

CONVIVIUM

A six-monthly review of
post-critical thought

NUMBER 24

MARCH 1987

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NEWS AND NOTES

Our last number came out just too late to include the news that Professor John Polanyi had jointly won a Nobel Prize for his work on chemical reaction dynamics. He has our belated but nonetheless hearty congratulations. Some of you who knew Magda have remarked what a pity it was that she never lived to see it. And the newspaper of Manchester University - a biased source! - said of the prize 'It is made all the more meaningful since many people considered it was nothing less than a miscarriage of justice that his father before him...did not win that award'.

We have heard that Drusilla Scott's Everyman Revived - The Common Sense of Michael Polanyi (reviewed by Lesslie Newbiggin in Convivium 21) has been reprinted, and is available from The Book Guild, Temple House, 25 High Street, Lewes, East Sussex BN7 2LJ.

W.J. Neidhardt has kindly sent us a copy of his article published in the Asbury Theological Journal last year, 'Qualitative-mathematical relationship analogies in natural science and theology - the science of gentle hierarchies'. Starting from the premise that theology and science presuppose an intelligible universe, Neidhardt goes on to demonstrate that both disciplines use a similar approach to 'relationship analogies', and cites as examples Neils Bohr's wave-particle complementarity and the dialectical thinking of Karl Barth.

D. Bagchi.

A Kantian Critique of Polanyi's 'Post-Critical Philosophy'

During the past three-and-a-half years I have read seven issues of Convivium with mixed feelings. On the one hand many of the sentiments expressed in the name of Polanyi I have found most agreeable: the importance of passion and commitment in pursuing the truth, the insufficiency of a purely materialistic (or positivistic) explanation of the world, the importance of distinguishing between logical levels, the close connection between ontology and epistemology, the priority of faith over knowledge--to name just a sampling of the doctrines I have found interesting and worthy of assent. On the other hand, however, I have also been surprised to find in the same pages scathing criticism of 'transcendental' or 'critical philosophy' in general and of Kant in particular. After reading the last issue (number 23), with its juxtaposition of typically undefended rejections of this philosophical tradition together with numerous affirmations of the very doctrines defended therein, I decided finally to break the ice and dive headlong into the waters of Personal Knowledge (hereafter PK) in hopes of discovering the extent to which these misunderstandings can be

traced to misunderstandings instigated by Polanyi himself. To my surprise, the misunderstandings of the disciples seem in this case to be drawn almost entirely from the words of the master--a situation which is not often the case when comparing the works of great philosophers with those of their commentators. In this essay I shall use Kant's philosophy as a sounding board to help pinpoint some unfortunate misunderstandings contained in PK.

In his section on 'Logical Levels' (PK 343-346) Polanyi states what I think we would all want to uphold, namely that 'A man's illusions are not the same as his knowledge' (PK 344). Yet nowhere in that section, so far as I can see, does he actually explain how such a distinction can be made (or justified, once a person asserts it) in terms of his criterion of 'personal knowledge'. If 'I believe p' and 'p is true' are identical assertions, as Polanyi suggests on several occasions (see e.g. PK 305), if they merely represent the 'personal' and 'universal' poles of my commitment to p (see e.g. PK 255, 313), then on what grounds can a person distinguish between one belief which is true and another which is not? The natural answer is to suggest that certain universally accepted rules must be appealed to in order to help us sort out which beliefs deserve to be held with 'universal intent' (i.e. which can be asserted as 'true'). But Polanyi disallows such a suggestion: 'To accept commitment as the only relation in which we can believe something to be true, is to abandon all efforts to find strict criteria of truth and strict procedures for arriving at the truth' (PK 311). I find this demand most unreasonable. Why does the fact, that believing a thing to be true implies commitment to that belief, preclude the legitimacy of establishing objective criteria for truth? In contrast to Polanyi, I would argue (along Kantian lines) that committing myself to a belief (as opposed to regarding it as merely a personal opinion) requires a simultaneous commitment to some (strict, and even--dare I say--objective) criteria for truth. If all Polanyi really wants to prove is that it is impossible to 'eliminate' the 'personal coefficient' (PK 254) altogether, then I would certainly want to agree. But on many occasions he seems at least to be arguing for a thesis rather more extreme than this--and it is this extreme view which I have trouble accepting.

