service. For several years you have turned your back upon God and denied your earlier beliefs. Perhaps what you need to do, if you would be cured, is to repent and turn back to the God of your youth." He became very angry, and after saying that he had not come to a psychologist to be told things like that, he walked out without making any further appointment. I thought that probably I should not see him again. About a fortnight later he telephoned to me at my home address saying that he must see me at once as he was in great trouble. He came along about nine o'clock, and, with much emotional display, he told me he knew what I had said was true. He then poured out a long story which he had concealed from me during the nine months of analysis, a sad story of wrong doing and guilt. We talked on until nearly midnight, and he turned to God and found forgiveness that night. After three further interviews he declared himself completely well.

Two years later he telephoned to me to say that he was moving to another part of the country, and, before going, he wanted to tell me that the last two years of his life he had been happier and healthier than ever before. He had also been given an important promotion in his profession.

Another important way in which the Christian Gospel may prove of great assistance is that it provides a meaning and a goal to life. So many men and women feel a sense of insecurity and bewilderment because they can find no meaning or purpose in life. They drift on like ships without chart or compass. To such, the Christian message brings a new vision, a new motive, and a new hope, and in this manner it becomes a powerful aid to the re-integration of a divided personality.

On theoretical grounds it seems reasonable to believe that illness may be due to causes affecting primarily one or other of the levels of our being. It may unfold itself on the physical level, as in most of the bodily diseases with which we are familiar, *e.g.*, pneumonia and tuberculosis of the lungs. Secondly, illness may begin primarily on the mental level, as we see in many of the mental disorders included under the headings of neurosis and psychosis. Thirdly, an individual may become ill because of maladjustment taking place primarily on the spiritual level. Such maladjustment is related to the spiritual environment, which is God.

Because we are one being and not three, illness beginning primarily in one layer of our personality is likely to affect the others. For example, mental life may be seriously disorganised by such physical disease as encephalitis, which destroys many of the nerve cells in the brain.

In the reverse direction we see innumerable physical symptoms produced by the various forms of mental disease. The spiritual side of man's nature is affected often by both bodily and mental illness. It is equally true that body and mind are often affected by spiritual states. In dealing with individual men and women an attempt should be made to discover where the trouble primarily resides, so that appropriate measures of healing may be put into operation. It is necessary to bear in mind at the same time that, in every illness, we are dealing not with a disease in the abstract but with a total living personality.

It is necessary to explore every part of his being. Bodily conditions of ill-health may affect the mind and contribute to a nervous breakdown. It is wise to avoid generalisation, and to

examine the problems of each individual as they arise. Each human being is different from all his fellows, and each has problems peculiar to himself. Present knowledge of the causes lying behind mental disorders is very limited. The exploration of the mind is only just beginning. As far as we know at present, neurotic illness is primarily a disease arising on the mental plane, but both physical and spiritual states of ill-health may be contributory elements in its production.

Looked at from another angle, we may regard mental disorder as a social phenomenon. We may consider the individual from the point of view of his social environment, and enquire into social conditions which may bring about mental disorders. It is sometimes said that neurotic and psychotic diseases are increasing. It is not easy to substantiate this statement in the absence of reliable statistics, and it would be difficult to obtain satisfactory data. Some light is thrown on the subject by the number of people under treatment in mental hospitals, and by a study of the number of suicides occurring in successive years. Such investigations, however, would present a very imperfect picture for two reasons. Firstly because there are numbers of "borderline" cases which do not find their way into mental hospitals, and secondly because it would be difficult to form an accurate distinction of the percentage of the population suffering from neurosis, most of whom do not receive hospital treatment.

Another line of research having a direct bearing on the subject of this paper would be an enquiry directed toward discovering whether the proportion of neurotic breakdowns occurring among professing Christians is higher or lower than the proportion of such breakdowns in the general population. Here again there is room for investigation.

In the absence of such definite investigations there are certain general considerations worth noting.

There can be little doubt that a well-established Christian faith is a stabilising influence in mental life. Such faith brings a sense of security, and forms a basis upon which personality may be integrated. Even in the presence of adverse hereditary factors and difficult environment, Christian faith with its reliance upon God, and its belief in the overruling providence of God in the life of the individual believer, is a great aid towards enabling the individual to cope with the difficulties of life. The man of strong faith is better armed to meet with adversity and with the strains and stresses of life than the man who has no such faith.

In these days when industrial and economic conditions impose a continual strain upon the inhabitants of our great towns, and when the political uncertainty and the fear of war continually oppress the minds of us all, we are exposed to mental strain unknown to earlier generations. With all this there is, in addition, departure from the faith, and a state of uncertainty and bewilderment militating against mental health and preparing the way for mental breakdown. Beside the sense of insecurity in which the present generation is passing its days, there is the additional insecurity due to the lack of religious faith. The road which leads back to God is the road which makes for sanity in the fullest meaning of the term. The love and peace and confidence to be found in a truly Christian home play a large part in the development of a stable personality. The child brought up in such a home has the advantage of experiencing security in a loving atmosphere and reaps the further advantage of the security which comes from faith in God.

I believe that herein lies the prevention of much mental and emotional disorder in later life. The child brought up in a Godless home is deprived of one of the most potent influences making for integration of personality. I should place a sound Christian upbringing very high on the list of means of prevention of mental disorder.

To sum up my conclusions. There are various causes leading to neurosis, some hereditary, and some due to the stress of the environment. In many cases these causes are sufficient to explain the onset of nervous breakdown, and such ill-health is due rather to mental than to spiritual factors. In other cases, spiritual factors play a part in the causation and continuance of mental disorder. It is not right to generalise, but to consider carefully the problems of each individual, and to seek to estimate the part played by various factors in each case. When we go on to consider the prevention of mental disorders, it is highly probable that Christian faith is a powerful stabilising influence in mental life, and that a child brought up in a Christian home is better equipped than others not so trained, to hold his own against the strain of modern conditions of life.

DISCUSSION.

The CHAIRMAN (Dr. J. ARMSTRONG HARRIS) said: I agree with Dr. White's paper, and compliment him most heartily on its completeness and thought-provoking qualities.

The recent researches in Analytical Psychology tend to stress the importance of identification, introjection and incorporation of the parents as good internal objects. As physically the child takes its milk from the mother, so it takes in the parents mentally and makes them part of himself.

These mechanisms could be readily understood by those familiar with the Christian faith, where the indwelling of the Holy Spirit and the inner consciousness of God are felt and accepted as psychic realities.

The responsible, self-criticising, idealised part of the mind (super-ego), built up chiefly on the inner paternal image in the child's developing mind, appears, in the modern view, to develop at a much earlier age than was at one time thought possible. Five years was regarded as the usual age, but now it has been advanced to the first year of life when evidence of the developing super-ego is found. As this is the part of the mind which contains what we call the "conscience," the importance of early parental influences, of loving care, security and a good Christian home cannot be exaggerated.

I agree with Dr. White that the seeds of mental and spiritual disorder are frequently sown in early environment, and more care and attention must be directed than ever before to the formative years.

Dr. WAGLAND said: I have been very interested in Dr. White's paper. Would he kindly inform us whether some cases of neurosis are due to a faulty presentation of the Christian Gospel? Some presentations are often negative which, far from making life "more abundant," tend to dwarf and suppress individual development. Other presentations are incomplete, in that they tend to ignore the sex factor; much trouble and tragedy is caused in the lives of many Christians through ignorance and fear of or an unfortunate attitude towards the God-given function of sex. Is there not a need for the Christian message to be presented more positively? Do we not tend to occlude the underlying principles by over-emphasis of doctrinal and/or theological correctness? Should there not be more emphasis on bringing people into personal contact with our Lord? And are not many perversions, fears, complexes and homosexual tendencies due to past failure to present a complete Christian

Gospel and Message which MUST be linked with the Christian attitude towards sex, marriage, the family and home ?

Mr. C. E. A. TURNER said : As an educator I notice with appreciation Dr. White's emphasis on the importance of the spiritual factor in man. Without proper provision for this the child cannot but develop mentally and morally warped and twisted, becoming consequently dissatisfied, unhappy and even delinquent to an extent which perturbs responsible people to-day.

The setting aside of God's authority in the arrangements of the modern state, or home or individual life through the neglect of the Bible might well be the omission of the chief stabilising factor in the mental as well as in other spheres. As J. H. Newman said of the exclusion of theology from a university course, it is to take the spring from the year and unravel the thread. . . .

W. J. Thomas, in *The Unadjusted Girl*, suggests that the adolescent needs recognition, response and affection, security, new experience and adventure. We believe these can be found in the application of Christian truth.

The Christian knows that the fear of the Lord (the all wise) is the beginning of wisdom (Prov. ix, 10)—for mental health ; that there is forgiveness with Him that He may be feared or revered. God's love has in its perfection cast out fear or terror (1 John iv, 18). He has not given us the spirit of fear, but of power and of love and of a sound mind (2 Tim. i, 7). Paul's prayer states the Christian ideal : that spirit, soul and body—the whole organism and personality of which Dr. White has spoken—be preserved blameless unto the coming of our Lord Jesus Christ (1 Thes. v, 23). For this a God-conscious, a God-centred life, with God as life's end and good are needed.

Mr. T. K. SIMONS asked if there was any psychological explanation for the so-called "black sheep of the family." After instancing a case of which he had had personal knowledge, he wondered whether in addition to prayer, psychology could suggest a means of approach.

Mr. HUTCHINGS asked whether there were any figures showing the approximate percentage of mental disorders that were beyond all doubt brought about by spiritual factors.

Mr. TUCKER asked whether the author felt that there were cases where the human mind was invaded by external spiritual forces.

Dr. PHILP said: I possess medical qualifications, and during twenty years' work in Kenya I have seen a great deal of psychosis and neurosis. I am now working as a minister, with some medical work, in an industrial area on Tyneside.

The Old Testament teaching on sex is not given the place it should have. There is a tendency to ignore the dreadful passages dealing with sexual matters. If we teach the Bible, and not bits of it, we shall have a saner outlook.

Environment does play a part; especially can this be seen with people brought up in cities. I was delighted when in Kenya if a new member of my staff came from the country. Country born people find adjustment easier than those from a city environment.

There is also such a thing as atmosphere. There is an atmosphere which is an invasion from outside, if not from beneath. It can even be seen reflected on the countenances of those present.

With regard to psychical research and spiritism, I would plead for caution on these lines. I have seen breakdowns through spiritism. Character can be changed through spiritism, and there can be a breakdown in health. I have seen such a case which eventually recovered by the grace of God, though physically the person suffered very much.

With regard to denominations, and certain Christian teaching, we must be careful of too much introspection. This can lead to extreme cases of neurosis—almost psycho-neurosis.

Dr. OAKLEY JOHN said: Whilst very much appreciating Dr. White's analysis of the spiritual factor in mental disorders, it would appear to me that in this paper (and in papers on allied subjects) there must needs be an anthropocentric tendency which undervalues the position of God in His Universe. It would seem that parallel with eliminating (or pasteurising) infected milk in order to reduce the incidence of tuberculosis, it is now being suggested that in order to reduce the incidence of mental disorder due to the effects of the Godless home (where the child "is deprived of one of the most potent influences making for the integration of the personality"), we should introduce the Christian faith so that the child may

“hold his own against the strain of modern conditions of life.” That these facts are true I agree, but surely the emphasis is wrong. The spiritual factor is important in man because he is a trinity (body, mind and spirit), not merely body and mind. If we accept the fact of God and His desire to hold communion with us, then we are bound to be deformed (to a greater or lesser degree) if we ignore this part of our nature.

For medical men the problem arises acutely, both to those who hold the Christian faith and to those who do not. Lord Horder, during a teaching round at St. Bartholomew’s Hospital, is reputed to have put on the prescription sheet of a Jewish patient for whose ills no physical causes could be discovered :

R. Rabbi, one.

We need to emphasise that Christianity is not an additional means of therapy (which may be tried if radiant heat and massage fail), but the workings out of the obligations laid on us by Almighty God.

AUTHOR’S REPLY.

I agree with Mr. Turner in his emphasis upon the importance of moral and spiritual training in childhood and adolescence.

There can be little doubt that one of the causes of delinquency in early years is a lack of moral discipline and religious instruction in the home, and that a wise religious upbringing makes for mental stability in later years.

In reply to Mr. Hutchings’ question, I do not know of any figures showing the percentage of mental disorders brought about by spiritual factors. There is room for investigation along these lines.

Mr. Tucker has raised a very difficult question. I do not doubt that when he speaks of the human mind being invaded by external spiritual forces, he refers to demon possession. Some missionaries who have laboured in the Far East—in China and India—have reported cases of demon possession, but it is difficult to obtain reliable evidence. Some years ago Dr. Lomax wrote a book about conditions in mental hospitals in England, in which he states that some insane people appear to be devil possessed. This is a theory difficult either to prove or refute, and I am not in a position to give a positive opinion.

Dr. Wagland has raised two very important questions, the

presentation of the Christian Gospel, and the teaching of the facts of sex life. I agree with him that false ideas about God, and ignorance about sex matters often contribute to neurosis, especially to emotional disorders of the Anxiety type. A great amount of fear and guilt arises because of misunderstanding and ignorance, and it should be brought home to parents and to ministers of religion that it is their duty to instruct boys and girls in these important subjects. The Christian Gospel should be applied to every relationship in life, and its function is to set men free, not to bring them into bondage of fear and guilt.

What I have said partly answers Dr. Philp's questions. I agree entirely with Dr. Philp in what he says about Spiritism. I consider Spiritism a most dangerous practice, fraught with emotional strain, and often leading to evil consequences in the minds of its adherents. I agree also with the danger of too much introspection. Introspection may be healthy if it leads to further knowledge of self and the correction of wrong tendencies, but it may become morbid if it takes the form of wallowing in one's own emotions.

In reply to Dr. John's contribution, he misunderstands me if he thinks that I regard Christianity merely as an additional means of therapy, or as a means of enabling the child to hold his own against the strain of modern conditions of life. I assure him that I have no such narrow and negative conception of Christianity. In my paper I have dealt with only one aspect of Christianity, namely, that which impinged on my subject, spiritual factors in mental disorders. Christ healed men and women suffering from mental and physical disorders, but we agree that He did very much more than that, His healing was incidental to His main purpose of redemption, a means towards a great end.

Mr. Simons raises the problem of the black sheep of the family. Without further knowledge of the details of such a case, I am not in a position to answer his question whether psychology would help.

