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CONVIVIUM

(Michael Polanyi Newsletter)

"Our concern with Michael Polanyi's philosophy is not simply with what he himself taught, but with what we, learning from him, may do in carrying further the kind of scientific enquiry which he has taught so many of us." (Prof. Torrance, Edinburgh)

The Newsletter is intended to be a means of contact among those working in this spirit in any field, or simply interested in keeping in touch with such work. It is produced at Surrey University by Dr. Bob Brownhill and Miss Patricia Smart, backed up by a small committee which meets to consult three or four times a year. We would be glad to hear of anyone who would like to join this committee, which was originally set up at the 1975 Polanyi conference in order to launch the Newsletter.

The members of that Cumberland Lodge conference decided not to set up a Polanyi society, since some of those present objected to the idea of a society attached to one man's name. (There is in the U.S.A. a Polanyi Society with which we keep in touch.)

The Convivium committee have in fact widened their scope and have been responsible for arranging a number of conferences. Last year there was a conference on education held at Oxford University, and so far this year there has been a day conference at Manchester University sponsored jointly by the British Society for Phenomenology and the Convivium committee; and a weekend residential conference at Surrey University on Science and Society sponsored jointly with the University Philosophy Department.

Convivium can only fulfill its function with the active participation of its readers. Please write and say what you would like included, what meetings or conferences you think should be arranged, and tell us about relevant books or articles you have read, or what you are writing and thinking.

Members of the Convivium committee ,1977:-

Richard Allen
John Brennan
Robert Brownhill
Joan Crewdson
Robin Hodgkin
Magda Polanyi
Drusilla Scott
Patricia Smart

Reports on Conferences

One-Day Conference on "Polanyi and Phenomenology" held at Manchester University, February 19th 1977.

The conference was held jointly with the British Society of Phenomenology. Twenty five people attended including Mrs Magda Polanyi.

The first session began with a paper by Dr. Wolfe Mays , Manchester University, on ' Polanyi, Piaget, Popper and Husserl'. Dr. Mays drew out significant themes connecting Polanyi and Piaget, with briefer references to Popper and Husserl. In the course of this discussion he drew upon his own contacts with Polanyi in Manchester, especially regarding Polanyi's interest in the question of inference machines which some people at that time believed to be about to replace human minds. This part of the paper was enlivened with several amusing anecdotes. Dr. Mays expressed his intention of publishing a version of this paper in a revised form in the British Journal of Phenomenology at some later date.

The second session consisted of a symposium between Dr. Francis Dunlop (Cambridge University, Institute of Education) and Mr. R.T. Allen (Loughborough College of Education) on 'Polanyi and Phenomenological Ethics'. Dr. Dunlop began by outlining the chief aims, methods and concerns of phenomenological moral philosophers, especially Scheler, Hildebrand and, above all, Hans Reiner, the realist branch of phenomenology, rather than its Idealist or Existential tendencies. He stressed their attempt

to do justice to all aspects of moral experience, their comparative lack of interest in justification, their stress on the moral competence of the ordinary moral agent in the concrete situation, their acceptance of the distinctive character of morality, their attempt to articulate the principles which already inform moral judgment, and their basic trust in moral experience. These philosophers, accepted the necessary basis of morality in intuition, not a coldly intellectual intuition, and held the world of actual experience to be charged with value. Value was for them the foundation of ethics, rather than duty; and ethics could not 'save' the ordinary man for only his own moral insight could do that. Dr. Dunlop made reference to an underlying similarity in spirit of Polanyi's philosophy with phenomenology.

Taking up the theme of value, Mr. Allen argued that Polanyi's philosophy of tacit integration restored reality to value and vice versa. He referred to Polanyi's ideas on the necessary self-evaluation of all our intellectual operations, to the evaluation and criticism of the subject-matters of biology and technology in terms of the operational principles of organs and machines, and to the yet more complex necessary elements of evaluation in psychology and history where in the latter the subject matter (great men) may well judge the historian. Polanyi united what German philosophy has often sundered - the *Verstehen* of the humanities and the external observation of natural sciences - by means of his introduction of his concept of indwelling, common to all disciplines (and all moments of life), but increasing in scope and complexity as one moves from physics and chemistry, via biology, technology and psychology, to history. Polanyi's conclusion was that there were no valuefree sciences: intellectual passion had integral functions even in physics in the selection of items of scientific interest and value, in the appreciation of intellectual beauty as a clue to reality, and the urge to communicate discoveries. Knowing and Being pp.33-4 were cited with reference to the impossibility of bracketing all moral standards in the study of human action. Reference was also made to the impossibility of any casuistry in a Polanyian perspective, and Mr. Allen concluded by emphasising Polanyi's rehabilitation of value against objectivism.