Polanyi argues that 'impersonal meaning is self-contradictory' (PK 253) because 'only a speaker or listener can mean something by a word, and a word in itself can mean nothing' (PK 252). 'The framework of commitment', he asserts at PK 303, 'necessarily invalidates any impersonal justification of knowledge.' These claims seem to me to be both true and false. It is quite true that words in isolation from their use within some context have no inherent meaning and that an entirely impersonal account of knowledge could not justify itself. Nevertheless this does not mean that words whose meanings are understood cannot be used impersonally, or that impersonal knowledge is always a false ideal. Kant clearly acknowledged the need to 'deny [impersonal] knowledge, in order to make room for [personal] faith' (Critique of Pure Reason [hereafter CPR], p. Bxxx). But he meant something

quite different by this than what I think Polanyi means. Kant meant to acknowledge essentially three points: (1) one cannot enter an epistemological system without adopting a rational faith in some key presupposition (e.g. in the 'thing in itself') as its unknowable starting point; (2) once such faith is implemented as a key to open the door to such a system, the conditions for objective knowledge can be outlined impersonally (i.e. without any explicit reference to faith); and (3) faith comes in again when deciding what to do with possible knowledge claims which do not fit perfectly with the given criteria for truth.¹ It seems, therefore, that the perspectives between which Kant carefully distinguishes in order to show how they are integrated, Polanyi merely blurs together as examples of personal knowledge. For Polanyi faith and knowledge are always thoroughly intermixed, because he recognizes only one perspective from which the world can be viewed, the empirical. He would accept (1) and (3) but reject (2). Kant admits that objective knowledge must recognize that it depends on faith for its ultimate justification, and that it must leave room for faith in other matters (i.e. it is not all sufficient), but in return for this it is given full reign over its rightful territory. He paves the way for the reductionist to reduce the reducible, so long as he recognizes the irreducibility upon which the very possibility for reduction is based. For once we have committed ourselves to the truth of a given belief or system of beliefs, the truths arising out of this context can be viewed apart from our commitment, so that a set of strict criteria for truth within that system can and do become very valuable rules to clarify and follow. Moreover, it is arguable that an awareness of such criteria within a system is more important for establishing truth than an awareness of the personal commitment which justifies such criteria, because a person can be (and generally is) unaware of his or her presuppositions and yet can still make valid discoveries within the system. But if such discoveries contradict the criteria for truth within that system, they will be false, and hence worthless to the system.

The one-sidedness of Polanyi's theory of meaning is well illustrated when he says 'it is as meaningless to represent life in terms of physics and chemistry as it would be to interpret a grandfather clock or a Shakespeare sonnet in terms of physics and chemistry' (PK 382). But would in fact the latter pair of interpretations be meaningless? I think not. The physicist and chemist would have some perfectly legitimate things to say about the mechanics of a grandfather clock or about the paper and ink used to print a sonnet. And what they say would have meaning, objective meaning! Polanyi's point (I hope) must be that an account in terms of physics and chemistry alone would not suffice to bring out the full meaning of the object under consideration. But how many physicists or chemists would say that it does? As it stands, Polanyi's assertion would be true only if 'meaning' means 'personal meaning' and if the physicist and chemist interpret things using impersonal meanings. Yet this latter is precisely the

view Polanyi is trying to combat, so it would seem odd if he were presupposing it in his argument!