883RD ORDINARY GENERAL MEETING
HELD AT 12, QUEEN ANNE'S GATE, WESTMINSTER, S.W.1, ON
MONDAY, 25TH APRIL, 1949.

E. WELLISCH, ESQ., M.D., D.P.M., IN THE CHAIR.

The Minutes of the previous Meeting were read, confirmed and signed.

The CHAIRMAN then called upon Rev. J. Stafford Wright, M.A., to read his Gunning Prize Essay, entitled, "The Decalogue and Psychological Well-being: its Present-day Significance and Value to Mankind."

*THE DECALOGUE AND PSYCHOLOGICAL WELL-BEING:
ITS PRESENT-DAY SIGNIFICANCE AND
VALUE TO MANKIND.*

BY REV. J. STAFFORD WRIGHT, M.A.
(Being the Gunning Prize Essay, 1948.)

SYNOPSIS

The Decalogue must be tested afresh to-day. p. 122.

The value of the section that deals with life, family, property, and good faith, is proved by its recognition in the legal systems of most nations. p. 123.

The value of the theistic section might appear more debatable, but there is some good psychological justification for at least investigating it. pp. 124-127.

An examination of the Ten Commandments one by one shows that they are psychologically sound, and thus make for man's well-being, pp. 128-140, though they can be fully realised only by one who is in Christ. p. 140.

IN a day when mere antiquity fails to carry authority, it is necessary to submit all things old to fresh scrutiny so as to see whether they contain an intrinsic validity that is unaffected by the lapse of time. Even such a venerable code as the Decalogue cannot escape. The world to-day demands proofs that a thing works, that it produces results. Amidst the clamour of competing ideologies, it has no room for airy theories. Such an attitude may well be welcomed by the Christian. So long as the test of works is not simply £ s. d., but includes those deeper values that no money can buy, the Christian is well prepared to

bring out those things by which he lives to the light of day, and to weigh them in the balances, with the assurance that they will not be found wanting. It is in this spirit that the present essay is prepared to examine the Decalogue.

It is a Biblical axiom, with a more-than-Biblical application, that "in the mouth of two or three witnesses shall every word be established" (II Corinthians, xiii, 1). Looking back on the pages of history, one finds many more than two or three witnesses to the value of one half of the Decalogue. It would be true to say that almost all peoples have framed laws against murder, adultery, theft, and perjury, while respect for parents, if not explicitly enjoined by law, is implicit in social custom.

Any large-scale attempts to defy these laws have not only astounded neighbouring peoples, but have brought their inevitable penalty. Thus the present generation has been profoundly shocked by the outworkings of the Nazi philosophy in Germany, with its massacres and purges, its plundering of territory and private property, its encouragement of children to betray their parents, and its trumped-up charges against individuals and nations. Such a system could not last, for it was uprooting the very foundations of all that human conscience respects as morality.

For one can grant this to the human conscience in general. It is far from being an infallible guide. But it can give a meaning to the terms "right" and "wrong," and it can give decisions on broad points of morality. Hence the Book of Amos opens with denunciations of neighbouring nations for atrocities that shocked any reasonable man. Hence, too, the common conscience seeks to embody the sanctity of human life, family, property, and the pledged word, in every code of law.

It may, however, be equally true that mankind in general has reached this conclusion through experience. The moment that man realises his position as a member of a social group, he is forced to limit his own irresponsibility in the interests of the whole. The subject of duties and rights forces itself upon him and demands adjustment. The result inevitably is that, no matter what multiplicity of minor regulations and taboos come into being, the foundational commands to respect human life, family, property, and the pledged word, must underlie everything.

This appeal to history and experience might appear at first sight to militate against the claims of the Decalogue to be a Divine revelation. Such an objection is a relic of childhood

days, when one gathered the impression that on Sinai God, as it were, invented totally new laws, somewhat in the manner of a person inventing rules for a new game. Undoubtedly there was much that was new in the Law. But the Law was no freakish set of rules. According to its own estimate it was planned that the people who received it might be "an holy nation" (Exodus xix, 6). Whatever may be the primary connotation of the word "Kodesh" ("Holy") it cannot be divorced from the moral significance that it assumes in Scripture. This is well demonstrated in Norman Snaith's book, *The Distinctive Ideas of the Old Testament* (Chapters 2 and 3). Holiness towards God is expressed in righteousness of life.

The Decalogue professes to establish righteousness, and, even when one has allowed for the perversions of the human conscience, it is still clear that, whether through intuition or experience, the consciences of mankind in general have reached certain basic conclusions on what constitutes righteousness. On these points a divinely-given law from a righteous God would necessarily be in agreement with the conscience and experience of mankind.

We may agree with Henri Bergson when he writes, "Suppose we discern behind the social imperative a religious command? No matter the relation between the two terms: whether religion be interpreted in one way or another, whether it be social in essence or by accident, one thing is certain, that it has always played a social role. . . . In societies such as our own the first effect of religion is to sustain and reinforce the claims of society." (*The Two Sources of Morality and Religion*, page 5.)

There is thus a *prima facie* case for regarding a large section of the Decalogue as being of permanent value for mankind. The great dread of peace-loving people at the present moment is that another totalitarian system will throw aside these basic laws, and plunge the world once more into misery. The well-being of mankind, psychological and physical, depends on the recognition of those great social factors, the right to life, family, property, and good faith.

Later it will be necessary to examine these individual laws of the Decalogue in greater detail. But before doing so, we must turn to the Decalogue as a whole. For, while it is true that for some commands we can appeal to the general opinion of mankind, there are others which stand in a different category.

The Decalogue falls into two obvious divisions. The first four commands concern duties towards God, the last six concern

duties towards our fellow men and women. Yet it is one Decalogue, and claims the same divine fiat for the first four commands as it does for the last six. The thing that differentiates the two groups of commands is that one can appeal to the results of tangible experiment for the second, but not for the first.

This statement needs a further qualification, or it may be misleading. It is obvious that if the first group of commands is right for man, in the same way as the second group is right, then its application will produce results that commend themselves to any reasonable man. On the other hand the contents of the commands are not what would naturally be discovered by man's use of experimental methods. Man by himself reaches, like the Athenians, the idea of the Unknown God, and must wait for some direct revelation if he is to know the True and Personal God (Acts xvii, 22-31). Thus one would expect that, taking the Decalogue at its face value as the revelation of the Supreme Being, the first four commands would be beyond man's unaided reason to discover, but would satisfy man's reason and heart when they were followed.

In the light of this one must examine the first four commands, at first in general, and then in particular.

There was a time not so long ago when the popular idea of the effect of the New Psychology was that it had explained away the validity of religion and of religious values. The dominance of the Freudian School did much to create this impression. God was no more than a projection of the Super-Ego or Ego Ideal. The attempt to suppress instincts, in response to what was believed to be a divine law, would result in the formation of dangerous complexes.

It is interesting from the point of view of this essay to notice Sigmund Freud's own lamentable excursus into the days of the giving of the Decalogue. His *Moses and Monotheism*, while not touching directly upon the Decalogue, is a Freudian reconstruction of the history and of the Jewish belief in the One God, not upon sound historical criteria but upon the writer's own psychological ideas of what must have happened.

Alfred Adler, on the other hand, was willing to admit the reality of God. Phyllis Bottome in her life of Adler tells us, "Any form of real religion formed on obedience to approved moral precepts, Adler always acknowledged as of the greatest possible value to a human being. 'The idea of God,' he often

said, 'is the most enlightening thought that has yet occurred to mankind.' He himself became a Protestant and even joined the Protestant Church early in life as a protest probably against what he believed to be the isolating quality of the Jewish religion. . . . It seemed to Adler to be a form of refined selfishness to keep God for one tribe or for one set of human beings rather than to share a universal Deity with the common family of mankind" (page 65).

It is difficult to tell from this how deep was Adler's faith. But it is clear that to him there was nothing damaging to psychological health in a belief in God. In fact he himself writes in his *Science of Living*, "In the last analysis to have a goal is to aspire to be like God. But to be like God is, of course, the ultimate goal—the goal of goals, if we may use the term" (page 54).

In turning to Jungian Psychology one finds oneself in a world that is completely different from that of Freud and Adler. As has been well said by Gerald Vann, "To be acquainted with traditional Christian theology and then to read the works of Jung is to be startled at every turn by the way in which the two dovetail or run parallel. The hunger for the infinite which alone can fill the human heart, the longing for spiritual re-birth, the felt need for the healing and turning to good of the 'dark shadow' within the self, the need of integration, of being made whole—all these things are both psychological fact and religious truth; psychology therefore confirming belief in religious doctrine, and religion fulfilling the needs and desires which psychology empirically reveals" (*The Heart of Man*, page 16).

This does not mean that Jung himself admits a belief in God as a part of his system. If a patient believes in God, Jung treats him or her on the basis of this belief. But the whole movement of Jungian psychology is inward rather than outward. Thus Jung closes his book, *The Integration of the Personality*, with these words, "The undiscovered way in us is like something of the psyche that is alive. The classic Chinese philosophy calls it 'Tao,' and compares it to a watercourse that resistlessly moves towards its goal. To be in Tao means fulfilment, wholeness, a vocation performed, beginning and end and complete realisation of the meaning of existence innate in things. Personality is Tao." Or to quote J. Jacobi's book that has a Foreword by Jung himself, *The Psychology of C. G. Jung*, "The Jungian system claims, in spite of its intimate reference to the fundamental

problems of our being, to be neither religion nor philosophy. It is the scientific summary and representation of all that the experienceable totality of the psyche includes" (page 145).

This inward turning of Jungian psychology makes it easier to expound many of its conclusions in terms of Oriental thought than of Occidental, though Jung himself has not identified himself with any religion. Certainly he is not unfavourable to Christianity, and many of his beliefs can be welded into the Christian scheme. He shows a certain sympathy with religious dogma when he writes in *Psychology and Religion*: "In itself any scientific theory, no matter how subtle, has, I think, less value from the standpoint of psychological truth than the religious dogma, for the simple reason that a theory is necessarily highly abstract and exclusively rational, whereas the dogma expresses an irrational entity through the image" (page 56).

The theories of the Gestalt School and of Behaviourism are not relevant to the subject in hand. It is those psychologists who are engaged in practical psychiatry to whom one must turn for a lead on the value of a belief in God, such as is pre-supposed by the Decalogue. It is not, however, a simple matter of counting heads. The most that can be shown is that a belief in God is fully consistent with psychological well-being, and that many people who lose faith in God suffer psychologically as a result. The former point has been shown by the beliefs of Adler and of Jung, and the latter is borne out by the experience of psychiatrists, whether or not they regard the patient's original faith in God as no more than an illusion.

Thus J. R. Rees of the Institute of Medical Psychology, London, in *The Health of the Mind*, sums up what probably most practising psychiatrists would agree with, when he says, "Religion and idealism play a very important part in the search for health. Religion is the result of an instinctive demand, and human beings, whatever their 'intelligence quotient' may be, are always seeking hungrily for some philosophy of life which contains spiritual values" (page 81). And again, "Adjustment to the Infinite is a matter which everyone will have to express for him or herself in their own way" (page 220).

It is not by chance that the international conference on medical psychotherapy meeting in London this past summer heard lectures from representatives of the Christian faith.

This somewhat lengthy clearing of the ground has been necessary. It is useless to begin a piecemeal consideration of the

Decalogue and its influence on psychological well-being, unless one can admit that there is a *prima facie* case for considering a theistic statement as relevant at all. Not only may we feel encouraged to go forward in our examination, but, if we are to be guided by Jung's emphasis on the mysteries of the psyche and by the prominence that other psychiatrists give to religion, we may see a reason for the primacy that the spiritual group of commandments takes over the more material group. This primacy is no chance arrangement. It was re-affirmed by Jesus Christ in His summary of the two sections in terms first of love of God and then of love of one's neighbour (Mark xii, 30, 31). This was no unique interpretation. It underlies the whole of Judaism and of Christianity.

We may now come to an examination of the individual commandments which make up the Decalogue.

The First Commandment follows closely on the introductory words, "I am Yahweh thy God, which have brought thee out of the land of Egypt, out of the house of bondage. Thou shalt have no other gods before Me." The last words mean literally "in My face" or "in My presence." There are several points here that are relevant to our theme. The first is the supreme authority of the One who speaks. There can be no psychological well-being without authority. Ancient and modern history is full of examples of the power for good or evil of dominating authorities. Man without authority is lost, and a nation without authority disintegrates as sheep without a shepherd. Thus it is that God begins the Decalogue with words of supreme and dogmatic authority. He claims man's highest devotion, and as the foundation of all that follows He declares that man must serve Him utterly and completely.

The second relevant point is the personal appeal of Person to person—"I"—"thou." Martin Buber points out the fallacy of speaking of the Decalogue as "the catechism of the Hebrews in the Mosaic period." For "a catechism means an instruction for the person who has to be in a position to demonstrate his full membership of a religious community on the basis of general sentences which he recites. . . . The soul of the Decalogue, however, is found in the word 'Thou.' Here nothing is either stated or confessed; but orders are given to the one addressed, to the listener" (*Moses*, page 130).

If there is one thing that makes for despair it is the thought that one is at the mercy of blind and insensate forces, that there

is no personal power behind the world, or that, if there is such a power, He is completely indifferent to the fate of mankind. But the First Commandment is the address of a Personal Being to a personal being. Although God's ways are far above man's ways, and although the Person of God transcends the person of man, there is yet that link of personality that makes it possible for God to say "I"—"thou."

A third relevant point emerges from the introductory words. They remind of an action that God has done on behalf of the one whom He addresses. "I have brought thee out of the land of Egypt, out of the house of bondage." This is an appeal that in one sense is tied to a single period of time. But the New Testament picture of redemption through Christ warrants our extension of the time to eternity. There is a redemption from the bondage of Egypt that will be a perpetual memorial for all eternity, for the lamb that was slain on the night of redemption from Egypt foreshadowed the Lamb of whom it is written that "the Lamb is the light thereof," that is, of the New Jerusalem (Revelation xxi, 23).