In discussion Dr. Dunlop wondered if this really was value that was being discussed, and Mr. Allen wondered if Dr. Dunlop was too closely associating value with moral value.

The final session on basic themes in Polanyi and phenomenology was introduced by Dr. Wetherick (Aberdeen University) who spoke ex tempore on his interest in Polanyi and phenomenology as a psychologist. He and the following discussion concentrated on the issues of the logical distinctiveness of minds, machines and organs, and theological notions in general, some people questioned and others argued for Polanyi's emphasis on the irreducibility of teleological and intentional phenomena.

It was generally agreed that an interesting and enjoyable conference had been held appropriately in Manchester, where Polanyi had lived and taught for many years.

R.T.A.

Weekend conference held at Surrey University 25th -27th March 1977 on the theme of 'Science and Society' and organised by Convivium and the University Philosophy Department .

This was a very successful conference. Dr. John Baker, F.R.S. (Oxford University) spoke about his own and Michael Polanyi's contribution to the work of the Society for Freedom in Science. Mr. John Brennan gave an interesting paper on the relevance of Polanyi's ideas to the organisation of science. Professor Shivesh Thakur (Surrey) lectured on the possibility of developing systematic modes of thought relevant to different states of consciousness. Professor John Ziman, F.R.S. (Bristol) developed some of the ideas which he had first put forward in his book Public Knowledge. Dr. R.J. Brownhill and Dr. N. Ragg (Surrey) presented a controversial paper arguing that Polanyi had not succeeded in making a clear distinction between pure science and technology and had not therefore satisfactorily established his argument for their different forms of organisation. A number of the arguments had been previously put forward by Brownhill in his paper 'Towards a Philosophy of Technology', Scientia, Dec. , 1969. Miss Patricia Smart (Surrey) ended the conference on Sunday morning by examining Polanyi's contribution to the

philosophy of science , and argued how he was exerting increasing influence. She thought that much of Polanyi's thought was complementary to that of Karl Popper and did not directly oppose it as was sometimes thought.

An interesting feature of the conference was a discussion group held on Saturday evening and led by Dr. Geoffrey Price (Manchester) on 'Science and Science Policy', and the general participation of conference members in the discussions held after each paper.

It is expected that Dr. Baker's paper and Mr Brennan's paper will appear in the journal Minerva. Professor Ziman expects to include his paper in a forthcoming book.

Report on an American conference by Drusilla Scott .

The American Polanyi Society and Skidmore College in New York State jointly sponsored a conference in June on the relevance of Michael Polanyi's thought to various disciplines. The Director was Harr Prosch. I was happy to accept Harry Prosch's invitation to attend, and was especially glad of the opportunity to meet some American Polanyi Society members including Professor William Scott and Dean Frederick Kirschenman.

Professor John Reed in his talk on 'Polanyi, Piaget and Education' drew some interesting parallels and connections between Piaget and Polanyi, e.g., their view of knowledge as rooted in our animal faculties but progressing by what Piaget calls outdistancing, Polanyi emergence. Both find a hierarchical structure and both see discovery as the key way of knowing. Piaget's 'schemata' have features in common with Polanyi's idea of 'indwelling'. Some morals were drawn from both these views of knowledge, for the educator wanting to rescue the practice of education from muddle and opportunism. Professor Reed remarked neatly that a child can do more than he can tell, but if he is taught explicit knowledge before he has the basis of tacit knowledge he will try to tell more than he knows.

Professor Pattee's talk, 'Illustration of Dynamic and Linguistic

Complentarity at the Cellular Level' was the one I was least equipped to follow, yet found the most interesting. It was also the best presented since we read it beforehand and Profesor Pattee gave a brief and much simplified resume and then answered questions with great skill. The argument seemed an application or enlargement of Polanyi's treatment of the code properties of DNA in Life's Irreducible Structure and in Meaning. I thought that part of what Polanyi and Pattee were saying could be summed up in the phrase -"the medium is not the message". Polanyi said that the discovery of the genetic code was supposed by some to prove definitely that life can be fully explained by physics and chemistry, but in fact it proved the opposite. DNA can only be a code because the order of the links in its chain is not determined physically or chemically. Pattee says, "Only by recognising the symbolic content of physical structures can we make any useful distinction between the living and the non-living world.", and he shows how the structure of DNA must be distinguished from its meaning, which can only be learnt from what the cell reads from it. "The cell actually reads and interprets its own genetic description and constructs what is described . This is not meant only as an analogy. I mean it as a commonsense, literal description of what the cell actually does." .. "Linguistic control transforms linguistic structures into dynamic activity"; "the process requires a dualistic complementary description if it is to be explained or understood. "However, such explanation can never be complete, and must ultimately depend on the tacit dynamics of the knower."