The only explanation I can think of for why Polanyi adopts an exclusivist approach to the nature of truth is that his 'philosophy' (to the extent we can call it that--see below) is primarily not, as he would have us believe, merely a working out of his personal calling. It is that to be sure. But it is also (viewed objectively?) largely a reaction against the dangers of 'positivism', or 'objectivism', or--what he seems to regard as, virtually the same animal--'critical philosophy'. By 'reaction against' I mean to imply that Polanyi spends so much effort in saying 'no' to the positivist that his own work tends at times to take on a character not unlike his opponent. Polanyi seems to share many of the presuppositions of the positivist, such as that only one kind of knowledge is valid (personal knowledge), and that our 'modern society' is right in looking to the scientist as a 'guide' who can give us the authoritative word on matters of knowledge (see e.g. PK 375); but he swings the pendulum to the other side by replacing 'objectivist' epistemologies with what seems at bottom to be a 'subjectivist' epistemology: 'The only sense in which I can speak of the facts of the matter is by making up my own mind about them' (PK 316). Kant, of course, is also a subjectivist of sorts (though he is an objectivist as well). Indeed, I fail to see how Polanyi's statement here differs (aside, perhaps, from being an epistemological maxim rather than a practical exhortation to the man on the street) from Kant's 'sapere aude' ('Have courage to use your own reason'), which is flatly rejected as part of the 'Enlightenment' (and therefore wrong) at Convivium 23, page 21.

Polanyi does claim that 'the personal...transcends the disjunction between subjective and objective' (PK 300); but he never, so far as I can discover, explains how personal knowledge breaks away from mere subjectivity without the help of strict (objective) rules. For instance, what gives him the right to reject astrology or alchemy, as he does on several occasions (see e.g. PK 183, 354), as meaningless or false, or to judge of 'a Zande witch doctor' that 'his rationality is altogether deluded' and that 'as an interpretation of natural experience it is false' (PK 318)? This, I believe, is nothing but positivism disguised in the clothing of personal knowledge. (Doesn't the Zande also have a duty to accept his 'calling', which 'may be taken to include the historical setting in which [he has] grown up' (PK 324)?) Polanyi agrees with the positivist in believing that 'science is important--indeed supremely important--in itself' (PK 183), but argues that 'science' must be redefined in terms of 'the perspective of commitment' (PK 317, 328), i.e. in terms of personal knowledge.

Positivism seems to be regarded by Polanyi as a purely scientific prejudice. He shows little (focal) awareness in PK of the fact that positivism is also (indeed, primarily) a philosophical movement, or a set of philosophical presuppositions. Consequently, the personalist science he puts in its place is supported by very few explicitly philosophical arguments.

Instead Polanyi concentrates on what Kant would call 'empirical psychology' --i.e. on examining how knowledge actually arises (e.g. in children or animals). He shows no awareness of the difference between this and 'transcendental philosophy'--i.e. abstract reflection on the necessary conditions for the possibility of experience. His bias can be seen, for example, when he analyses 'discovery', which he says occurs only in science (!), and compares it with 'problem solving' in mathematics, and 'invention' in technology (PK 124ff). Rather than balancing these with analyses of various modes of creativity in the humanities, such as 'insight' in philosophy, he ignores this domain altogether. (He does, of course, admit the legitimacy of systems other than science, such as religion and art (PK 202), and even provides some helpful clues as to what such systems are on about. However, he distinguishes carefully between them and science by saying they 'are tested and finally accepted' by 'a process of validation', whereas scientific tests proceed by a process of 'verification'. Unfortunately, he does not clarify how this difference affects the participation of personal elements in the two types of knowledge which result.)

Polanyi makes no attempt to hide his own emphasis on science (except perhaps in the subtitle of the book, which could easily mislead the reader to expect 'a Post-Critical Philosophy', rather than a psychology and theory of science; perhaps this is why he includes the word 'Towards'). He says, for instance, that his purpose 'is to show that complete objectivity as usually attributed to the exact sciences is a delusion and is in fact a false ideal' (PK 18). At PK 256 he explains that 'objectivity...proceeds by a strict process, the acceptance of which by the expositor, and his recommendation of which for acceptance by others, include no passionate impulse of his own.' Polanyi's alternative is that scientists should follow his example, for he accepts the scientific theories of others 'personally, guided by passions and beliefs similar to theirs, holding in my turn that my impulses are valid, universally, even though I must admit the possibility that they may be mistaken' (PK 145). 'The selection and testing of scientific hypotheses are personal acts' (PK 30), from which he infers that scientific knowledge must be regarded as personal knowledge.