This introductory reminder is essential for the understanding of the Decalogue. The commands of the Decalogue pre-suppose an experience of God. To one who has not had this experience the commands appear burdensome and sometimes meaningless. While it is true that anyone who follows the commands of the Decalogue for their own sake will find a blessing thereby, he will find far fuller blessing in following the commands for God's sake. This difference of attitude underlies the experience of St. Paul in Romans vii. So long as the Law was an external commandment, it was a burden too heavy for him to bear. But when he grasped the significance of redemption in Christ, then he found that the righteousness of the Law was fulfilled in him as he walked not after the flesh but after the Spirit (Romans viii, 1-4). Thus although one may be able to demonstrate that the Decalogue makes for the psychological well-being of mankind, there is all the time the pre-supposition that for its utmost effectiveness there must have been that experience of God that is summed up by the word Redemption.

There is yet a fourth point of significance in this First Commandment. It has been asserted that this command suggests monotheism rather than monotheism. This assertion takes no account of the fact that it is well-nigh impossible to frame monotheism in the form of a command, nor of the obvious fact that, whether

he is monolatrous or monotheistic, man is continually adopting other gods besides the One. Hence Jesus Christ stated the possibility of attempting to serve both God and Mammon (Matthew vi, 24), while in the same strain St. Paul on two occasions identified covetousness with idolatry (Ephesians v, 5, and Colossians iii, 5).

Here is a profound truth. The secret of integration for any man is a single-mindedness. This is the secret of all the courses in practical psychology that attempt to teach the way to success in life. There must be one dominating purpose to which all other aims are subservient. It is when a man has his interests and affections centred on two or three diverse objects that his life lacks coherence and integration. There is only One chief end of man, and that is God. All life to be coherent must centre in Him, "for where your treasure is, there will your heart be also" (Matthew vi, 21), and "if thine eye be single, thy whole body shall be full of light" (Matthew vi, 22). And this is only the New Testament way of expressing the truth that is stated in this First Commandment, "Thou shalt have no other gods before Me."

The Second Commandment is a prohibition against the worship of God in any visible form. Judaism is not alone in its horror of images of God. The man who is in earnest in his search for the true God echoes the words ascribed to Krishna in the Bhagavad-Gita, "Blind are the eyes which deem the Unmanifested manifest." It would probably be impossible to find a religion of idol-worship that was not degrading to the worshippers. Certainly the Books of Amos and Hosea are clear enough witnesses to the moral state of the Israelites who turned after the Baalim of the high places and after the golden calves.

The application of this Commandment to modern civilised man is simple. Modern man has not freed himself from trust in charms and superstitions. If he does not bow down to them, he at least serves and worships them. The lucky sixpence, a little carved god of good fortune, the mascot, are all examples of devotion to powers other than the Most High God.

One cannot believe that these superstitions make for the psychological well-being of man. J. C. Flugel in *Man, Morals and Society*, speaks of "the essential psychological resemblance between taboo and obsessional neurosis, in which the patient also feels strain and worry whenever the compulsive ceremonial is not carried out" (page 136). In the context Professor Flugel

has been comparing the dictates of superstition with the dictates of taboo. If then a man becomes wholly free from superstition through his devotion to God, then he is free from at least one form of obsessional neurosis.

It might, however, be agreed that it is possible to treat God in a purely superstitious way. He too may be "used" to bring good fortune or to avert bad. It is here that the reason given for the Second Commandment has its force. God is a jealous God. The adjective implies that God is zealous for the whole of our devotion, and demands our love and obedience not simply for His sake, but for our sake too; since man is so made that he can only realise the potentialities that are in him and function perfectly if he is perfectly adjusted to God. This means that the initiative comes from God. It is not we who use God—which is magic—but God who uses us—which is religion. It is not we who are jealous for God, so as to use Him for our own good fortune, possibly at the expense of others, but God who is jealous for us that He may take us into His vast plan for the universe.

It is in this Commandment too that we are shown the solidarity of the human race. Man cannot flourish in isolation, neither is he responsible to himself alone. The life and destiny of generations yet unborn lie in his body. There is a physical truth in the statement that God visits the iniquity of the fathers upon the children. A dishonoured body can leave a miserable heritage to its descendants. Here is something to move man from his selfishness. Even if he is prepared to face the consequences of his sin with the proud boast of "I can take it!" yet he must think that he is sentencing others to "take it" also.

Yet after all this is only a partial application of the Commandment. In its context the reference is to idolatry and superstition, to turning after some substitute for the true God. And the warning and promise are extended to succeeding generations who walk in the footprints of their father. Where the father sets an example of indifference to God, the father's iniquity is liable to be followed by the children. Similarly the father's love and obedience are likely to be found in his children also. God here speaks of the persistence of good or bad habits, and warns that the children who do not take warning from their father's sins will be visited with their father's punishment. Ezekiel xviii shows that the son may break the entail of sin or

good, but it is not easy. No man can be living in a state of psychological well-being who thinks that his life begins and ends with himself alone.

The Third Commandment forbids the taking of the Name of Yahweh thy God in vain. Here is blasphemy, which coarsens a man's character, because he treats his Creator as a name beneath contempt. Here too is hypocrisy, where a man professes to name the Name which is unutterable holiness, while his life is deliberately turning into unholy channels. "Name" denotes character, and it is a solemn thing to profess to belong to the Holy One and to belie this profession with one's life. A double life of this sort will sooner or later bring its fruit. A conflict will be set up in the unconscious, and the unconscious will take its revenge. Man is not so made that he can take the Name of the true God in vain and still be guiltless. He may not admit his guilt to himself, but the depths of his mind will admit it for him.

The Fourth Commandment is the last of the section that concerns man's duties specifically towards God. It concerns the Sabbath rest. This Commandment is a notorious centre of debate, but there are some well-defined principles in it that are applicable for man's total well-being.

The New Testament teaching is that the Sabbath itself was a shadow, or type-picture of things to come (Colossians ii, 16, 17). This means that it takes its place with the ritual of the Old Testament as something which vanished in its outward form when Christ brought in the reality. According to Hebrews iv, 10, it pictured the complete cessation of all human works in order to find rest in Christ. It is thus a witness to justification through simple faith in the finished work of Christ.

But the principle of one special day in seven was admitted into the New Testament Church when it commemorated the first day of each week, presumably in memory of Christ's Resurrection on that day. Thus in Acts xx, 7, the disciples at Troas gather to break bread on the first day of the week, and in I Corinthians xvi, 2, a weekly collection of money for Christian purposes is made on the first day, presumably at the weekly service.

While therefore we may not say that the stringent regulations of the Sabbath apply to the Christian Lord's Day, or Sunday, we are justified in seeing clear indications in the Sabbath regulations of the principles that should guide the keeping of the one day in

seven. For the Old Testament types had a significance in themselves as well as for what they ultimately signified. The godly Jew could find the sacrifices a means of grace. Similarly, he found the Sabbath rest a means of refreshment.

Experience has borne out the value of this rest day. It was said that during the last war those factories that turned over to a seven-day working week produced no more in the long run than did those that closed down on Sunday. Neither men nor animals nor machinery can endure a continuous grind. This Commandment lays down the solemn duty both of work and of rest.

But in what sense is man to rest on this one day? The reference can hardly be to mere relaxation. The peoples of the East, who first received this Commandment, know what it means to relax at every opportunity. They need no Fourth Commandment to instruct them in this. A modern song writer has declared that it is mad dogs and Englishmen who go out in the mid-day sun! And with the advances of modern life, even Englishmen are finding more leisure than ever before.

It would be strange if the Fourth Commandment inculcated no more than the observance of a special day in the spirit of a Saturday afternoon off. This Commandment belongs to the group of duties towards God. There is a Godward movement about it. The rest on this day is so that the day may be holy to the Lord in the fullest sense, as is said in Isaiah lviii, 13, "Call the sabbath a delight, the holy of the Lord, honourable; and . . . honour Him."

In this spirit the early Church sanctified the Lord's Day, and met then for worship. One cannot say how they spent the remainder of the day. Their masters would hardly excuse them from their employment. But if for us it is possible to rest, we should rest and devote the day so far as possible to the building up of the spiritual life.

There is a psychological value in this. It is a bulwark against materialism. A man who spends Sunday in resting over the Sunday newspaper and secular books, or engaged in the same hobbies as he pursues on the week-night evenings, is as much a materialist as the man who opens his shop as usual. Spiritual values must be fought for. They do not come easily. That is why the Lord's Day has been given, so that we may form the habit of turning to spiritual things very definitely on that day.

A good habit is psychologically a blessing. It tends to affect a considerable area of our life and outlook. That is why the

habit of resting on Sunday with the purpose of devoting the day especially to God has its effect upon the way in which one spends the remainder of the week. The spiritual outlook of Sunday colours the outlook of the whole of the week.

The two reasons that are given for keeping the Fourth commandment supplement each other, and point to something more than mere relaxation. In Exodus xx, 11, there is the reminder of the Creation story. The precise interpretation of the "seven days of creation" need not concern us here. The emphasis is upon the six stages, followed by a cessation of creation. It is obvious that God did not need physical relaxation after labour. His rest has some deeper spiritual significance, as was seen by the writer of Psalm xcvi, 11, and Hebrews iv. A description of this rest belongs to the language of Christian mysticism, and only those who have some experience, however feeble, of union with God, can say something of its content. But its realisation belongs to quiet communion with God, and not simply to bodily and mental recreation.

Deuteronomy v, 15 gives a further reason for resting on this day. It is to be in memory of deliverance from the hard labour of Egypt. The thought again here is of redemption, and this redemption, both for the Jew and the Christian, is fundamentally a spiritual action. God redeemed, so that the people might be for His own possession. The hard labour of the world is to be changed for the rest in Him.

Thus it is that both in the Commandment itself and in the reasons that are given for it, one finds a principle that is valid for the present day, and that is vital for the maintenance of a spiritual way of life.

So the Decalogue passes to its second great division. It has spoken of life in relation to God. Now, before passing to life in relation to one's general environment, it recognises the more intimate environment of the family. It is the family that makes the first impact on the growing child. Growth in the family is presented as the normal ideal. It is a well proved fact that a child is handicapped if it is forced by circumstances to grow up under orphanage conditions, however kind the orphanage may be. Hence such orphanages as Dr. Barnardo's make extensive use of foster parents for their children.'

A similar handicap faces the children of disrupted families, where the parents are divorced or separated, or even where such circumstances as war mean that the father is absent for a long

period. To have a father and a mother to honour is something that makes for the well-being of the child both in childhood and in later life.

St. Paul rightly saw that this Commandment is reciprocal. Not only must the child be told to honour father and mother, but father and mother must prove themselves worthy of honour. Thus when St. Paul quotes the Fifth Commandment in Ephesians vi, 2, he immediately urges fathers not to provoke their children to wrath, but to bring them up in the nurture and admonition of the Lord. In Colossians iii, 21, he gives as a reason for not provoking the children, "lest they be discouraged."

Whether or not one follows Freud wholly in his stress on the derivation of much of the contents of the Super-Ego and Ego-Ideal from the commands and example of the parents, one must admit that these commands do become built into the background of the conscience. How important then it is that the commands should be worthy, and the example in accord with the commands!

But granted that the parents are true to God, it is important that the child should honour them. The Decalogue mentions both parents. The child must be guided wisely through its Oedipus period, and should reach maturity without any fixation upon the one parent rather than the other. There may be various difficulties owing to the dominance of one or the other of the parents, but the Fifth Commandment gives the ideal.

There is a promise attached to this Commandment, a promise of long life in the land. While there may be, and are, individual exceptions, this promise is perfectly valid. A nation of happy families, with a respect for family authority, is slow to embark on programmes that rebel against authority, and plunge the country into revolution. Revolution shortens life, and defiance of the Fifth Commandment is a well-known concomitant of revolution. We have already noticed the encouragement that Nazism gave to children to spy on their parents. The Russian revolution also made one of its aims the taking of children from the immediate care of their parents and putting them under the direct care of the State. One hears that this system in its crude form is largely abandoned in Russian to-day. Evidently results proved that the Fifth Commandment was wiser than Communist theory.

The Sixth Commandment stands out in stark directness, "Thou shalt not kill." The extent of its application is still a matter of controversy. In the light of the fact that the Israelites

were shortly to take the land of Canaan by force of arms, one can hardly suppose that to them the Commandment banned killing in war. Moreover the Law prescribed the death penalty for certain offences, thus indicating that the Commandment had no necessary reference to this. Therefore most interpreters adopt the interpretation of the Revised Version that appears in the Church of England Prayer Book and elsewhere, and translate, "Thou shalt do no murder."

It is impossible to dogmatise, but one may surmise that if Christian principles continue to spread in the world, there will be a deepening application of this command not to kill. This happened with the command to love one's neighbour as oneself. For centuries this command was interpreted in a manner that was not inconsistent with slavery. But gradually its fuller implications were realised. In the same way there is an increasing feeling that the Sixth Commandment has as its ideal the outlawing of war. Some would go further and extend it to the animal world, applying it not only to vivisection, but also to the wearing of furs and the eating of flesh food. Although the Christian Church is not yet prepared for these further applications, and in fact they may be mis-applications, yet it is not beyond the bounds of possibility that they are correct.

In the meantime one can see that this assertion of the sanctity of human life is vital for the well-being of society. War always has a brutalising effect. But one can go further. In the Sermon on the Mount Jesus Christ took this Commandment even deeper, and applied it to that anger which is the seed from which murder grows (Matthew v, 21-26). Psychology is fully in agreement here. There is a righteous anger that generates the needed energy for decisive action. But there is anger that disintegrates a man, that throws his rational thought out of gear, and that pours poisons into his blood-stream. If "Thou shalt not kill" also means "Thou shalt not indulge in unrighteous anger," then one can see how valid this Sixth Commandment is, even for those people to whom murder seems something completely irrelevant to their lives.

The Seventh Commandment forbids adultery, that is sexual relationship of a married person with someone other than his or her partner. It is necessary to give this literal definition to make it clear that polygamy is not adultery. There is, for example, no reason to suppose that Solomon broke the letter of this Commandment. It would probably be true to say that almost

all nations and tribes have some regulations against adultery, whether they practise polygamy or monogamy. Unfortunately, however, adultery has often been defined too narrowly, as though a married man could go with a girl and be guiltless, while in similar circumstances a married woman would be guilty.

The application of this Law in the Pentateuch itself shows that both man and woman are regarded as guilty, even though the punishment in one case falls more heavily on the woman. Adultery with a married woman, whether or not the man is married, is punished by the death of both parties (Leviticus xx, 10). Any man, married or unmarried, who has relations with an unmarried or unbetrothed girl, is forced to pay a heavy fine to her father, marry the girl, and then is forbidden ever to divorce her (Deuteronomy xxii, 28, 29).

