Tradition & Discovery

The Polanyi Society Periodical

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Preface

I am pleased that Professor John Polanyi gave *TAD* permission to publish in this issue a recently discovered unpublished lecture that Michael Polanyi gave as the seventh of an eight-lecture set in 1954 in Chicago. This just turned up as a wrongly dated document hidden away in the Karl Polanyi archives. It is a very readable and interesting lecture that reflects how Polanyi was beginning to pull together material in his Gifford Lectures as he worked on *Personal Knowledge.*

Also this issue includes two book discussions and an article by Charles Lowney that follows up on his essay in *TAD* 36:1 in the fall of 2009. Lowney's new essay continues his exploration of the bearing of Polanyi's ideas on moral philosophy; a third and final essay in the series will follow in a subsequent *TAD*. One book discussion here focuses on Theodore L. Brown's *Imperfect Oracle*, a new book that treats the authority of science. Brown, a chemist by training, kindly responds to comments by Jay Labinger, also a scientist, and Richard Moodey, a sociologist. The second book discussion focuses on Phil Rolnick's *Person, Grace and God*. The conversation here is an expanded version of that held at a recent annual meeting and it includes comments by Andrew Grosso, Paul Lewis, and Paul Gavrilyuk and a response from Rolnick. There are also three short reviews of books, one on neuroscience and moral issues, one on the migration of Jewish-Hungarian professionals after World War I and the other on J.H. Oldham's discussion group "The Moot" in which Michael Polanyi participated.

Take a close look at the 2009 annual meeting program (p. 5) for Atlanta on October 30, which will feature two sets of graduate student papers. Also in News and Notes (pp. 3-4) is information about materials now on the web as well as bibliography of interest. The Society is plugging its new Speakers Bureau (p. 4) so please help with the effort to get some campus talks scheduled for the fall semester.

Phil Mullins

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NEWS AND NOTES

University of Dayton Polanyi Materials

Roesche Library at the the University of Dayton has an intereting Special Collection of Polanyi materials. You can view the inventory at http://library.udayton.edu/basics/archives/spcoll/colls/polanyi.php. Brunno Manno was a faculty member at the University from 1977-80 and donated some materials. Michael Polanyi's last scholarly public presentation titled "From Science to Culture" was given at a conference at Dayton sponsored by the Consortium for Higher Education Religious Studies on the topic "Culture and Crisis: The Social Thought of Michael Polanyi." CHERS initiated a "Society for Explorers" which became The Polanyi Society. See Scott and Moleski's discussion in *Michael Polanyi, Scientist and Philosopher*, 280-281.

Steven R. Brown and Richard Robyn, "Reserving a Key Place for Reality: Philosophical Foundations of Theoretical Rotation," *Journal of the International Society for the Scientific Study of Subjectivity*, v.27 no. 3 (April 2004): 104-124.

Abstract: Factor rotation has been a controversial topic in the history of factor analysis, and preference has always been for a solution that is determinant, such as the simple-structure solution approximated by varimax. Stephenson's preference for judgmental rotation, available in Q methodology software packages such as QMethod and PCQ, is little used, due in part to lack of understanding of its philosophical bases in the writings of Egon Brunswik (psychological cues), J.R. Kantor (specificity), Charles S. Peirce (abductory logic), and Michael Polanyi (tacit knowledge). The philosophical justifications for theoretical rotation are summarized, and concrete examples are presented as illustrations designed to encourage acceptance and more widespread usage.

The Travel Fund and 2010, "The Year of the Young Scholar"

Walter Mead

Members and friends of the Polanyi Society have a history of generously responding to appeals to shore up the Society's funds—whether the appeal has been for the general fund after a more-costly-than-anticipated conference, or for prepublication orders to encourage a publisher to re-issue an out-of-print book by Polanyi, or for rebuilding the Travel Fund to help young scholars to attend our meetings.

The Society has always managed to meet its needs through a combination of frugal operations and the generosity of supporters. In the works for consideration by some future Board, is a proposal to set up a more permanent endowment for the Society. This might allow a more regular stream of dollars to support particular Society projects.