The deceptive thing about all of this is that it is true, but tells only half the story. Kant would certainly agree that objectivity cannot exist without being supported on a subjective foundation; but for him this foundation comes not in the form of empirical elements such as passion and belief, but in the form of transcendental elements (i.e. synthetic a priori rules) which make it possible to communicate objective facts as deserving of universal assent. Such transcendental elements are usually 'tacit' in our experience, except perhaps when we are doing philosophy; but this fact about our personality does not make these elements personal in Polanyi's empirical sense. Nor does it mean that personal factors such as passion and belief play no part in determining how Kant actually expressed himself. On the contrary, the perceptive reader of Kant can detect just as many pas-

slonate assertions, and just as many expressions of personal belief, in his writings as can the perceptive reader of Polanyi. Polanyi misunderstands the philosophical concept of objectivity if he thinks it rules out the presence of such personal elements on any level whatsoever. (And so do the positivists, of course.) It does not rule them out, but merely seeks to establish a perspective which abstracts from such elements even though it admits they are there, so that (as Polanyi himself would put it) our 'universal intent' can be made explicit. Kant is claiming to have laid hold of something which transcends our particular passions and binds us together necessarily as persons in communion with each other in so far as we admit to being rational, something the particular expression of which (even Kant's) will no doubt be coloured by one's own intellectual passions, but whose root lies deeper (or at the opposite pole altogether) and as such provides the very earth in which our passions can sprout and grow! Thus his transcendental philosophy is not so much impersonal as transpersonal: it is not like an 'anonymous cheque', as Polanyi suggests, but like a cheque signed by everyone and made payable to everyone.

Polanyi never explains how universal intent can itself be grounded in personal knowledge. This is no surprise, however, because its ground lies elsewhere: 'all our knowledge begins with [personal] experience', as Kant says at CPR B1, but 'it does not follow that it all arises out of experience'. Another way of saying the same thing is that only persons can adopt perspectives on the world, but this does not preclude the possibility of a person adopting an 'impersonal' perspective by abstracting from our own subjectivity as far as is possible--i.e. by committing ourselves to the pole of universal intent rather than that of personal knowledge. Polanyi himself acknowledges that 'the degree of our personal participation varies greatly within our various acts of knowing' (PK 36), and even that classical physics closely approximates 'a completely detached natural science' (PK 63). Given these admissions, it is difficult to see why he has such difficulty accepting the ideal of objective knowledge, so long as it is recognized as an ideal to which we can at best approximate but never fully realize in its perfect form as applied to empirical facts. For objective knowledge is personal in much the same sense that death is a part of life, or darkness a form of light, or cold a degree of heat: to reject one concept is implicitly to reject the other, since such concepts are defined by their opposites (what could 'good' mean if there were no 'evil'?). Polanyi's ill-defined concept of 'universal intent' either means 'approximation to objective knowledge' or, as far as I can see, it means nothing significant at all. But if this is what it means, then his 'two poles of commitment' might as well be called 'personal' and 'impersonal'--thus resolving the dilemma which keeps cropping up throughout PK by putting personal knowledge in its proper place, as one valid perspective, rather than the valid perspective, on the world.