In practice there is no known instance of the death penalty ever having been enforced for adultery amongst the Jews, according to an article in Hastings' *Dictionary of the Bible* (Volume I, page 521). We may presume that the death penalty was regarded as the maximum possible, and not as necessarily enjoined for every case. But it is clear that both husband and wife are regarded as guilty.

This equality commends itself to modern civilised man. The only point at issue is the vital one of whether adultery is sin at all. At the moment the world is witnessing a rapid drift away from the Seventh Commandment. Some years ago Bertrand Russell, in *Marriage and Morals*, urged that legal marriage should not be held to impose any obligation of sexual faithfulness, and neither husband nor wife should be jealous of the other's relationships. A recent book by L. E. Jones, *The Bishop and the Cobbler*, advocates the sanction of a distinction between a legal wife for child-bearing and other women for "love" relationships.

This new morality has not yet had a long enough vogue to prove itself to modern man by its results. The Christian has no doubts as to what these results will be. The verdict of history is against it. More than ten years ago J. D. Unwin showed in his book, *Sex and Culture*, that the decay of the ancient civilisations coincided with the breaking down of sexual self-restraint and violation of the marriage bond.

Jesus Christ pointed out that the glory of monogamy is seen in its original institution with Adam and Eve, but that God left it to man to find out through painful trial and error that, after

all, God's way was best, and that polygamy and divorce were due to the hardness of man's heart (Matthew xix, 4-9). Many of the Jews had already approximated to that position by the time of Christ. Christian experience has confirmed it.

Those who would now set it aside in favour of greater sexual freedom cannot show that this freedom makes for psychological well-being. Their freedom breaks down on the rock of jealousy—not an evil jealousy, but the natural jealousy that the husband and wife, if they are truly one, feel for each other. It is, moreover, well recognised that harmony between father and mother is necessary for the well-being of the children, and even Bertrand Russell, in the book already referred to, advocates a more or less constant union of husband and wife until the children are grown up.

There is no doubt that the Christian Church needs to give more frank and personal instruction on the marriage-relationship. It is not simple adultery, but the roots of adultery, that need to be attacked. A right adjustment to sex from the beginning; clean-living, such as is suggested by Jesus Christ's interpretation of this Commandment in Matthew v, 28; good sense in the choice of a partner; and the readiness to co-operate after marriage; all these things are part and parcel of this Commandment. This is the way of well-being for individual, home and nation. Popular reports of Hollywood morals do not suggest that here is a psychologist's paradise.

The Eighth Commandment needs no expansion. It is a Commandment that everyone applauds, -but that many people break. One effect of the war has been the large increase in pilfering and scrounging, which is still stealing, by whatever name it is called. Commonsense, however, can probably be relied upon to adjust matters here. Much will depend upon how far private ownership remains. Few people, beyond professional thieves, will rob an individual. But it is not so easy to feel that one is stealing from a nebulous corporation or from the nation in the abstract. The realisation that stealing from the nation is the same as stealing from oneself will probably come gradually. But in the meantime one can assume that the Eighth Commandment is still recognised as making for man's total well-being.

The Ninth Commandment denounces the bearing of false witness against one's neighbour. While there is a primary reference to a court of law, it is fair to include all malicious gossip under this head. Again there is no need to expound this

Commandment. A citizen has a right to his good name. To rob a man of his good name is recognised as the meanest of actions. Such robbery is not good for the psychological well-being either of the victim or the one who slanders him.

So we come to the Tenth and last Commandment, "Thou shalt not covet." This is the only Commandment that speaks of a purely inward disposition. It is striking to find it here. It is as though God is anticipating the boast of anyone who declares that he has kept the letter of the four previous Commandments. Covetousness, in one form or another, is the seed from which murder, adultery, theft and slander grow. Covetousness means a lack of contentment. The realisation of the Tenth Commandment means an inward serenity.

All the great men of the world who have approximated in any way to inward serenity have seen the truth of "Thou shalt not covet." It was at the heart of Gautama Buddha's Four Truths: desire is the origin of all suffering. This idea is basic to the wisdom of the East, it has brought contentment to mystics of the East and West alike, and it has been asserted in the writings of poets like Walt Whitman, and prose writers like Thoreau and David Grayson, in ways to which many human hearts respond. If only one could be free from covetousness!

But not all feel this. The modern world is caught up in a thirst for money-making. There must always be full scope for the acquisitive instinct in man, and a society that cannot find work for all must inevitably produce covetousness amongst its workless members. But the covetousness of which this Commandment speaks is that covetousness which is found even in those who already have possessions. It is expressed in gambling and other get-rich-quick schemes, that not only take from one's neighbour by methods other than those of the legitimate ones of exchange, purchase, labour or benevolence, but produce that constant desire for acquiring more that becomes like the power of a drug.

Covetousness of property or of money produces a restlessness and dissatisfaction that spoil the life. The solution to the problem of psychological well-being is not to be found here.

But the Tenth Commandment is not intended to leave us with the *Via Negativa* of Buddhism and of some forms of mysticism. The Decalogue in our Bibles is written in a straight column. In experience it should be written in a circle so that the end leads on to the beginning. Why should a man not covet

his neighbour's goods? The answer is, "I am the Lord thy God." It is as the writer to the Hebrews expresses it, "Let your manner of life be without covetousness; and be content with such things as ye have; for He hath said, I will never leave thee nor forsake thee" (Hebrews xiii, 5). A man who has his all in God finds nothing to covet in that which is his neighbour's.

The Decalogue then is a wheel of life round which man may travel to perfection. Only the circumference of the wheel appears in the Commandments as they stand written. But every wheel has a hub, and the hub of this wheel is Jesus Christ. A man who seeks to travel round the circumference will find much help, but the man who finds his own centre in Christ will be taken to become a part of the wheel itself. When he fails to fulfil the Law, he is not plunged into despair, but finds peace and renewed well-being in true repentance and faith in Christ, who kept all the Law Himself, and yet who died for the sins of mankind who had broken the Law. And when he comes to the Law, he no longer comes with the thought, "The righteousness of the Law must be fulfilled *by me*," but, like St. Paul, he says, "The righteousness of the Law is fulfilled *in me*, as I walk in the new power of the Spirit of Jesus Christ within."

DISCUSSION :

The CHAIRMAN (Dr. E. WELLISCH) said: I have listened with the greatest interest and appreciation to the Rev. J. Stafford Wright's inspiring paper, and should like to congratulate him in your name on the winning of the Gunning Prize.

May I thank you for your kindness in inviting me, as a psychiatrist, to come and be chairman at this meeting. It is a great honour and joy for me to do so, because I believe that theology and psychology have very much in common.

Theology and Psychology not only have the same origin, but also the same aim. Unfortunately, however, both sciences move at present along separate ways, and are even in certain aspects hostile to each other. This split is a dangerous sign for the spiritual situation of our time.

The New Psychology has arrived to-day at a decisive stage, and the direction of its further development will be of immense importance for the future of our world. There is no doubt that Sigmund Freud's discoveries are of the highest ethical value, but it cannot be

denied that some features of psychoanalysis are liable to promote atheistic tendencies in predisposed persons. The religiosity of Jung is a great inspiration, but his belief amounts to polytheism, a fact which should not be underestimated. Unless the New Psychology can find that its roots lie in the Old Theology it will become a force dangerously undermining the religion of the Bible.

Also the New Theology is to-day at the cross roads. If it should continue to disregard the discoveries of science, of which psychology is an important branch, this would have dangerous consequences. Salvation is of the soul, and whatever facts the new psychology has revealed about the miraculous mechanisms of the soul should arouse a vital interest in theologians. This is not a question of academic interest only, but also of the greatest practical importance. The common man, in his search for healing from the mental stresses of this world, is turning in increasing measure for help no longer to the priest but the psychotherapist. Whilst the churches are empty, the psychiatric outpatient clinics are so full that they cannot meet their demands. The common man feels that the new psychology has something to offer which the Church lacks. Unless the Church will return to its ancient office of the sacrament of healing, and the clergy will take up the study of psychology seriously, it will promote the feeling of disappointment in the masses.

Of the many thoughts of the Rev. J. Stafford Wright's paper, I should like to discuss one in particular. It is the fourth point of significance in the First Commandment: "that there must be one dominating purpose to which all other aims are subservient." This is exactly the view of modern psychiatry as regards the integration of man. The integration of the psyche is most seriously disturbed in a form of insanity which is called "schizophrenia"—this means "split mind." In this disorder the belief in one purpose, one goal of life, is split. If man's belief in a dominating purpose is split he becomes slothful. Slothfulness was regarded by mediæval theology as one of the seven deadly sins, called "acedia." Slothfulness, however, is also a leading sign of schizophrenia. "Accedia" and "schizophrenia" are therefore largely the same notion. This example shows the great importance of a common approach to mental problems by theologians and psychiatrists.

It also shows that the cure of mental illness lies in the last instance

in religion. Not, however, in any kind of religion whatsoever, but in the only one which can redeem all mankind, the religion based on the Holy Decalogue.

Dr. B. F. C. ATKINSON said : I would like to make the following comment on the paper of my friend, Mr. J. Stafford Wright, which I have read with great interest and pleasure.

On page 135 he discusses the scope of the sixth commandment. I think he will find that the Greek word used in some of the quotations of this commandment in the New Testament has the sense of *to take human life*. The word is *φονεύειν* (phoneuein). It is difficult to suppose that we are intended to confine the sense to acts which artificial human legal codes define as "murder." At the same time, the use of the word appears to rule out any prohibition against the taking of animal life, such as Mr. Wright tentatively suggests may be intended. We may compare 2 Peter ii, 12. The limitations upon the scope of the commandment, which Mr. Wright very properly mentions, appear to me to have been inherent in the temporary dispensation of the law and to be parallel with divorce and polygamy, but to have been quite clearly swept away by the perfect ethical teaching of the New Testament.

Mrs. DOROTHY BEACH spoke at length. She drew attention to the difference between the moral and ritual law of Moses. She believed that the Sabbath was a part of the moral law and that it was not Jewish only. In evidence of this statement, she said that the ancient Babylonians kept the Sabbath. Therefore she did not think that Sunday could, in any sense, take the place of the Sabbath. The New Testament gave no countenance to the view that Jesus had altered the customary Sabbath observance. The law of Sunday was not enforced until A.D. 321, but on this matter a mistake had clearly been made. Even in the hereafter, the Scripture showed that the Sabbath, not Sunday, would be observed.

Dr. NORMAN S. DENHAM said : It is doubtful whether the question of the incidence of the Sabbath observance as enjoined in the Decalogue is entirely relevant to our discussion, but one would make some observations in respect of Mrs. Dorothy Beach's statement that even Mary the mother of the Lord Jesus was so concerned as to

keeping Sabbath that she refrained from anointing the body of Jesus, in order to observe it faithfully. It is to be noted, however, that Joseph and Nicodemus handled the body of our Lord, thus incurring ceremonial defilement. Regarding works of necessity or mercy, did not the Lord say that if an ox or ass fell into a pit, the Jews would certainly rescue it if the accident befell on a Sabbath ?

Nine of the commandments are reiterated in the New Testament, but not the fourth. The only case in which it is mentioned, apart from its spiritual keeping in Hebrews iv, 9, is in Colossians ii, 16, where Paul exhorts that no one should judge another concerning keeping the Sabbath day. In Romans iv, he refers to the same matter, saying that one regards it while another does not.

However, Mary did not rest because of the weekly Sabbath, but because of the Paschal Sabbath, 15th Nisan. The command which she obeyed (Luke xxiii, 56) is seen in Leviticus xxiii, 7. Not only was the Passover day when our Lord suffered a holy day, but on the following day no servile work was to be done. Accordingly, Mary and the women rested on that day. In A.D. 30, the year of the Crucifixion, the Passover fell on a Wednesday, as many are aware. Thus Mary rested on Thursday, the 15th Nisan, and the women were at liberty to purchase and prepare spices on the Friday.

Mrs. Ellen G. White writes under supposed inspiration in her *Early Writings* and in *The Desire of Ages* that Christ rose on the first day of the week. Careful examination of Matthew xxviii, 1, will evidence that Christ had risen ere the first day of the week drew on (*epiphoskō*), the same word being used in Luke xxiii, 54. Reference to Matthew xii, 40, assures us that our Lord's body had lain in the grave exactly three days and three nights from the evening of the Passover day. Dr. Torrey, among many others, was fully assured of this.

As our Lecturer has truly noted, the Fourth Commandment is a notorious centre of debate. Surely, in this Dispensation of Grace, as he well remarks, the rest now envisaged is not that of outward form or incidence of dates, but in the heart's sense of rest in Christ's redemptive work, now finished.

Mr. RATTENBURY said that there was a suggestion in the mind of the common man that psychology has something that Christianity has not. This is a fallacy.

Dr. ERNEST WHITE said: Mr. Stafford Wright has made an important contribution to thought in his careful analysis of the Decalogue and the relation of its components to psychological theories.

There are three points I should like to make.

Mr. Stafford Wright is doubtful about Jung's belief in God. Many of Jung's statements on this subject are ambiguous, but it must be remembered that he deals with psychology and not with theology. In his book, *Modern Man in Search of a Soul*, he lays it down as one of the necessary qualifications of a practising psychotherapist that he should believe in God, from which we may safely infer that he himself believes in God.

Secondly, in these days when the old moral standards are being called into question on every hand, and spoken of as old fashioned and out of date, it is important to stress the fact that the keeping of God's laws makes for mental health and social stability. How necessary for health is one day's rest in seven! I have more than once been consulted by Christian ministers and others who were suffering from breakdown because they failed to observe this law, working all day every day, Sundays included.

Then again, breakdown in marriage often leads to serious consequences, not only in the emotional life of the divorced or separated couple, but in the children of the union. Stability in home life is most important for the mental growth and stability of the children.

Many patients who consult me have suffered in childhood from the unhappiness of divided homes, or were themselves illegitimate, and it was in the insecurity attendant on unhappy and divided homes in early childhood that the seeds of later neurosis were sown.

Thirdly, it should be emphasised that God does not impose His laws upon us in an arbitrary manner, like a tyrant imposing his will upon unhappy subjects in a harsh and unreasonable way. God loves and understands His creatures, and knows what is best for their ultimate good and happiness. In giving His laws, He has at heart the highest welfare of mankind, both individually and socially. The great principles of the Decalogue are psychologically sound, and make for mental health and stability.