We have not yet, however, reached this stage. I must once again make an ad hoc appeal for contributions to our Travel Fund, which is being substantially tapped to support the upcoming Atlanta program featuring papers by graduate students. I am happy to report that with contributions to the Society this year, it presently appears, the Travel Fund can be stretched to meet existing needs. However we will need immediately to replenish the fund for later needs. If you wish to donate directly to the Travel Fund this year, checks should be made out to the "Polanyi Society - Travel Fund" and mailed to **Walter Mead**, 4 Kenyon Court, Bloomington, IL 61701. For additional information, e-mail Mead (wbmead@comcast.net). It is, of course, possible, when you next pay Society membership dues, to include a contribution that will go to the Travel Fund. Because the Polanyi Society is registered as a non-profit organization, contributions are tax-deductible.

Student Housing for Annual Meeting

Some of the students who will be attending the Atlanta meeting (see p. 5) hope to minimize expenses by sharing costs on a room for two to three nights between Oct. 29 and 31. If you are rooming alone and are open to sharing, please contact Wally Mead and he'll put you in touch with an interested student.(wbmead@ilstu.edu).

Appraisal

The March 2010 (v.8, n. 1) issue of *Appraisal: The Journal of the Society for Post-Critical Philosophy and Personalist Studies* was recently published. The following articles are in the issue: (1) Eleanor Godway, "The Crisis of the Personal: Macmurray, Postmodernism and the Challenge of Philosophy Today"; (2) Tihamér Margitay, "Understanding and Being-in-the World in Polanyi's Philosophy of Knowing"; (3) Stefan Fothe, "Applying Polanyi's Concept of Tacit Knowing to Episodes of Intuitive Acting"; (4) Endre Nagy, "The Phenomenology of Conversion: the Conversions of Karl and Michael Polanyi"; (5) Norman Sheppard , "Michael Polanyi: the Importance of Personal Contributions in Science." Except for the first essay, these articles were papers from the Tenth International Conference on Persons. See the revamped *Appraisal* website at http://www.spcps.org.uk/ for information on subscription and back issues.

Polanyi Society Speakers Bureau

The Polanyi Society's new Speakers Bureau is now operational. Marty Moleski, S. J. and Richard Gelwick gave talks in February and March at Loyola University of Maryland and Yale University respectively. Discussions with a few other univeristies about future talks have occurred. If you know anyone who might be interested in sponsoring a talk, please send the name and e-mail address to Phil Mullins. There is now a link on the Polanyi Society web page with general information about the Speakers Bureau. You will find there a precis of the talks given by Moleski and Gelwick.

Addition to Polanyi Society Web Site Collection of Polanyi Materials

Recently, Michael Polanyi's essay titled "The Body-Mind Relation," published in 1968, was added to the primary materials available for downloading from the Polanyi Society web site (http://www.missouriwestern.edu/orgs/polanyi/essays.htm). This essay was originally a paper given at a 1966 conference sponsored by the Western Behavioral Sciences Institute, the Salk Institute for Biological Sciences and the University of California, San Diego. This was the same conference at which the conversation between Polanyi and Carl Rogers occurred; this conversation is also available on the web site as an audio file and a text. There are now available on the Polanyi Society web site 10 Polanyi lectures, essays and letters plus links to 11 other Polanyi texts on other web sites. Some additional Polanyi materials will be added to the web site in the months ahead.

2010 Polanyi Society Annual Meeting

The Polanyi Society will hold its annual meeting in conjunction with the AAR, on October 30, 2010, in Atlanta, Georgia. To attend the Polanyi Society annual meeting, it is not necessary to register for the AAR meeting. For additional information about the AAR meeting, go to http://www.aarweb.org/Meetings/Annual_Meeting/Current_Meeting/default.asp. The hotels and rooms in which meeting sessions will be held will be assigned in the summer or early fall. The locations will be posted on the Polanyi Society web site (http://www.missouriwestern.edu/orgs/polanyi/) and in the October, 2010 *TAD*; they will also be available online and in print as Additional Meetings in the AAR materials. This year's two meeting sessions are projected to be on Saturday, October 30, the opening day of the AAR meeting rather than, as in recent years, on the Friday night and Saturday morning preceding the AAR meeting. If there are changes when final time assignments are made, these will be posted in the publications listed above.