Dr. Bruno Manno in his talk set religious faith within the post-critical view of knowledge that is not wholly explicit but is fired by passionate and personal commitment. Professor Robert Innis spoke on "Polanyi's epistemology and the Philosophy of Language", and Professor Carol Fowler on "Tacit Knowledge and Cognitive Psychology". My notes of these last two do not now convey enough to me to make any worthwhile account of them possible. It was a heavy day with five diverse talks and my powers of mental digestion unfortunately flagged. I expect it would be possible to get copies of these two talks; I have copies of the other three and could lend them to any one who wants them. I am now convinced that the only way to get through such a solid programme is for the audience to read the papers

first and the time to be given up for discussion; the papers treated in this way would be much easier to take in.

All in all it was a very worthwhile experience, most ably managed by Professor Prosch. I hope we shall have an opportunity to welcome members of the American Society to some Polanyi conferences in England.

Miscellaneous Information

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John Brennan, a committee member, has just had a book published: J.M.Brennan, The Open Texture of Moral Concepts, MacMillan, 1977 in New Studies in Practical Philosophy (General Editor: W.Donald Hudson).

This book forms an important contribution to the contemporary debate about the logical character of moral judgments. The author sympathises neither with the prevailing naturalism nor with non-naturalism. Both these schools of thought are mistaken as moral properties cannot be reduced to non-moral, and moral judgments must be regarded as non-cognitive. There is, he claims, a moral point of view from which human action can be so understood, and interpreted that deliberation about it, and judgment upon it, are seen to be cognitive and rational modes of behaviour.

Prof. John Ziman, F.R.S., who spoke at our Science & Society conference has recently published a book entitled, The Force of Knowledge: The Scientific Dimension of Society, Cambridge University Press, 1976.

The Polanyi number of the Journal of the British Society for Phenomenology will appear in October, 1977. The contents are as follows:

- # 130 J.M.Brennan(London) The distinction between objectivity and objectivity in the philosophy of science
- # 131 R.J.Brownhill Freedom and authority: the political (University of Surrey) philosophy of Michael Polanyi
- # 130 Marjorie Grene Tacit Knowing: grounds for a revolution in (University of philosophy California, Davis)
- # 130b Rom Harre The structure of tacit knowledge (University of) Oxford
- # 136 H.Prosch Biology and Behaviourism in Polanyi (Skidmore College)
- # 139 W.T.Scott Commitment: a Polanyian view (University of Nevada)
- # 130 N.E.Wetherick Review of "Meaning" by M.Polanyi & (University of H.Prosch Aberdeen)

Michael Polanyi tells us his attention became focussed on the political implications of science when he met Nicolai Bukharin, a leading theoretician of the Russian Communist Party, who tried to persuade him that 'under socialism the concept of science pursued for its own sake would disappear', for said he, "the interests of science would spontaneously turn to the problems of the current five year plan". Well, that might be dismissed as naive soviet rhetoric but in other guises this essentially totalitarian idea is extremely insidious and widespread. It can be recognised in all countries of the world whenever planning and control of human activities are given long-term priority over human conscience and human creativeness.

Polanyi, instead of reacting to the threat of totalitarianism by withdrawing to a comfortable liberalism - as many people did in the thirties - started to work out an original philosophy of action and discovery. His theoretical scheme in no way contravenes science, but does transcend it and relates it to other creative human activities. Throughout his early life he had worked as one of the community of scientists in the relatively free, intellectual world of Europe which existed till Stalin and Hitler screwed the lid down. He knew from his own experience but also from the experience which came to him through friendship with men like Einstein that there was a connection between freedom, adherence to human values and commitment to truth at the personal level and the largely unpredictable flowering of human culture at the corporate level.

But these are fine liberal words: what sort of relationship exists between these things; between personal values and creativity; what are the springs from which they flow? Polanyi's book, PERSONAL KNOWLEDGE, which appeared in 1958 was his main attempt to answer such questions. This book made a mild stir at the time - more in America than in Europe - but it has never received the