Mr. C. E. A. TURNER said: The author's excellent argument suggests that the well-being of the child demands that the Decalogue

be a definite part of modern education, to be taught authoritatively, sympathetically and with understanding. Its divine principles, intended for the good of man, should not only be learned by heart from early years and practised in the home and school, but also expounded to form an intelligent and intelligible foundation for the child's future.

AUTHOR'S REPLY.

I should like to thank those who have contributed to this discussion, and particularly the Chairman and Dr. White for what they have said from the standpoint of applied psychology.

Dr. Basil Atkinson, in adducing the use of *phoneuein* in the New Testament, has produced a piece of evidence that I had overlooked, and I agree with what he says in this connection.

To discuss the whole question of the Sabbath and Sunday would require a paper in itself. When Mrs. Dorothy Beach says that "Sunday worship was introduced in A.D. 321 . . .," she has failed to distinguish between legal introduction and prevailing practice. Constantine enforced Sunday worship as a Christian measure because Christians already met for their services on that day. The evidence of the early Christian writers soon after New Testament times is that Sunday was the day when they met. So far as the New Testament goes it seems to me that Colossians ii, 16, 17, is the vital passage. Paul definitely asserts that the Sabbath in itself was only a shadow or type, and, like other Old Testament types, it has been fulfilled by Jesus Christ. The only way of evading the plain sense of this passage is to say that Paul was referring to the extra Sabbaths of certain festivals, and was not alluding to the weekly Sabbath. To my mind such a limited use would be impossible without qualification in the context. If one speaks to a Jew about the Sabbath, or Sabbaths, he would be bound to suppose that one was speaking of the weekly Sabbaths. Certainly he could not suppose that these were excluded.

I would not deny that Jewish customs lingered on amongst Hebrew Christians. The Acts of the Apostles and the Epistles bear witness to this, especially with circumcision. So far as A.D. 70 is concerned, Jerusalem was still Jewish, and even Christians who did not observe the Sabbath would find their movements restricted

on the Sabbath day. This would account for the reference in Matthew xxiv, 20.

Dr. Norman Denham has taken up the point about the *paraskeue*, though I do not agree with him about the day of the Crucifixion.

I think that the question of the Babylonian Sabbath is not so simple as Miss Beach implies. One of the latest books that deals with it is Dr. Norman Snaith's *The Jewish New Year Festival*.

884TH ORDINARY GENERAL MEETING

HELD AT 12, QUEEN ANNE'S GATE, WESTMINSTER, S.W.1, ON
MONDAY, 9TH MAY, 1949.

REV. F. CAWLEY, B.A., B.D., Ph.D., IN THE CHAIR.

The Minutes of the previous Meeting were read, confirmed and signed.

The following elections were announced :—F. L. Hogg, Esq., M.Brit.I.R.E., A.M.I.E.E., Fellow; Rev. F. H. Harris, Fellow; Milson G. Polson, Esq., Fellow; Rev. Frank Wood, L.Th., Member; Rev. A. Victor Maddick, B.A., Th.B., L.Th., Member; Douglas W. Lyon, Esq., L.R.C.P. & S., L.R.F.P.S., Member; Frederick G. Nevell, Esq., Associate.

The CHAIRMAN then called on Rev. Gordon J. M. Pearce, M.A., to read his paper on "The Christian and the Marxist Views of History."

THE CHRISTIAN AND THE MARXIST VIEWS OF HISTORY

BY REV. GORDON J. M. PEARCE, M.A.

SYNOPSIS.

An account of Marx's theory of economic determinism. The main types of social change in history are discussed with special reference to the interplay between theology, politics and economics. It is shown that Marxist theory contains much truth even though, taken too seriously, or too literally, it often leads to absurdity. The general conclusion is reached that the attitude of Marxism is essentially religious—the main tenets of Judaeo-Christianity having all been adopted and translated into secular terms. It is concluded that this religious element is so strongly entrenched that Marxism can only be replaced by an alternative religion.

In an Addendum the author discusses the Christian attitude towards history—one that finds in the incarnation a key to the meaning of the historical process.

IN this paper I propose to give some account of Marx's chief contribution to the study of history, namely, his theory of economic determinism.

Before we consider Marxism, however, we must indicate our line of approach. Every day we hear or read of Russian Communism. Millions of people have adopted this political creed, and it shapes the policies of many nations. Communism is a

force to be reckoned with in the politics of the modern world. It arouses enthusiasm, suspicion, or hostility in those who come into contact with it. It may be welcomed or hated; it can scarcely be ignored. With Communism as a system of practical politics, however, we shall not be directly concerned. We shall do well to attempt to clear our minds of prejudice towards Communist policy, and to examine dispassionately the theory of political action by which Communists profess to be guided.

There are several varieties of Communism. Plato advocated a communistic mode of life for the rulers of his Republic. The primitive Christian Church in Jerusalem seems to have practised some form of communism, for its members "possessed all things in common." Mediæval monasteries were organised on a communistic basis. Many writers on politics have expounded systems which advocated a communistic doctrine of the ownership of wealth. For our present purpose, we shall content ourselves with examining the Communism of Karl Marx, its most important, though not its sole exponent to the modern world. But here again we must delimit our ground. Student though Marx was, he always considered it his task to change the world rather than to contemplate it. He took part in the organisation of Communist activities, and wrote much about the political events of his time. His intellectual interests ranged far. A considerable part of his major work, "Capital," is devoted to the discussion of economic theory, and his illustrations and proofs are derived from his study of primitive societies and from the history of western Europe. In his various writings he works out a political theory, a doctrine of man, a system of morals, an account of history; or, at least, even if he does not expound all these matters with systematic thoroughness, he makes important suggestions about them in the course of his study of society. We shall consider his political and economic views for the light they throw on his conception of history.

Marxism is a doctrine of social change. Change in the natural world has attracted the attention of philosophers since Heraclitus, and has remained important for modern philosophers like Bergson and Whitehead. Men and women change. Other writers beside Shakespeare have written about the seven ages of man. Society also changes. Political regimes vary from age to age. The benevolent despotism of the Tudors gives way to the absolutism of the first two Stuarts and the military dictatorship of Cromwell. The Whig oligarchy of the eighteenth century is followed by the

Parliamentary democracy of the Victorian era. Not only do political systems change. We do not speak the same English as Chaucer wrote, think in the manner of John of Salisbury, wear our clothes after the fashion of the Puritans, or build in the style of Sir Christopher Wren. Laws and government, institutions and modes of living, technique and culture—human social life changes with the passing years.

How can we account for this change? What initiates and maintains it? Many answers have been given. Changes in the physical environment, in climate, food, and soil, set up social changes. The work of a great man may have far reaching effects on the life of his own and subsequent ages. The life of Israel was shaped by Moses. The culture of the Roman Empire was profoundly influenced by the conquests of Alexander. The life of our own times has been shaped by Galileo, Descartes, and Newton. Not a few attempts have been made to account for social change, to outline a perfect society, and to suggest some means of attaining it. In making these attempts social thinkers called to their aid faith, philosophy, imagination, and some of their accounts now strike us as quaint rather than exact. One of the most famous, Sir Thomas More's "Utopia," has given us the adjective "utopian" to describe what is possible of achievement in cloud-cuckoo land, but certainly not on earth.

Marx aimed at giving a scientific account of social change. "Just as Darwin," said Engels, "discovered the law of the evolution of organic nature, so Marx discovered the evolutionary law of human history." What Darwin did for biology, Marx wished to do for social study. He desired to dedicate his book "Capital" to the great biologist, who declined the honour.

In order to explain Marx's doctrine, I shall quote some sentences written by Engels to indicate what Marx contributed to "The Communist Manifesto," a pamphlet published by them jointly in 1848 when Marx was twenty-nine, and Engels twenty-seven.

"I consider myself bound to state," Engels wrote, "that the fundamental proposition which forms the nucleus, belongs to Marx. That proposition is: that in every historical epoch the prevailing mode of economic production and exchange, and the social organisation necessarily following from it, form the basis upon which is built up, and from which alone can be explained the political and intellectual history of that epoch; that consequently the whole history of mankind (since the dissolution of

primitive tribal society, holding land in common ownership) has been a history of class struggles, contests between exploiting and exploited, ruling and oppressed classes ; that the history of these class struggles forms a series of evolution in which, now-a-days, a stage has been reached where the exploited and oppressed classes (the proletariat) cannot attain their emancipation from the sway of the exploiting and ruling class (the bourgeoisie) without, at the same time, and once for all, emancipating society at large from all exploitation, oppression, class distinction, and class struggles. This proposition, which in my opinion is destined to do for history what Darwin's theory had done for biology, we, both of us had been gradually approaching for some years before 1845."

Notice, first, the claim that a certain social organisation necessarily follows from the mode of economic production and exchange in any period, and that this organisation is the basis of the political and cultural life of that period.

Consider the state of affairs in the Middle Ages. A mediaeval village was largely self-supporting. Corn and vegetables were grown in the local fields ; cattle grazed in the meadows, and pigs rooted in the woods. Wool from the fleeces of the local sheep clothed the inhabitants, and some remained to sell outside. The peace of the village was kept by the lord of the manor, supported by the villagers, who gave him service in exchange for protection. Everyone lived close to the land, the economy was agrarian, and the authority of the local magnate was very considerable. An economy of this kind made possible, indeed, made inevitable, the hierarchical mode of government known as feudalism. The Parliamentary democracy of modern times, or the militaristic imperialism of Rome, would have been impossible in a state in which communication between local communities was slow and difficult, in which interchange of ideas was comparatively rare, where civil servants were lacking, and central authority was weak. Inevitably, political power would be concentrated in the hands of some local leader who claimed to be the owner, or the chief tenant, of the lands around his headquarters, and protected the people on his estates from the depredations of a neighbouring lord, provided that they served some time in tilling the manorial domains and supplying the lord's necessities while he was dealing with his enemies and theirs.

Not only did the economy strongly influence the mode of government. It played a large part in shaping the morals, the religion, the culture of the time. The moral notions which were

most widely approved were those that tended to preserve the power of the lord. The virtue of submission to authority was thoroughly inculcated and rebellion was stigmatised as a sin which could hold no promise of success on earth and have no hope of mercy in heaven. Whether submission to authority is always a splendid virtue may be open to doubt; that it was a highly convenient attitude in an inferior, his feudal superior could never doubt. We are not to suppose that the lord was necessarily a hypocrite, that he said in effect, "I know that a man of independent spirit is finer than one who is cowed into submission, but my own interests demand that my tenants shall be submissive; therefore I will have them taught that submission is one of the greatest virtues." The point is rather that he was himself convinced that the moral order of the time was the right one, but his conviction depended directly upon the need to maintain his position in a society which would otherwise collapse.

Even theological doctrines were influenced by the political, and hence by the economic, structure of society. Dr. Maldwyn Hughes observed that most writers on the doctrine of the Atonement "poured their ideas about the Cross into the moulds of the dominant conceptions of their own particular age. During the period of the Fathers, when brigandage and warfare were prevalent, the practice of ransom existed. In harmony with this, man was held to be in bondage to the Devil, and the death of Christ was thought to be the ransom paid for man's deliverance. The Mediaeval Period was the age of chivalry, and the Atonement was interpreted in terms of this institution. Sin was defined as a violation of God's honour (for example, by Anselm) and Christ's work as a satisfaction."

Suppose we now compare mediaeval England with the England of the late eighteenth century. Throughout the intervening centuries, the power of the towns, and especially of those within easy reach of the sea, had been steadily increasing, and the power of landowners had declined. A new economy had arisen based not so much upon wealth in the form of land as upon wealth gained from exchange in trade. The growth of modern science and the development of new techniques facilitated the rise of industry and England was rapidly becoming an industrial country. In other words, the mode of economic production and exchange was rapidly becoming industrial rather than agricultural. Consequently, the balance of political and social power was altered. A new class had arisen, the manufacturing class,

whose members, though drawn both from the landed aristocracy and from the peasants attached to the soil, had aims and interests different from the classes from which they had sprung. The middle classes slowly gathered into their hands a considerable proportion of the wealth of the country, and having gained economic power, demanded political power, and obtained it with the passing of the Reform Bill in 1832. The chief means which a community adopts to satisfy its basic material needs decides its class structure, its political system and its culture. The reign of Queen Victoria was conspicuously the golden age of the middle class. Its preferences strongly marked the literature, art, and religion of the time; both politics and culture reflected the dominance of those who derived their wealth mostly from trade and industry.

This view of history is known as dialectical materialism. It has been briefly defined by Professor Seligman as the view that "the chief considerations in human progress are the social considerations, and that the important factor in social change is the economic factor."

To return to our earlier quotation from Engels, we must notice that he asserts that Marx held that since the economic factor was dominant in history, "the whole history of mankind has been a history of class struggles." Marx insists that a change in the economic centre of gravity in any community is accompanied by a struggle between the possessors of economic power and those who would take it from them. No class can be divested of its power without a struggle. The feudal system tended to be weakest in large towns. Merchants formed guilds to resist the claims of feudal overlords and gradually increased in strength. The feudal system itself encouraged the organisation of the trading class which at length overthrew it. A Marxist would hold that the Reformation is less significant as an event in the religious history of Europe than as an indication that political and social power was passing from the Mediaeval Church, a great feudal institution, into the hands of the Commercial class. As feudalism nurtured its destroyer, so also bourgeois capitalism generates and nurtures the class that will strike it down.

The Industrial Revolution was made possible by the invention of new machines, the use of coal and steam, and improved means of transport. Cottage industry, in the face of severe competition, fell into decay. The population was drawn from the countryside and set to work in mills and factories situated in towns which

grew up to house those who were thus employed. The choice before those who came to work in the new factories was either employment there or starvation. Having nothing else with which to bargain, they were obliged to sell their only possession, their labour. This employers bought at the cheapest rate. The law of supply and demand operated in favour of low wages and high profits. If a business operation was profitable, considerations of justice and humanity counted for little. Economics was a territory beyond the sway of moral law. Marx prophesied the steady growth of urban civilisation, the spread of western methods of production throughout the world, the penetration of western trade and commerce into every continent, the growth of large international business corporations, the decline of the small trader, and the increasing misery of the working class. Between employer and employed there could be no peace because their economic interests were opposed. The wealth of the one depended on the poverty of the other. But capitalism also engenders its destroyer. To enable the workers to operate machines, they must be given a certain amount of training. The organisation of factories demands the adequate education of the employees whose work is administrative rather than manual. The working class gradually takes advantage of its training to organise itself to secure better conditions of employment and to demand higher rates of pay. Trade unions grow, and the use of the weapon of the strike is discovered. The misery of the proletariat increases with the prosperity of the bourgeoisie, hostility between the two classes issues in proletarian action made more effective by growing class-consciousness and by increasing skill in the use of methods of attack. Capitalism increases the size of the proletariat and augments its strength, until it is at last in a position to seize power for itself and "to expropriate the expropriators." When this revolution occurs the minority which owns the wealth of the community is dispossessed. The proletariat which capitalism has itself made the only class in the community other than the dwindling bourgeoisie, seizes wealth for itself. Thus the community now owns the wealth of the community. Classes die with the system which gave them birth and class antagonism perishes in a society in which there is but one class to own the means of production and supply.