This year's annual meeting program is devoted to six papers by graduate students. Neil Arner and Phil Rolnick have worked diligently to put together this set of papers from students studying at a variety of different institutions.Walter Mead also has and continues to work hard to raise dollars for the Travel Fund which will help support student travel to the annual meeting (see the note on p. 3). Papers for both sessions should be available for downloading from the Polanyi Society web page link for the annual meeting by late October.

Session I: 9 a.m. October 30, 2010 Chair: Neal Arner, Yale University

David Agler, Pennslyvania State University
"Polanyi and Peirce on Doubt"

Aaron Creillor, University of Hawaii at Manoa
"The Epistemic Structures of Polanyi and Ryle"

Nancy Hutton, Harvard Divinity School
"Technologies of Intimacy as a Way of Knowing"

Session II: 7 p.m. October 30, 2010 Chair: Phil Rolnick, University of St. Thomas (MN)

Neil Arner, Yale University
"Appraising Newbigin's Appropriation of Polanyi"

Kellen Plaxco, Marquette University
"From Polanyi to Origen and Back Again"

Mary Speckhard, Geneva College
"*Beyond Liberalism and Fundamentalism*, Toward Polanyi."

Persons

Michael Polanyi

ABSTRACT Key Words: personal knowledge, knowing life, knowing intelligent performance, rising levels of personhood.
This text is the seventh of an eight-lecture series given by Michael Polanyi at the University of Chicago in the spring of 1954. The lecture focuses on the nature of human knowledge of other living beings.

[**Editor's Note:** The following hitherto unpublished lecture by Michael Polanyi was recently discovered in The Karl Polanyi Archives at Concordia University, Montreal, Canada. In a fall 2009 visit to the Karl Polanyi Archives, Walter Gulick noticed a curious entry in the listing of materials indicating the Karl Polanyi Archives held a 1945 lecture by Michael Polanyi delivered in Chicago. Phil Mullins later retrieved a copy of the essay and examined it with Marty Moleski, S.J., the surviving author of *Michael Polanyi, Scientist and Philosopher*. The old ditto copy of the essay does have a note on the top of the first page indicating that this was a lecture delivered in Chicago on February 18, 1945. However, Michael Polanyi did not come to North America in 1945. Internal evidence in the essay makes clear that this was the seventh of an eight-lecture series. Such a lecture series was delivered from January 25 to February 26, 1954 at the University of Chicago; this lecture was almost certainly delivered on February 18, 1954--the date on the ditto copy opening page is apparently simply a typographical error. Moleski found a copy of the lecture (acquired many years ago) in the late Bill Scott's files; Scott also seems to have dated the lecture as part of the 1954 series since he penciled a question mark and the date 1954 adjacent to the notation dating the lecture in 1945. Michael Polanyi apparently either sent or gave his brother Karl a copy near the time that the lecture was delivered and this eventually found its way into the Karl Polanyi Archives. The manuscript clearly is a lecture text that has not yet received some of the final touches that a published essay might have received. Although the other lectures in the series have been lost, this lecture recapitulates earlier lectures and suggests that the final eighth lecture will focus on commitment. Although it is part of a larger set, this lecture stands alone relatively well and is of special interest because it pulls together in a compact fashion Polanyi's perspective on persons and knowing life. The lecture reflects Polanyi's reworking of themes in his 1951 and 1952 Gifford Lectures titled "Commitment: In Quest of a Post-Critical Philosophy" which are in fact two series of ten lectures each. None of the Gifford Lectures is, however, titled "Persons." This 1954 lecture can thus be considered a stage on the way toward the June, 1958, publication of *Personal Knowledge: Towards a Post-Critical Philosophy*. In a March 8, 1954, letter to his older sister who attended the lectures, Polanyi described his 1954 Chicago lectures as "very useful to me for it led to a sharpening of my points and tightening of my argument" (quoted in *Michael Polanyi, Scientist and Philosopher*, 225). *Tradition and Discovery* appreciates the cooperation of Ana Gomez, Coordinator of the Karl Polanyi Archives where this lecture has quietly resided in File 46-15 for many years. The lecture is published with the permission of Professor John Polanyi.]