attention is deserved, though there are now signs that this is changing. Thinkers in different fields seem to have rediscovered Polanyi, finding his concept of discovery crucial to their own approach - Joseph Weizenbaum the MIT computer theorist quotes him extensively, as does Professor Torrance, and F.R. Leavis refers to him enthusiastically in THE LIVING PRINCIPLE. But it is Polanyi's humane view of what a scientist is that makes him particularly attractive today. Polanyi sees Man the enquirer and Man the inventor, not as beings whose destiny it is to dominate nature, but as being part of nature, partners in it. There are echoes here of Teilhard de Chardin, but Polanyi, it seems to me, always kept his feet more firmly on the ground of science and reason than Teilhard did in his flights of prophetic imagery. There is one central idea in Polanyi's analysis which keeps his philosophy anchored in ordinary experience - that knowledge is not just what we can think and speak about. Knowledge, he stresses, is always built on foundations which run deep into our life experience and into the experience and orientation of our communities. He doesn't find it necessary to refer much to inexplicable entities like intuition or 'the unconscious' but he develops the idea that our highest actions - of discovery or of creating, for example, are always rooted in and made up of, simpler processes and parts. He calls this inarticulate infrastructure of our knowing 'tacit knowledge'.

In one sense it is glaringly obvious that we each possess and share important attitudes, feelings and orientations which affect what we think and do but which can't be clearly spoken about. Polanyi's primary achievement, which leads to new ways of thinking about psychology and society as well as science, was to provide an analytical framework of parts and wholes, and therefore of levels, in which such higher and lower aspects of knowledge could be rationally related.

The idea of tacit knowledge is of special importance in Polanyi's philosophy because it provides a powerful link between thought and action. If I know how to perform some complex skill, like riding a bicycle, there are some aspects of my 'know-how' which I can easily talk about - pressing down on the pedals for instance and pulling up on the handle-bars while steering at the same time. I may also be partly aware of the ways in which I stay in balance. There are, however, other aspects of this balancing and propelling act where my capacity is undoubted, made up, as it is of many skills and trials, but where I can't clearly analyse my actions. Part of my knowledge is clear; part is hidden. Now, some of this knowledge was acquired consciously while I was learning to ride my first bike and even before then in earlier acts of movement and balance. And it may be that there are some deeper aspects of competence which were inherited (probably there are), but this needn't concern us at the moment. Polanyi is not merely saying that there are layers of experience, some buried more deeply while others are more accessible. He goes further and says that from that great mass a certain amount of relevant information and related sub-skills are integrated in purposive actions. Some of these can be thought about and talked about quite easily; others aren't consciously known until they are revealed by careful investigation. Listen to what Polanyi has to say about riding a bicycle:-

I have come to the conclusion that the principle by which a cyclist keeps his balance while cycling is not generally known. The rule observed by the cyclist is this. When he starts falling to the right he turns his handle-bars to the right, so that the course of the bicycle is deflected along a curve to the right. This results in a centrifugal force (sic) pushing the cyclist to the left and offsets the gravitational force dragging him down to the right. This manoeuvre presently throws the cyclist out of balance to his left which he counteracts by turning his handle-bars to the left; and so he continues to keep himself in balance by winding along a series of appropriate curvatures. A simple analysis shows that for a given angle of imbalance the curvature of each winding is inversely proportional to the square of the speed . . . But does this tell us exactly how to ride a bicycle? No. You obviously cannot adjust the curvature of your bicycle's path in proportion to the ratio of the imbalance over the square of the speed; and if you could you would fall off the machine, for there are a number of other factors, etc. . . .

Similar ideas about how clear knowledge is rooted in shadowy knowledge or experience have been examined by others - especially philosophical psychologists like William James, or, more recently, by Professor Jerome Bruner, who would say that a child may gain 'enactive' knowledge of a complex skill, involving intention, balance and force, but he will only be able to gain articulate, explicit knowledge of it if he learns the language of physics, and is able to represent aspects of such experience in diagrammatic or mathematical form. But how does an individual move from diffuse knowledge to those precise modes of knowledge which characterise science?

Polanyi discusses the ways in which we use language and other articulate sign systems like mathematics, to make our acts more precise, manipulable, abstract. This involves high levels of self-monitoring and growing awareness of standards. And this in turn means that sometimes we look at ourselves with detachment and analysis predominating; at other times we look or act from ourselves - committing ourselves to un-selfconscious action. How can this be? Polanyi takes practical skills as his starting point and discusses a phenomenon which many people will have experienced - that if you start thinking about how you are doing an action while you are doing it, you will be likely to make a mistake. Stephen Potter exploited this idea in Gamesmanship. 'Analyse your opponent's putting', he says, 'for this is the golden rule. Ask him what muscles he brings into play and from which part of the body "the sequence of muscular response begins".' He will be sure to fluff the shot - why? Well, Polanyi says it's because you have broken up the wholeness of your opponent's action by getting him to attend to one of its parts. Polanyi uses the term 'focal awareness' for the integrated, sustained attention essential to a skilled performance; and he distinguishes this from that 'subsidiary awareness' which we have when we stop and think about part of our action - the working of a muscle, say, or the pressure of the pedals on our feet.