The social and political revolution is accompanied by far-reaching cultural change. Under capitalism, morality is merely a device for keeping the workers in subjection. Religion encourages

them meekly to acquiesce in the degradation of their present life by promising them rewards in heaven. The function of the worker is to tend his machine ; creative activity is denied him ; consequently he has little or no interest in the arts or in culture. He is entertained by machine-made pleasures provided by capitalists who make large profits from brightening lives which they themselves make drab.

If, then, to revert to our earlier question, we ask : What is the cause of social change ? Marx's answer is that social change is initiated by variation in the mode of economic supply and that such change is reflected in a class conflict which moves to a climax. No one can read Marx without being struck by the difference between him and earlier socialist writers. It is comparatively easy to portray an ideal society, and throughout the centuries, men have never been lacking to undertake the task. Few of these dreamers of dreams, however, have suggested how the beautiful ideal may be translated into fact. Their ideal states have remained ideal, and in the main impossible to realise, except perhaps by men who were themselves ideal. Marx brings the discussion down to earth. He claimed to set Hegel's dialectic the right way up by using it to explain not the abstract ideas of logic, but the concrete realities of social life. For many years, Marx pored over bluebooks in the British Museum, and was among the first of social scientists to use statistics. He claimed that his doctrine was based upon the historical study of social facts and corroborated by them. He claimed in other words to give a strictly scientific account of human society, and he worked out a theory which he thought was capable of scientific examination. Marx possessed a vivid sense of the dramatic and a considerable power of expression ; his mind had a remarkable scope and he himself lived close to practical affairs ; his doctrine seemed to be firmly based on social fact and enabled those who accepted it to foresee what must inevitably come to pass in the future ; moreover, it gave them the confidence and hope which sprang from the belief that they were on the winning side and that nothing could prevent the final triumph of their cause. These features of Marxism account for its power over the men of our time. It is not a religion, but it has some of the characteristics of a religion, and indeed, there is much to be said for the view that it is the only successful mass-religion of the modern world. The Christian speaks of the sovereignty of God, the Marxist of the sovereignty of the economic process ; the Christian, of redemption

from sin; the Marxist, of redemption from iniquitous social conditions; the Christian, of conflict between God and the Devil, the Marxist, of conflict between proletariat and bourgeoisie; the Christian, of the certain coming of the Kingdom of God, the Marxist, of the certain coming of the class-less society. Providence, Redemption, and Eschatology are all in Marxism, but they are all translated into secular terms. The blood of many Jewish rabbis flowed in the veins of Marx; he inherited the moral passion of the Old Testament and exhibited a fervour for righting wrongs which, in view of his deterministic account of history, is something of a paradox.

Marxism can be interpreted in two ways; we may regard it as a method of interpreting history, or as a theory in the strict sense. It is important not to confuse the two, for as a method, it may be useful, but its usefulness does not entail its validity as a theory. The question we have to ask of a method of interpretation is, Is it fruitful? For the Marxist, the life of society is unitary. All its aspects reflect a single pattern of culture. In this pattern, the economic element is most important, and dominates the other activities of life. In the event of a contradiction between economic and political systems, the political is transformed because it pays more to adopt the more profitable structure. Economics divides society into classes dominant and subservient. Society is essentially unstable. The development of fresh methods of production bring to the front fresh classes to compete for power. A Marxist will take account of economic processes which affect religion, art, philosophy. It follows that the extent to which the Marxian view can be followed is a question of degree. Its usefulness may vary with different periods of human history. It may throw light, for example, on the class-structure of nineteenth century England without throwing much light on the structure of contemporaneous Basuto social life, or on English social life in the days of King Alfred. We may admit, on the whole, that as a method, Marxism is fruitful and does lead to the discovery of the truth. The development of social and economic history, of sociology, and the social sciences, has been powerfully influenced by the impetus of Marxism. But, of course, even the best method can be misapplied, and Marxism has often been used as a method of study in fields which are not amenable to this type of investigation. It may be doubted, for example, whether, in spite of the claims of some scientists who are taking part in the present discussion, it can

be usefully applied to the solution of problems in biology. The Marxian method is probably most valuable in its application to the problems of modern European history, but even here, it is important to remember that it is not the only method which yields useful results.

We may, however, take Marxism as a theory in the strict sense, that is, as a set of truths to be accepted or rejected. If we take it in this sense, Marxism is open to serious criticism. Consider Marx's essential thesis that the economic factor in social life dominates all the rest. But is not the economic factor itself determined? We may make out a case for the view that the Industrial Revolution accelerated the growth of bourgeois capitalism and gave rise to a greatly enlarged urban proletariat. But the change in the means of supplying the necessities of life would not have been possible except in a fairly stable society whose political organisation was well developed. Even if the necessary scientific discoveries had been made and the requisite techniques developed, say in the reign of King Stephen, it is scarcely conceivable that the factory-system could have been established. The necessary political organisation was lacking. Further, it is very doubtful whether the change would have occurred prior to certain scientific discoveries. The inventions of Watt, Hargreaves, Arkwright, and others, made possible the change in the mode of production. Is it not a fact that scientific inquiry greatly influences economic technique? In short, where are we to draw the line between economic and non-economic activities? It is easy to speak of "the economic factor," but in practice it is very difficult to isolate it and to exhibit it working in isolation from other factors. We should be on our guard against theories which give too simple an account of very complex human activities.

Nevertheless, we ought also to be on our guard lest, having pointed out the inconsistencies of Marxism and indicated its inadequacies and its failure to account for subsequent developments in social and political affairs, we imagine that we have robbed it of its power to appeal to the mind and imagination of men. The criticism of Marxian theory is important, but by itself, it is not enough. Marxism is not only a philosophy, a social and political theory. It is a dogma passionately accepted with a religious intensity. A religious faith can be destroyed only by a more adequate faith which gives a valid account of the facts of human experience and touches the deepest springs of human

action. Christians believe that their faith gives a true account of human nature and of the real environment in which men live, enables them to solve at a deeper level their personal and social problems and inspires them with a nobler hope.

I should like to conclude this paper by making a few comments on the Christian view of history in order to suggest some differences between Christianity and Marxism.

Christians believe that at a certain point in time, God became incarnate in Jesus Christ, who lived, died, rose again. This unique event divides human history and bestows significance upon it. The historical process is moving towards an end in which the redemptive purpose of the God disclosed in the Incarnation will be fulfilled in the establishment of His divine rule and in the subjugation of everything opposed to His will. Human history elapses between three critical points: the creation of man, the Incarnation, and the Second Advent, but it is the second of these, the Incarnation, which links together the first and the last things and discloses the meaning of the whole process. For the Christian, God, who is transcendent, intervenes in the temporal process in order to redeem it. The Christian's approach to history is eschatological; that is to say, he finds its meaning revealed in certain events which belong to history and yet are beyond history, since in them the eternal God has intervened in the temporal order. For the Christian, the meaning of history is not disclosed by any historical event such as the age of the Antonines, or the growth of freedom, or the establishment of a classless society, but by one unique event, the Incarnation of our Lord Jesus Christ. His Advent certainly belongs to history; we know who was the Roman Emperor when it occurred. Secular historians may regard it merely as an event in history to be noticed with many other events which occurred in the reign of Augustus. At that time the Republic persisted, Virgil and Horace wrote, and Jesus of Nazareth was born. The Christian, however, enlightened by his faith, sees in the birth of Jesus Christ that event with reference to which the importance of all the others must be assessed. The significance of history must be sought, he affirms, not in any human acts, but in the mighty act of God which, although it occurred in history, is not merely an historical event.

The difference between the Christian and the Marxist account is plain. Christians believe in the living God who transcends the world, yet is immanent within it. Marxism is often called

atheistic, and if, by the use of this term, we mean to indicate that Marxism knows nothing of the God who has revealed Himself in Jesus Christ, then the description is accurate. According to Marx, our religious ideas are functions of economic structure. "The religious world," says Marx, "is but the reflex of the real world." "God," says Lenin, "is primarily a complex of ideas which result from the overwhelming oppression of man through external nature and class slavery—of ideas which fasten this slavery upon him, and which try to neutralise the class struggle." God is merely an idea, or a complex of ideas, not so much deliberately invented by men, as generated by his social relations. He does not exist as the Creator and Redeemer of the world. Marx, however, does not quite succeed in maintaining his atheism. He repudiates the Christian God, but venerates, indeed, almost deifies, the dialectical process. This process creates human culture and moves inevitably on its way towards its appointed end. It is at once the source of all social change and its director.

Marxism, again, is materialistic; Christianity, on the other hand, while it maintains that the material world is real, holds that it possesses a subordinate reality derived from the supreme reality, God, who is its creator. Marxism, however, is a special form of materialism. Marx and his followers have been at pains to insist that their materialism is very different from that, for example, of eighteenth-century France. The older materialism was based ultimately upon the mechanism of Newtonian physics; the science of biology with its newer conception of evolution, and more especially the social studies, just beginning to take shape in Marx's early days, showed the inadequacy of the mechanistic principle of explanation. Marx's dialectical materialism was, he thought, much more effective in explaining the phenomena of human social life. There is some doubt, however, whether Marxism ought to be described as a form of materialism. Marx used the word "materialism" to distinguish his doctrine from Hegel's idealism. In view of this, and having in regard the fact that Marxism "embodies the fullest recognition of the conscious determining power of mind," G. D. H. Cole prefers to regard Marx's "materialism" as a form of "realism."

Further, Christianity holds that the human will is free. Its freedom is impaired by sin and limited by the over-ruling will of God; nevertheless, within a circumscribed area, it has genuine freedom. Hence it is not possible to predict from a consideration

of human history the course which man will certainly take in the future. Marx, as we have seen, accepts a form of determinism and believes that dialectical materialism enables him to forecast what will inevitably be the future tendencies of any given society. Without this principle of explanation, he thinks it impossible to offer any genuinely scientific account of human social life.

The divergencies between Marxism and Christianity are deep-seated, and ultimately arise from differences which are metaphysical and theological. A Christian may be, perhaps ought to be, critical of the capitalist system. At least, if his faith is the faith of the prophets and the apostles, he will be greatly concerned with the question of social justice. He will notice that in the modern world the followers of Marx are stern critics of capitalism and champions of the oppressed. If he declines to equate liberal democracy, particularly in the heavily secularised form it has assumed in Britain and America, with the social ideal of Christianity, he may be inclined to regard Marxists as fellow-travellers. In this he will be mistaken. No matter how much their objectives seem to be akin to the objectives of some Christian reformers, we cannot disregard the facts that they begin with different pre-suppositions, they are animated by a different spirit, and they really travel to a different goal. Some kind of alliance between a secular, this-worldly Christianity and Marxism, may be possible; no kind of alliance is possible between Marxism and Biblical faith. Two cannot walk together unless they be agreed, and they need to agree first of all about the purpose of their journey. They are not likely to walk very far together if one walks to improve his physique while the other walks counting all things loss that he may know Christ and the power of His Resurrection.

DISCUSSION.

The CHAIRMAN (Dr. F. CAWLEY) said: A most opportune subject. In some real measure the peace of the world depends on Russia's way of thinking and our own reaction to it, politically and spiritually. Russia is a deeply religious country, hence it is essential that Christian people the world over should study carefully and, as far as possible, sympathetically, the new order under which the Russians now live. In many quarters Marxist Communism is held to be a deadly enemy of Christianity. Even though this were finally proved

to be so, it would still be necessary for us to understand the nature of the difference. And we should have to remember the conditions of those earlier embittered years that paved the way, to a large extent, for the emergence of this new factor in world movements. Further, we ought not to forget that it is of the genius of the Christian faith to conquer many enemies in its age-long history, absorbing something of the qualities of the defeated to grace the Cross. Russia, I feel, is not far off from the Kingdom, and a part of our task is to aid her in this crucial hour. We therefore especially welcome Mr. Pearce, in whom we have one of our younger scholars. He has majored in philosophy and has read widely in theology. We are safe, therefore, in his hands, and are assured of a well-constructed exposition of Marxist Communism as it bears on history and the Christian faith.

Mr. W. E. LESLIE said : It is difficult to think of a more important subject at the present day than Marxism and Communism. Unfortunately a great many people are filled with blind, unreasoning panic when these subjects are mentioned, and react with indiscriminating abuse. This is a very dangerous attitude.

At the recent Lambeth Conference the Bishops published a careful and moderate review of the subject, and commended it to the study of the faithful. This section of the Report of the Conference has been re-printed by the Industrial Christian Fellowship in a 3*d.* pamphlet.

Mr. Pearce is therefore to be congratulated upon his attempt to give an objective scientific study of one part of Marxist philosophy.

Dr. P. W. O'GORMAN said : Discontented and envious men of the type of Marx and Engels, imbued with malice aforethought, always seek for justification in false philosophy to veneer their prospective evil deeds. It was a wise statesman who long ago asserted that education without religion turned out only clever devils. They can invent "dialectical" historical materialism and easily discover opposed parallels in past ages—light and darkness, Manichean two gods, Christ and Mahomed, etc. Scandalous social and economic iniquities, of course, need radical remedies, but never by illegitimate means.

Marxism cannot be understood without realising its fundamental principle, "militant atheism." The denial of God, of Heaven and Hell, of immortality of the soul, and of responsibility to the Supreme Judge, necessarily involve the view that men are beasts; the destruction of Christian civilisation, and the "liquidation" of all who oppose. Add to these the sham "Dictatorship of the Proletariat" or hand-workers, war against class and private property, the abolishing of the family, the unit of Society, and the insolent appropriation of children, together with the elevation of State godship as the source of morality, and the slavery of humanity. How do these practices compare with the essence of the two Commandments—Love of God and our neighbour? Are men so blind to the hatred and presence of Lucifer? Satan is not an abstract of the mind: he is very much alive and active, and we must seek the Archangel St. Michael's sword. Let us be ever mindful of St. Paul's warning in Ephesians vi, 11-12.