In today's lecture which is the seventh of the series I propose to bring to a conclusion my argument up to a certain point. I shall begin therefore by recapitulating briefly what has been said before. In doing so I want to lay all my cards on the table, and show you if I can that they all belong to the same set.

But I must confess in advance that in an important sense this will prove impossible, for there will always remain in my hand an indeterminate residue, a kind of joker. It plays the part of an ubiquitous trump card without

which all the rest would be nothing but bits of cardboard. This ubiquitous ultima ratio is my own signature, by which I underwrite the risks of my own words, in the conviction that no more can be demanded of me, or of anyone else speaking of his convictions, than that he sincerely declare the beliefs, which after due consideration of all that he believes to be relevant to the issue he finds himself holding. I shall elaborate this conception of commitment in my last lecture which should satisfy such ultimate questions raised by my discourse, in respect to which you may find yourself in doubt for the time being.

So let me now go back to the survey of human knowledge which I have given you so far. I had started with the exact sciences, defining them as a mathematical formalism with a bearing on experience. There appeared to be present a personal participation on the part of the scientist in establishing this bearing on experience. This was least noticeable in classical mechanics and I accordingly accepted this chapter of physics as the closest approximation to a completely detached natural science. Its statements could indeed be so formulated as to admit of strict falsification by experience. There followed two sets of examples for a more massive and not conceivably negligible personal participation in the exact sciences. The first of these comprised the knowledge of probability in science; or more precisely of the degrees of coincidence involved in assuming that an apparently significant pattern of events had come about as the result of chance. The second set demonstrated the assessment of orderly patterns in the exact sciences and showed that standards of orderliness, though bearing on experience, cannot be conceivably falsified by it. On the contrary, as in the case of statements of probability, they serve to appraise any relevant samples of experience.

Experience can of course offer clues to encourage or disappoint statements of probability or standards of order and this effect is important, but not much more important than the factual theme of a work of a novel is for its acceptability. Yet personal knowledge in science is not made but discovered, and as such it claims to establish contact with reality beyond the clues on which it relies. It commits us, passionately and far beyond our comprehension, to a vision of reality. Of this responsibility we cannot divest ourselves by setting up objective criteria of verifiability—or falsifiability, or testability, or what you will. For we live in it as in the garment of our own skin. Like love, to which it is akin, this commitment is a "shirt of flame", blazing with passion and, also like love, consumed by devotion to a universal standard.

Such is the true sense of objectivity in science, which I illustrated in my first lecture. I called it the discovery of rationality in nature, a name which was meant to say that the kind of order which the discoverer claims to see in nature goes far beyond his understanding; so that his triumph lies precisely in his foreknowledge of a host of yet hidden implications which his discovery will reveal in later days to other eyes.

My argument was clearly overflowing at this stage into domains far beyond the exact sciences. I chose to pursue the hunt for the roots of personal knowledge towards its most primitive forms which lie behind the operations of a scientific formalism. Tearing away the paper screen of graphs, equations and computations, I tried to lay bare the inarticulate manifestations of intelligence by which we know things in a purely personal manner. I entered on an analysis of the arts of skillful doing and skillful knowing, the exercise of which guides and accredits the use of scientific formulae, and which ranges far further afield, unassisted by any formalism, in shaping our fundamental notions of most things which make up our world.

Here, in the exercise of skill and the practice of connoisseurship, the art of knowing was seen to involve an intentional change of being: the pouring of ourselves into the subsidiary awareness of particulars which in the performance of skills were instrumental to a skillful achievement and in the exercise of connoisseurship

functioned as the elements of the observed compreheneive whole. The skillful performer was seen to be setting standards to himself and judging himself by them; the connoisseur was seen valuing comprehensive entities in terms of a standard set by him for their excellence. The elements of such a context, the hammer, the probe, the spoken word, were seen pointing beyond themselves and being endowed with meaning in this context; and on the other hand a comprehensive context itself, like dance, mathematics, music, was acknowledged as possessing intrinsic or existential meaning.