In contrast to Polanyi's approach, Kant believed that an objectivist

understanding of scientific knowledge was correct as far as it goes, but that it represents only one perspective on truth. Objectivist science is therefore not to be redefined, but subordinated to the primary standpoint of practical reason. Kant's first Critique, with its limitation of knowledge and definition of strict criteria for objectivity, has often been used by positivists as support for their position. Indeed, something akin to positivism is propounded in CPR, but only as composing one standpoint (the theoretical) from which the world can be viewed in reflecting upon it. Theoretical knowledge does not tell us how the world we experience actually is, but only how it will appear to us if we choose to view it theoretically (i.e. objectively). Kant's intent, however, was not to limit all our knowledge to the bare facts of a positivist science. Quite to the contrary, his intent was to limit the positivist scientist's knowledge to the realm of objective facts, and thus to free us to develop other sorts of knowledge from other, equally valid, standpoints. In fact, the third Critique is devoted to an expansion of science beyond the limits of theoretical, objective knowledge, by showing that the scientist often has to work not only on mechanistic presuppositions, but on teleological (purposive) ones as well, especially when dealing with organisms. This is, in fact, quite consistent with much of what Polanyi is attempting in PK, especially when he discusses the scientist's 'discovery of rationality in nature' in terms of 'the art of knowing' (PK 64).²

The great danger in Polanyi's approach is that, if science necessarily includes Polanyi's blurred concept of personal knowledge, and if science is allowed to retain its false primacy, then we are in danger of losing even more to the authority of the scientist if we commit ourselves to Polanyi's programme of personalist positivism than if we accept the old objectivist positivism, which, try as it might, could not succeed in explaining our personhood in scientific terms. Objectivist positivism is deluded because it believes it can explain away our personhood without taking account of aspects of our experience such as those Kant discusses in the second and third Critiques--an ideal which most people these days merely snicker at as being obviously false. But personalist positivism is dangerous because it requires us to submit our personhood to the authority of our tradition, and hence to the scientist as its guardian, before we can discover what is true. It seems to me that it tends at least to deny the legitimacy of any non-scientific perspective on truth.

This criticism of Polanyi is, of course, not entirely fair, because he does try to recognize the proper role of 'the wider domains of a complex modern culture' (PK 375; see also 202). Nevertheless, I think there is more than a grain of truth in what I have said, for Polanyi does place science on a pedestal of authority which, especially given his mono-perspectival epistemology, would give the scientist a good deal more power than under an epistemology which takes into account the principle of perspective as it can be found, for example, in Kant.³

While I was preparing to write this paper, a friend asked me 'Are there any positivists around anymore?' Rather than recounting my answer, I will leave the reader to answer that one. Suffice it to say that positivism is no longer the threat--in philosophy at least--that it perhaps was thirty or forty years ago. The question which interests me more is: 'If it is no longer the positivists who pose the major threat to the philosopher, who does?' The answer Kant gives is still the most relevant answer to this question today. Polanyi adopted a position of personal 'dogmatism' (as he himself calls it at PK 266) in order to combat the objectivist tendencies of sceptical positivism. In Kant's day the dogmatic and sceptical ways of doing philosophy were already well developed. But rather than siding with one or the other, he argued that the most promising road for the 'Critical' philosopher is the middle road: the enemy is the extremist, whether in the guise of dogmatism or scepticism, personalism or positivism. And the extremist is the person without a sense of the role of one's perspective in defining what is true. In Polanyi's work there are, I contend, two strains of thought: one which ignores the principle of perspective and one which depends upon it--hence one which is to be rejected as extremist, and the other, accepted as properly critical.

By now it should be apparent that Polanyi grossly misrepresents 'critical philosophy' in general and Kant in particular in his chapter on philosophical doubt (PK 269-298). Polanyi uses the word 'critical' in an anomalous sense, according to which it refers generally to the whole intellectual movement which, over 'the past four or five centuries...gradually destroyed...the whole medieval cosmos' (PK 265) by implementing its 'new analytical powers' (PK 268). Whereas it has been assumed over this period that we must deny faith in order to make room for knowledge (PK 266), he argues for the opposite approach: 'We must now recognize belief once more as the source of all knowledge.... No intelligence, however critical or original, can operate outside such a fiduciary framework.' He shows no awareness that Kant had already argued for precisely such a relation between faith and knowledge (see above) two centuries ago, or that the name Kant gave to his System was 'Critical philosophy'. (And Kant, of course, is not the only philosopher in the last four hundred years who has admitted that synthesis is as important as analysis! For instance, the absence of any mention of Kierkegaard, with his emphasis on passion and commitment, is particularly conspicuous.)