Mr. THOMAS FITZGERALD said: I believe that Mr. Pearce has presented an altogether too favourable picture of Marx's views. I think it ought to have been pointed out that Marx was a diligent student of Spinoza. In this way he absorbed much of what was worst in the Jewish tradition. Spinoza, for instance, had no use for repentance. "Repentance is no virtue, in other words it does not arise from reason; on the contrary, he who repents of an action is either miserable or impotent."

Finally—What is the attitude of Marx towards religion? He says "Religion is the laudanum (opiate) of the people," and his vehement modern disciple tells us that "No influence was more persuasive than that of Wesley in inducing the masses in England to accept the grim discipline of the new factories in return for the dubious consolation of an unproved and unprovable eternal bliss."

Mr. TITTERINGTON said: In any discussion of Marxism we need to keep our minds clear of what has been taking place in Russia. There has been only a partial application of Marxist principles in Russia, and there is certainly no classless society.

A classless society is neither desirable, nor possible. Just as in the physical world there is a law of increasing entropy, so that when

entropy reaches its culmination there is nothing but stagnation and death, so there is a kind of social law of entropy. A classless society, should it be possible for it to exist, would be stagnant; there would be no incentive, no active principle of life. But in fact it could not exist; for a truly classless society would have no law, no government, and nothing making for cohesion, to hold its parts together—it would inevitably disintegrate. It would really be no society at all, and a “classless society” would be a contradiction in terms.

Christianity, in its social application, should not strive for a classless society, but rather to regulate the relations between the different classes of which society is composed: rulers and ruled, employers and employed, and so forth.

Rev. C. T. Cook said: I deeply appreciate the very able exposition of Marxism given to us by Mr. Pearce. It seems to me, however, necessary to point out that the Soviet leaders have departed radically from the Marxist theory in their government of Russia. A few years ago, that noted authority on Russia, Sir Bernard Pares, declared that “Communism is as dead as a door-nail in Russia.” Indeed, as far back as 1922, Lenin scrapped the Communist programme for what he called “The New Economic Policy”—in other words, he substituted State Socialism for Communism. New class distinctions are taking shape in the Soviet Union. Already there is a far greater disparity between the pay of Russian Army officers and the rank and file than is the case in Britain, and substantial rewards are paid to individual scientists and others who render outstanding service to the State. There are also many other signs that Russia’s present rulers are returning to the capitalist “evils” they are supposed to have repudiated.

Mr. C. E. A. TURNER said: Mr. Pearce is to be congratulated on his excellent examination of the Marxist position and the issues involved. It is agreed with the author that Marx gives an economic interpretation of history, but this is only one of several viewpoints, and perhaps we can accept it *as such*. But history is affected by personalities, ideas, scientific enquiry and religion. While all these are expressed in the economic sphere because man lives in a body, the material is only a vehicle by which the personal and spiritual

behind all things is expressed. Ideas reached by taking up one or even several viewpoints, like some photographs, can be very distorted. What is needed is the comprehensive survey, and this can be done only by and in the revelation of God, Who declares the end from the beginning (Isaiah xlvii, 10)—even of history!

Communism may claim to “liquidate” all classes, but social classes do not disappear. They are replaced. Communism does not do what it teaches; it is self-contradictory. It merely changes the form or arrangement of the social strata. It gives no true freedom, but brings those it liberates from one tyranny under another. It replaces one faith for another.

We reject Communism on the best grounds when we say that it is quite contrary to the tenor of Scripture, Old Testament and New. Social classes were made and accepted in the Old. The teaching of the New did not attempt to change them, but sought to produce harmony between them—not “class war.” Also there is nothing approaching Communism in the future kingdom of God.

WRITTEN COMMUNICATION.

MR. ARTHUR CONSTANCE wrote: This paper is timely and of vital importance. It is evident that world events will compel us all to make up our minds, one way or other, regarding the validity of Communist dialectic. I feel that the author of this paper should have emphasised much more clearly, in his opening sentences, the vast difference between the “communism” of the Christian Church in early times and this sinister political ideology of to-day. Some of his sentences in this connection might have been written by someone endeavouring to relate the two. And there is quite obviously no connection whatever. Surely it is evident that Socialism—all forms of which are materialistic, and promise material gain to the envious, in opposition to the plain fact that we are pilgrims and strangers in this world, with our hopes rooted in another—has no Scriptural sanction whatever. Marxian Socialists harp on the “brotherhood of Man” and ignore the countless passages in Scripture which show that men are *not* equal. The political content of the Bible—if such a term can be used—is one of social degrees: kings, lords, rulers, masters and servants. Our Lord recognised all forms of class distinction, and preached no revolt of one class

against another. His teaching is exactly that of the Victorians who believed that we should be content with our lot, in the place God has appointed. It is this other-worldly humility, emphasis on the *spiritual* at the expense of the *material*, contentment to suffer social or personal injustice, which is so diametrically opposed to Marxian materialism, and which is truly anathema to all Socialists. And the paradox of the position is that God has used the humble, the other-worldly, the *unsocial* humans of the world far more than its political busybodies and rebellious reformers. The author gives Marx credit for a sincerity which was non-existent. Marx was no "member of the proletariat," of the "toiling masses." He was a fraud.

885TH ORDINARY GENERAL MEETING

HELD AT CAXTON HALL, WESTMINSTER, S.W.1, ON MONDAY,
23RD MAY, 1949.

ERNEST WHITE, ESQ., M.B., B.S., IN THE CHAIR.

The Minutes of the previous Meeting were read, confirmed and signed.

The following election was announced:—Arthur V. K. Gilbey, Esq., Member.

The CHAIRMAN then called upon Sir Frederic G. Kenyon, G.B.E., K.C.B., Litt.D., LL.D., F.B.A., to deliver his Presidential Address on "Jesus Christ or Karl Marx."

PRESIDENTIAL ADDRESS

JESUS CHRIST OR KARL MARX.

BY SIR FREDERIC G. KENYON, G.B.E., K.C.B., D.Litt.,
LL.D., F.B.A.

THE object of the Victoria Institute, as defined at its foundation in 1865, is "to investigate fully and impartially the most important questions of Philosophy and Science . . . with the view of reconciling any apparent discrepancies between Christianity and Science." At that date the challenge of Natural Science was the main danger which Christianity had to face. The vast extensions of scientific knowledge and of scientific investigation seemed to threaten not only the traditional beliefs of Christianity, but the need for religion itself. The claims of Science were both far-reaching and backed by confident self-assurance, while on the other hand, it must be admitted that much of the current defence of Christianity was based upon inadequate knowledge and unsound assumptions. The relations between Science and Religion had to be re-examined, if the old beliefs and the new knowledge were to be reconciled.

That was the task which the Victoria Institute, nearly a century ago, set before itself; and I think we can claim with confidence that the Institute has carried out its mission. Much dead wood in current beliefs has been cut away; great additions, tending to confirm our Christian faith, have been made to knowledge; while on the other hand the claims of Science have been greatly abated by the realisation that Science by no means covers the whole field of existence so fully as its self-confident

advocates of that generation believed, and that the fields of Religion and Natural Science were not mutually hostile but mutually complementary.

But the work of the Victoria Institute is by no means finished by this establishment of healthier relations between Religion and Science. Nor should we reconcile ourselves to the assumption that our main task now is to discuss minor problems of Biblical criticism—to play, so to speak, in our own garden without much thought of what is going on in the world outside. To my mind, it is more in accordance with the principles of the Institute and with the spirit in which it was founded, that we should concern ourselves with the wider problems which threaten the existence of Christianity itself. It is no longer a question of harmonising the apparently divergent views of Science and Religion; it is a question of defeating a vast movement which would abolish religion altogether, and would corrupt Science into a pseudo-science “falsely so called,” a perversion of the true ideals of disinterested and untrammelled research.

I cannot but believe that this is a challenge which it is in accordance with the spirit of our foundation that we should accept. It was not the intention of our founders that we should concern ourselves with the mint, anise, and cummin of Biblical criticism, but that we should vindicate Christianity in the face of the great hostile force which then appeared to threaten it. To-day, Christianity is threatened, even more formidably, by a new hostile force which claims irretrievably to destroy it; and I believe that our Institute will perform its highest duty if it girds itself to take its part in the great struggle with which Christianity, liberty, and civilisation itself are now confronted.

For that is indeed the position to-day; and it is high time to awake out of sleep before it is too late. Half Europe now, if not in its own heart anti-Christian, is under bitterly anti-Christian domination; and its leaders are inspired with a fervent belief in their own cause which makes them truly formidable. And (what seems to me more alarming still) on our own side we see no comparable confidence, no unity of faith, such as to assure us of an equal solidity of resistance upon our side. Our beliefs, no less than our material resources for armed defence, are in disrepair in the face of an insistent enemy. Like the Jews under Nehemiah, we have to rebuild our walls while keeping our material weapons at hand for immediate use in case of attack.

We are indeed paying the penalty for two or three generations of ease and self-satisfaction. The change within the past half-century has been very marked. In my younger days, in the country, church-going was habitual—evening as well as morning in many cases. During my time at Oxford, in the eighties of the last century, attendance at the University sermons was spontaneous and very large. The capacious galleries for undergraduates were full, Sunday after Sunday, and preachers such as Liddon, Farrar, Gore, Scott-Holland, Sanday, Boyd-Carpenter, packed the whole church to capacity. In the nineties, when I was in London, it was difficult, except by favour, to get a seat in the Temple Church, where Vaughan preached in the morning and Ainger in the afternoon; and other preachers drew large congregations elsewhere. Church-going was, in fact popular, among younger people as well as old, and this certainly continued into the twentieth century. The change within the last half-century is very marked. Church-going now is definitely not popular. Congregations, whether in town or country, are normally small—a mere sprinkling, compared with the crowded churches of the previous generation. When I was a sidesman at Harrow in the nineties, it was definitely difficult to find places in the large parish church on Sunday mornings. At Oxford the large undergraduate gallery in the University Church is gone; in our country churches the regular attendants are scattered thinly over the seats. The contrast is obvious and distressing.

And yet this does not imply hostility to the Church, and still less hostility to religion. What it does imply is a growth of indifference, of loss of interest in the definite teaching of Christianity. And though very general, it is not universal. What is serious, is that this loss of interest carries with it a loss of strength, and an absence of common and enthusiastic action against a common foe who, for his part, does not lack enthusiasm. And it must be added that the substratum of Christian belief is far weaker in most European countries than in our own.

Now, this weakening in Christian confidence is, to my mind, largely the result of the liberalistic scholarship of the latter part of the nineteenth century. In spite of the solid scholarship of such writers as Lightfoot, Salmon, Sanday, Gore, and many others who might be mentioned, there was an effervescence of destructive criticism, emanating chiefly from Germany and Holland, which shook the credit of the records on which our knowledge of Christianity stands. The dates of the New

Testament books were questioned, their authorship drawn into doubt, and their authority as a true record of our Lord's life and teaching so shaken as to be reduced almost to the personal preferences of each new critic. If the scholars could so differ among themselves, what was the plain Christian to think? Was it worth while to come to church to listen to teachings of such questionable authority? For this shaking of our foundations we are paying the penalty to-day.

What then is the remedy, and in particular, what is the duty of our Society? To my mind it is not so much the simple advocacy of Christianity as against Communism, as the provision of the sound basis of scholarship on which the fight against Communism can be carried on. We must regard ourselves as the *scholars* of Christian belief, who can give confidence to its more popular advocates who fight the enemy on his own level. If it was the liberalistic teachings of the extreme left-wing that shook the confidence of the ordinary student or reader in the first half of this century, it is the constructive scholarship of our present-day knowledge that must re-assure it; and that is precisely what modern scholarship is able to do. It is also precisely the kind of work that the Victoria Institute is intended by its constitution and initial purpose to undertake.

It is, to my mind, the prime duty of the Institute to make known the historical bases of Christianity; and for this the archaeological and literary developments of the twentieth century provide a strong equipment. Fifty years ago it was claimed that the results of scientific research had invalidated the traditional historical basis of the Gospels: and it is the conclusion of this fifty-years-out-of-date scholarship that is still being thrust upon us as the latest light of Science. The fact is that the trend of modern scholarship has for the past generation or more been quite the other way. This is the trend of scholarship for scholars' sake, not the partisan claim of Christian apologists. It can be asserted with confidence that the tendency of modern scholarship has for the past generation been to establish more firmly than ever the historical basis of traditional Christianity; and Christian advocates are now in a position to take the offensive with confidence on this basis. It is the destructive criticism of fifty years ago that is now out-of-date; and it is the function of the Christian apologist to convey this assurance to the general body of those who concern themselves with the study and practice of the Christian faith.

Here, as I see it, is the special position of the Victoria Institute in the fighting line to-day; and it is because I cannot expect to be associated much longer with the formation or expression of its policy that I am taking the opportunity of our Annual Meeting to lay before you the policy which I believe to be the historical function of our Society, and to ask you to consider its applicability to the circumstances of our own day. It is not our duty to be retrograde or anti-progressive in our attitude to modern developments, but rather to be forward in welcoming them, in sifting them, in assimilating and in interpreting their results. We should, by our constitution, be the vanguard in the study of modern thought, scientific and religious; not the rearguard, unwillingly accepting results as they are forced upon us. That, at any rate, is the policy which I wish, from the position in which you have placed me, to commend earnestly to your attention.

I ought at this stage to apologise to you. Please do not suppose that I think that the members of our Institute need any conversion to the views that I have been advocating. One does not look to find here extravagantly "advanced" opinions which, half a century ago, claimed to represent the results of liberal scholarship. In this sense I am preaching to the converted. My object, however, is to urge on the Institute and its members the urgent need for a forward policy; that it is not now a time for the cultivation of our own plot, but for positive action against scepticism, and for the provision of the armour and ammunition required to secure the Christian faith against the aggressions of anti-Christian secularism.

For this purpose it is necessary that we should realise the great advances which have been made during the past half-century in increasing our knowledge of historical facts, in both the pre-Christian and the Christian periods. For our present purpose it is a matter of great importance that these advances have, for the most part, been in the field of archaeological and historical scholarship, which is not open to the charge of being corrupted to serve controversial ends. We are able to appeal to facts, not to partisan imaginings. We have the scholars on our side now, not against us.