The arts of doing and knowing, the valuations and the understandings of meanings, are thus seen to be only different aspects of the act of extending our person into the subsidiary awareness of particulars which compose a whole. The inherent structure of this fundamental act of personal knowing makes us both necessarily participate in its shaping and acknowledge its results with universal intent. It is the prototype of intellectual commitment.

Here was revealed the source of personal convictions of which we had previously traced the remotest streams as giving life and meaning to the formal structure of the exact sciences. And as personal knowledge was seen to involve the extension of a living body, it became clear that the conception of personal knowing will have to be included in a general conception of life; so that knowing life and being alive would be accounted for in similar terms.

In preparation of this program, I had to turn first to systems which embody rules or serve us as machines. Such artefacts are fragments of man's intellectual life, which operate with a considerable measure of independence, but can be said to be what they are, namely rules of logic or ethics, or machines, only if they are relied upon by a person who believes their operative principles to be right. He will then account for any process which he believes to be controlled by these principles in terms of its reasons, which any failure of such a process to comply with its supposed operative principles will be explained by the intervention of events of a different kind, not subject to the operative principles of the process. The failure of a machine for example will be explained in terms of physical and chemical events, precisely because physics and chemistry can in themselves never define the operational principles of a machine.

These threads of thought tend to converge towards a new joint meaning the moment I acknowledge the presence of living persons of which I myself am one. As the exercise of personal knowing sets up standards for my own skill and connoisseurship as well as for the things known by me, it may be exercised also for setting up standards for other living beings known by me. This I do by identifying myself with them and, simultaneously, criticizing their standards from my own point of view. This logically three storied structure of my appreciation of a living being naturally includes my appreciation of myself as a living and knowing being, and thus the perspective is thrown open of an evolutionary process, leading up from the amoeba to the highest animals and including the animal holding this discourse. My skills and connoisseurship, my knowledge of speech and my understanding of science, like all of the rest of my intellectual proficiencies, are then seen as forming part of my life, and the enquiry into the nature of knowledge which I have so far pursued here appears as an extension of biology, while biology itself appears in its turn as a process of life reflecting on itself.

I shall now specify this perspective at a few points, since time will not permit more than that. The lowest manifestation of individual life—but not the least wonderful—is its manner of existence, in shapely forms, ruled by specific standards. The meaning of such harmonious being and our appreciation of its significance are two allied forms of life. For the appreciation of harmonious beings is, like the enjoyment of a a work of art, itself a

harmonious being. Our contemplation of living beings finds a justification in itself, which is derived from the significance which it accords to the living beings which it contemplates, as beings in themselves.

Morphogenesis is the process by which these significant shapes come into existence, from germs which by comparison are mere featureless lumps of protoplasm. It represents an achievement, which we appreciate by virtue of our own experience of achievement, but we appreciate its aptness from the point of view of its own standards, as attributed to it by ourselves. It makes no decisive difference here whether we find that morphogenesis is performed by the going into operation of preformed fixed mechanisms, producing independent interlocking sequences, which are characteristic of a mosaic egg; or alternatively, by a comprehensive process of equilibration as discovered by Hans Driesch in the fact that any fragment of the early sea urchin embryo will develop into the whole individual. Both are processes which can be biologically appreciated and analysed only in relation to the rightness of a morphological goal to the achievement of which they contribute.

I postpone further comments on this in order to include other achievements of living beings, our knowledge of which is similar to that of morphogenesis. The automatic functioning of our internal organs is such an achievement. It differs from morphogenesis in the first place by the fact that the changes involved in it are transitory so that the "wisdom of the body" has been acknowledged pre-eminently in its capacity for keeping its internal condition unchanged in spite of widely varying external conditions. The circulation of our blood and the process of our breathing operate at a rhythm that is counted in seconds while our digestion of food, its resorption and storage, its oxidation and the elimination of the refuse through lungs, kidneys and bowels extends over cycles of whole days and nights; but whether quick or slow, these pulses leave the animal unchanged and indeed form part of a vast system of activities, including the external behavior of the animal which are concerted in achieving this stability.