Near the beginning of his chapter on doubt Polanyi proclaims: 'It has been taken for granted throughout the critical period of philosophy that the acceptance of unproven beliefs was the broad road to darkness' (PK 269). This generalization is so inaccurate that it doesn't even make a good joke! Polanyi supports his judgment (PK 269-270) by quoting Kant on the nature of mathematics (CPR B851), where, if anywhere, 'mere opinion' is out of place (or would Polanyi want to defend a mathematician who holds the opinion that $2+2=5?$), and by quoting Kant's criticism of Hume (CPR B805-6),

where it is not doubt which Kant is advocating, but certainty. Nothing Polanyi says about Kant suffices to put him in the tradition of Cartesian doubt, which he consistently eschewed. At PK 271-272 Polanyi does quote CPR B766, where Kant describes the importance of criticizing reason in all its endeavours, which Polanyi apparently takes to be equivalent to doubting. But Kant's understanding of criticism is just the opposite: rather than trusting reason enough to doubt any and all knowledge of objects (à la Descartes), Kantian criticism asks us to trust our knowledge enough to criticize any and all uses of reason. Criticism therefore rests ultimately, as I have already said, on a rational faith. Finally, Polanyi criticizes Kant's view of certainty in mathematics again at PK 273-274, arguing that Kant has failed to realize that the truth of any mathematical judgment depends on 'the acceptance of some not strictly indubitable framework'. From what I have said it should be obvious that Kant would agree wholeheartedly with Polanyi on this point. Yet this does not contradict Kant's plea for certainty in mathematics, for the acceptance of an overall (fiduciary) framework is not strictly a mathematical judgment. Once we have agreed to have faith in a given framework (e.g. one which defines '2', '+', '=' and '4' in such a way that $2+2=4$), it is surely proper to expect the valid judgments within that framework (e.g. that ' $2+2=5$ ' is always false) to carry a high level of certainty, as Kant suggests.

The irony of Polanyi's critique of philosophical doubt is that, whereas he sets out to defend faith in the face of doubt, it seems to me that he ends up criticizing the very certainty which faith is able to produce, and as a result devotes the bulk of the chapter to a defence of the significance of doubt. What else is his frequent reminder that we 'may be mistaken' about what we regard as knowledge, if not a newfangled version of Cartesian doubt?! A constant awareness of the perspectival difference between the acceptance of a systematic framework (by faith) and the acceptance of an element within that framework (by knowledge) is perhaps the most fundamental lesson to be learned from Kant. But Polanyi, it seems, never recognized this clearly enough to find a place for it in his personal knowledge. Instead, he seems to have been satisfied with viewing faith on a lower level, merely as equivalent to a tacit doubt in the sufficiency of the articulate (PK 277).

The perceptive reader will have perhaps noticed that I have used phrases such as 'It seems to me...' and 'I believe...' rather frequently in my discussion of Polanyi's ideas. The reason for this is not, as might be suspected, that I wish to pay lip service to Polanyi's notion of personal knowledge by admitting tacitly that my own judgments are merely affirmations of my own beliefs, as uttered in my tradition, in keeping with my commitment to my calling. On the contrary, if the assertions which follow such qualifiers are true, then they are true for reasons quite apart from my belief that they are true. Admittedly, my knowledge of their truth is

personal in the sense that it is me who has decided to believe them; but if they are true, they would have been true even if I had never been born, or had never decided to study philosophy. Indeed, the need to use such phrases is, it seems to me, one of the best arguments against Polanyi's doctrine of truth as thoroughly personal: to admit merely that 'p seems true to me' or that 'I believe p is true' is not the same as to commit myself to the assertion that 'p is true', for the latter alone makes an objective claim. To commit oneself to an assertion objectively is to believe that it is true for everyone. (Hence Polanyi's frequent claims that he is really only expressing his own personal opinions in PK are hard to swallow: he is also clearly interested in persuading the reader to agree that what he says 'is true', in an objective sense--otherwise why would he have wanted to publish his viewpoints? That is, Polanyi seems to be trying to hide his universal intent by stressing that it is nothing but personal knowledge.)