I need hardly remind a society such as ours of the extent to which this is true of the past half-century. It applies to both the Old Testament and the New. In the field of the Old Testament, our knowledge has been revolutionised by the discoveries

of the 19th and 20th centuries. Instead of being an isolated nation between the great but dimly known empires of Egypt and Mesopotamia, the Israelite community has taken its place among a congeries of peoples, large and small, which occupied all the area between the valley of the Nile on the south, the rivers of Mesopotamia on the east, and the Hittite-occupied areas about the Halys on the north-west. We have been learning much of their history, their literatures and their religions, and can see the little nation which so strenuously followed the worship of Yahweh holding its own among them, and gradually, as knowledge grew and revelation came, extended its claims to a universality in which all the nations of the earth should be embraced. We are able to see this as a rational progress from the closely circumscribed limitations of the worship of the God of Abraham, of Isaac and of Jacob, up to the astounding claims of universal comprehension formulated by the great prophets. Yahweh is the king of *all the earth*: Sing ye praises *with understanding*—with a realisation, that is, of all that is meant by this amazing claim.

We have learnt, also, to view the development of the Hebrew people, not as an isolated phenomenon, but in relation to the development of the peoples around it. We know now that writing, instead of being a late invention of about the time of Saul or David, had been known and familiarly used among the peoples of Egypt and Mesopotamia from the fourth millennium B.C. We have codes of law from Babylonia and other Mesopotamian peoples which are coeval with, or much earlier than, the age of Moses, and need no longer be afraid of attributing to the Israelites at the time of their entry into Palestine an elaboration of detail which formerly seemed incredible. From the discoveries at Ras Shamra we have learnt much of the Canaanite religion which was the rival of the worship of Jehovah throughout the history of the two kingdoms. I should apologise for dwelling upon these facts which are well known to all of you; but I want to remind you how strongly we are now based in our knowledge of the history and literature of the Israelite kingdoms, and that it is no longer a welter of uncertain and unrelated details which the critic was free to handle to suit his own particular purpose.

And if this is true of the Old Testament, and of our progress in acquiring an ordered and logical view of its development, it is surely still more true in the more important and vital field of

New Testament study. It is difficult to realise—and I am sure many people do not realise, what an epoch-making change has been made by the discoveries of the last twenty years.

At the end of the nineteenth century, when the liberalistic wave in scholarship which still called itself Christian was at its height, our knowledge of the text of the New Testament was based on the two great vellum codices, the Vatican and the Sinaiticus, which criticism assigned to the first half of the fourth century. There was thus a gap of some 250 years between the date claimed for the composition of the Gospels and the earliest witnesses to their text. Compared with the records in the case of the great works of classical literature, this interval was small, and the text of these title-deeds of Christianity stood upon an exceptionally firm basis; but a considerable interval was left in which the imagination had a wide scope in fixing the dates of their origin and in imagining the course of their development. Of this scope, ample advantage was taken, especially in Germany and Holland, but not without adherents in this country. There was room then to imagine a considerable history of development in the production of the books now composing our New Testament, and the chain of evidence between the actual teaching of our Lord and our extant record of it was so attenuated that scholars and commentators had a great liberty to pick and choose as to the amount of teaching which they would allow to proceed from the Master.

It is this freedom of scope to spread the development of Christian teaching over a period of two-and-half-centuries that has been shattered by the discoveries of the last half-century; and I feel bound to repeat this assertion here, not because most (probably all) of you are not aware of the facts themselves, but because their weight is certainly not fully appreciated at large, and you are the means by which it can be impressed on Bible readers in general, and on those who do not read the Bible because they believe its authority to have been shaken by scientific criticism.

The last half-century has been the period in which the evidence of papyri has come in to supplement and to extend further back the evidence of vellum MSS.—on which we previously depended. And the bulk of this papyrus evidence has only come to light within the last fifteen years or less. Early in the century there were a few sporadic discoveries of Biblical texts on papyrus as old as or older than the great vellum codices; but the really

substantial advance was that made by the discovery of the Chester Beatty group of Biblical papyri, first notified at the end of 1931, and fully published, so far as the New Testament is concerned, between 1933 and 1936.

There was a discovery which at once sliced away a century from the gap which intervened between the composition of the Gospels and Epistles, and our earliest evidence of their text; for although the Chester Beatty MS. of the Gospels and Acts contains perhaps not more than a seventh of the complete text, it is yet extensive enough (except in the case of St. Matthew), to give a clear and substantial idea of the text of these essential books. And more than this. The text of the Chester Beatty Gospels and Acts shows so much difference in detail from the texts of the great uncials, whether Alexandrian or Western, as to show that a substantial period must lie behind it during which these books were circulating and passing through the normal stages of manuscript transmission.

The period during which the long and tangled processes of evolution, envisaged by the "advanced" critics, during which the Gospels emerged from a series of writings and re-writings, and the epistles of St. Paul were being put together from scattered fragments among the archives of the churches of Asia, was already becoming inconveniently narrowed, and much of the destructive criticism which had its heyday at the end of the nineteenth century had already been so much shaken that an impartial observer would have ruled it out of court. But more was still to come; and it is this latest evidence of which the full effect does not seem to me to be yet fully appreciated, and which I therefore ask your leave to emphasise once again. This is the fragment of the Fourth Gospel discovered by Mr. C. H. Roberts in the John Rylands Library at Manchester, and published in 1935; supplemented by the remarkable non-canonical fragments in the British Museum, published in the same year by Messrs. H. I. Bell and T. C. Skeat. Both manuscripts are assigned by palaeographers, both in this country and abroad, and on purely palaeographical grounds, to the first half of the second century—say about A.D. 120–140.

Now although the Rylands fragment is so small—only a few square inches—its evidence is decisive. Where there is now this tiny scrap, there was once a complete copy of the Fourth Gospel—the Gospel which by common consent of scholars of all schools is the latest of the books of the New Testament. If that was

circulating in Egypt about A.D. 120-140, it is mere perversity to deny that the origin of the book itself must be pushed back at least to the beginning of the century—to within a negligible distance, that is, of the traditional ending of the life of the apostle whose authorship, in its concluding chapter, it claims. Such a claim, made half a century later, might perhaps have passed muster as a legitimate literary device; but is it conceivable that, if it were not true, it could have been made within a few years of the death of St. John, when many were alive who knew him, and who would have repudiated a false claim by some unknown contemporary? If the dating of this Rylands fragment holds good, surely any rational criticism must admit that the case for the first-century date of the book and the authorship of St. John is so strengthened that it is mere perversity to deny it. To mention it, and then ignore it, as is done by the Bishop of Birmingham, is the abnegation of scholarship.

How much can be added to this by the British Museum fragments of an unknown Gospel, may be a matter of discussion; but it is surely quite impossible to deny some connection between the Fourth Gospel and a narrative containing such definitely Johannine phrases and so clear a Johannine colouring as the following: "Search the Scriptures, in which ye think ye have life; these are they which bear witness of me. Think not that I came to accuse you to my Father; there is one that accuseth you, even Moses, on whom ye have set your hope . . . And the rulers sought to lay their hands on him that they might take him . . . and they could not take him, because the hour of his betrayal was not yet come. But he, going out through the midst of them, departed from them." The exact relation between this narrative and that of the Fourth Gospel may be a matter of dispute; but that there is a connection, and that it confirms the early date of the Gospel, can surely not be denied.

I must apologise to those of you to whom the facts that I have been reciting are familiar, and for repeating what I have said about them elsewhere; but they are of such fundamental importance for the history of the New Testament and of Christianity, that one may surely be pardoned for dwelling upon them, and for urging you to make them as widely known as possible. Otherwise they may fail to make the impression they deserve on popular opinion. One can see what may happen from the example of the Bishop of Birmingham. He mentions the Rylands fragment of St. John, and then proceeds to ignore it.

He does not, or will not, recognise that it blows the whole of his argument to pieces. If the Fourth Gospel was not only in existence but in circulation so far away from its probable place of origin as Egypt in the course of the first half of the second century, nine-tenths of the ingenious theories of the origin and structure of the Gospels falls to the ground, because there simply is not time for the complicated processes of development which they advocate. *The history of the New Testament literature has got to be confined to the first century of our era.* That, as it seems to me, is the inescapable result of the discoveries of the last fifteen years; and it is the duty of the scholars who are acquainted with and appreciate the value of this evidence—of the members of our Society perhaps in particular, to spread the light as widely as they can. This is my apology for going over the ground again to-day.

We have thus to cut away, once and for all, a great mass of literature and learning which has cumbered the ground during the past two or three generations, and to go back to the area so well and honestly cultivated by the great English scholars whom I have already enumerated—Lightfoot, Salmon, Gore, and their colleagues and successors. Within the period indicated there is plenty of work to be done; but within those limits it must be kept; and I trust the Institute, with the zeal and earnestness that characterise it, will play a leading part both in the researches that have to be made, and in disseminating their results to the multitudes of interested listeners.

For that there are multitudes of such listeners I believe, if we can only win back their attention to these matters, and convince them of their vital importance for the contest and materialism and secularism with which we are faced. And one method which I think we should stimulate with all the power at our disposal, is the revival of church-going. How else are we to reach the great mass of our population? "How shall they call on him in whom they have not believed? And how shall they believe in him of whom they have not heard? And how shall they hear without a preacher? And how shall they preach except they be sent; as it is written: How beautiful are the feet of them that preach the gospel of peace, and bring glad tidings of good things?" That, I believe, is the function of the Victoria Institute in the present time of crisis. It is not enough to lead decent lives and reject the allurements offered by Communistic advocates. What is needed is the

affirmation of a faith, to meet the faith of Communism. The original task of the Institute, to establish better relations between Christianity and science, has, as it seems to me, been largely accomplished. We have now to take on a new task, to resist the inroads of Marxist Communism. In this conflict our task is, I think, to provide the scholarly basis, to assure Christians generally that our foundations stand firm, and to rally the forces that fight for Jesus Christ against Karl Marx. And the special point which I am anxious to urge to-night is that the Victoria Institute should be active in this fight, not passive. We should be in the forefront of scientific, well-informed, criticism, not lagging in the rear.

At the moment, the outlook may not seem too good. The forces of civilization are only now rallying to meet the threat which comes from the east—a threat directed by determined men with enthusiastic followers. The threatened civilisations have been divided, some of them shaken by recent unsuccessful war, and with no common spiritual ground of resistance. It is that which we have to restore. Politically much has been done in the last few months; what we need is that this political unity should be supported by a spiritual unity. And though the task appears difficult, we should not despair. The Church has often been in a minority. It has survived more threatening storms than these.

We have, I think, to realise more clearly both the danger that confronts us, and the forces which we have with which to meet it. On the one hand, anti-Christian Communism is active and is ably organised. But it should be realised that it is largely a façade. The mass of the peoples of the Communistically ruled countries is by no means wholeheartedly Communistic; part is definitely opposed to Communism, but is terrorised by force; much is indifferent. The Communistic challenge must be faced, and it may be found more hollow than it at first appears. On the other hand, there is plenty of evidence, which may be found in the reports of the British and Foreign Bible Society and the S.P.C.K. and S.P.G., of a world-wide demand for Bibles, far greater than the printing trade is at present able to meet. We should therefore, maintain unshaken our confidence that Christianity will come through this crisis as it has come through many crises in the past; only we must realise that it is our duty to put our shoulders to the wheel. We have a right to hope; we are bound as Christians to believe; and in this hope, and this faith, it is our duty to go forward.

DISCUSSION.

The CHAIRMAN (Dr. Ernest White) said : We are greatly indebted to our President for the important address which he has delivered. Sir Frederic Kenyon is not only a great scholar, foremost in the ranks of New Testament experts, he is also an old and trusted warrior in the battle for truth. We are grateful to him for putting his keen intellect and wide knowledge at the disposal of the Victoria Institute.

The subject which he has chosen is of very great importance for the future of civilisation. The war between communism and Christianity is not merely a clash of theoretical or philosophical ideas, it is a practical, living issue between all that is best in Western civilisation on the one hand, and a Godless system on the other, a system which would destroy human liberty as we know it, and overthrow the Christian faith.

Historic Christian faith has suffered from severe and repeated assaults during the past hundred years.

With the great scientific discoveries of the nineteenth century, theories were put forward which culminated in a mechanistic hypothesis of the Universe. The Universe was represented as a vast machine operated by blind laws, without intelligence or purpose. There was no need for God in all this, or if the conception of God was permitted at all, He was relegated to the position of an original first cause Who set the machine going at the beginning, but had nothing further to do with it. God became superfluous. Things could continue very well without Him.

In another direction, the Christian faith was assaulted by liberal theological theories which undermined belief in the truth of the Bible. Of many ministers of religion it might be said, "How shall they preach if they do not believe what they profess to teach." The man in the street became confused, and it was not altogether the fault of the people that they ceased to go to Church. Faith was undermined. Men and women of our generation are perplexed and confused. Someone has likened their mental attitude to a big question mark.

Hence the great importance of what Sir Frederic Kenyon has stated to-day about the early authorship of the New Testament writings. He has presented us with no mere theory, but with an objective fact, the discovery of the fragment of St. John's Gospel

on a papyrus dating back to the early part of the second century A.D. The date of the fourth Gospel has been a battle ground of opposing theories for many years, and now we have incontrovertible evidence of its early date. This gives the final blow to theories of myth or legend put forward in the past, and proves that the records of the life and sayings of our Lord were written down and circulated within a generation of their occurrence.

Our President's address contains a two-fold challenge.

In the first place, it is a challenge to all Christians. So many Christians appear to be ignorant of the historical evidence upon which rests the authenticity and authority of the New Testament documents. There is no longer any excuse for such ignorance. Recent discoveries have rendered untenable the older critical views which threw doubt on the reliability and early date of the documents. We are able now to give a reason for the hope that is within us, a reason founded on recent discoveries which demolish the edifice of Higher Criticism built up on wrong and imperfect knowledge.

In the second place, Sir Frederic issues a challenge to the Victoria Institute. It is our privilege, and we must make it our business, to give thinking men and women sound reasons for the faith which we hold. A great opportunity lies before us. We have the goods, and it is for us to make them known and to deliver them. We believe that the Institute has a great function to perform in the coming years, and we have been given a challenge which we trust will be meditated upon and accepted by the members.