My actual reason for including such phrases is because I am well aware that a single reading of a book with any depth to it is not sufficient to yield complete understanding. That is, I have not allowed myself to indwell Polanyi's ideas enough to feel confident committing myself wholeheartedly to the truth of my interpretive judgments of his work. I admit that I may have missed something crucial, so that my criticisms may be largely misguided. (Yet I would not want to make the same claim for my interpretive judgments of Kant's philosophy, which is why such qualifying phrases will not be found in my discussion of his views.) My hope is that, as an 'outsider', my judgments of Polanyi will nevertheless be of some use to 'insiders' in reassessing their positions, and in 'leaning out' of their personal knowledge at least to the extent of recognizing the truly critical (rather than post-critical) character of that aspect of Polanyi's thought which is of lasting value, and of its consistency with much of the philosophical tradition which he unfortunately believed he was rejecting.

Notes

1. I demonstrate the legitimacy of this interpretation of Kant's view of faith and knowledge in two articles: 'Faith as Kant's Key to the Justification of Transcendental Reflection', Heythrop Journal 25 (1984), pp. 442-455; and 'Knowledge and Experience--An Examination of the Four Reflective "Perspectives" in Kant's Critical Philosophy', Kant-Studien 78 (1987).
2. Like Polanyi, Kant holds in the third Critique that the knowledge revealed from this new, purposive standpoint is both objective and subjective. Polanyi's analysis of problem solving and discovery as a search for the unknown (PK 127) is also consistent with Kant's discussion in CFR of the unconditioned and of the ideas of reason. The nature of discovery can best be understood in Kantian terms as a search for the 'analytic a poste-

riori', as I have argued in 'A Priori Knowledge in Perspective: (II) Naming, Necessity, and the Analytic A Posteriori', The Review of Metaphysics 41 (1987). The latter is the sequel to 'A Priori Knowledge in Perspective: (I) Mathematics, Method, and Pure Intuition', The Review of Metaphysics 40 (1987); in both papers I defend the a priori character of mathematics, which Polanyi discounts with a stroke of the pen, claiming that 'this view has been proved to be mistaken' (PK 274). It is rather surprising, incidentally, that, instead of saying 'I believe that this view is mistaken', Polanyi should couch his rejection in such objectivist terms, especially since he does not even provide a reference where the reader can inspect this alleged 'proof'.

3. Aside from the papers mentioned in the previous notes, I have defended and elaborated upon my interpretation of Kant's principle of perspective in the following papers: 'Six Perspectives on the Object in Kant's Theory of Knowledge', Dialectica 40.2 (1986), pp. 121-151; 'The Architectonic Form of Kant's Copernican Logic', Metaphilosophy 17.4 (1986), pp. 266-288; and 'The Principle of Perspective in Kant's Critical Philosophy', (currently being considered for publication in Kant-Studien).

S. Palmquist

Harry Prosch, Michael Polanyi: A Critical Exposition, State University of New York Press 1986.

I read Harry Prosch's book on Michael Polanyi with eager interest. It is a work of devoted study, written from a wide knowledge of Polanyi's work, and a background of philosophical knowledge which sets it in perspective. I found in the first three parts - "Diagnosis-Perception-Treatment" that I was often struck by a connection picked up and illuminated by Prosch among the strands of Polanyi's thought, which had not struck me so precisely before but now seemed important and clearly right. I would instance his account on pages 60 and 61 of how, while the basic mechanisms of visual perception are structured to function towards the attainment of a stable coherent view of the world, they work mechanically and so cannot sort out true coherences from illusions; on the other hand we as persons "are performing one single mental act in seeing an object against a background". The physiological events in our bodies which are part of the skill of perception, are known to us only subliminally but they are part of the galaxy of clues of which we take account in our act of perceiving. This Prosch calls "a very important point for Polanyi. For if the factors in perception that lie entirely below the level of any possible focal awareness are not factors of which we are at least subsidiarily aware, then perception is not