Insofar as the organism is a machine it can be analysed only in terms of operational principles and the observation of any physical or chemical processes occurring within the system can be relevant to its essential function only as an embodiment of these principles. Our appreciation of operational principles is borrowed from our experience of engineering and the use of machinery, forming one part of our life and is used for the appreciation of the machine-like functioning of our organs, which is another part of our life. On the other hand, the kind of goal seeking equilibration discovered by Driesch in the sea urchin embryo is appreciated by us on the grounds of its kinship to conscious purposive behavior. For this process seems to display an inexhaustible resourcefulness making the best of an infinite variety of given circumstances, for achieving an invariable end.

At all levels of animal life we can recognize these two always mutual interacting types of rationality, namely those of machinelike operations and of a more flexible integrative behaviour, defined by our acknowledgement of its persistent resourcefulness. Both principles of purposive operation are essential to life, but it seems that the second is in a sense the more vital, for it implies in its higher forms the presence of an actively striving conscious individual. To illustrate this we shall pass on to the level of consummatory actions, like feeding.

At this stage the individual has become a doer of things and it is felt to be driven to action by a desire of its own. The critical appreciation implied in acknowledging its achievements becomes correspondingly more elaborate and more emphatic. Since we recognize as 'food' only materials which we believe to be nutritive and not deleterious to the animal it falls to us to this extent to determine what the purpose of feeding ought to be. This is often far from obvious. When a sheep eats the wool off the back of another sheep, or cattle eat bones, the uninstructed may object to this as an aberration but physiologists approve of it as a compensation for certain

mineral deficiencies in the animal's diet. Yet not everything that animals eat is nutritive or wholesome. It is easy to poison animals by arsenic or strychnine; we can deceive them as the angler does when making fishes bite at his fly. Rats will drink saccharine solution which has no nutritive value and captive apes eat their faeces which seems to be quite useless as food.

Feeding may undoubtedly be wrong, and our criticism in such cases is more substantial than that which we have expressed in respect to morphological malformation, for we know that the animal is satisfying a desire. The dog-lover is painfully conscious of his dog's craving when it is showing signs of hunger; the rat's enjoyment of a sweet taste is the only reason that can be stated for its feeding on a solution of saccharine. And where there is conscious desire the performance which satisfied the desire has the character of an action. The rationality of such action is ascribed to the desiring and acting person and any failure of his action may then be regarded under new headings. False feeding may be classed with embryonic malformation as a diseased process; a maniac devouring paper or sand is suffering from a disease. But to the extent to which action is prompted by desire we shall acknowledge also the possibility of a normal preference for merely subjective satisfaction, and to the extent to which action is intelligent we shall recognize further that error may be a possible reason for failure.

The expansion of the critical framework required for the observation of conscious forms of life is revealed also by reflecting on the observation of perception. We see the size of an object approaching the eye as constant so long as a certain relationship prevails between the effort of accommodation and the size of the retinal image. More precisely, we are jointly aware of the retinal image and of the adaptive effort as well as of certain relations of the two while both are undergoing a change, in terms of the constant size of an object seen at variable distances. The observer of this process of perception will regard it as a rational performance if he endorses the affirmations implied in it, which is that the object has remained of constant size. But it may happen as in the experiments of Ames that the observer varies, unknown to the observed subject, the size of the object, a white sphere, by inflating it. The subject will then be found to increase his accommodation as if the object were approaching and to become aware of the increased effort coupled with an increased retinal image by seeing the swelling object approaching at constant size. In this case the seeing of a constant size is regarded as an effort due to a mistaken perception. If the effort required for a certain measure of accommodation is increased by atropine poisoning an approaching object will be seen shrinking to a tiny size and the reduction of its size will make it appear farther off. Owning to the conscious character of perception we can know this anomalous appearance as such and regard it as a subjective experience of the perceiving person.

We have now ascended to the level where our knowledge of a living being becomes an encounter with a living agent. At the appetitive and perceptive level the animal is the centre of conscious efforts directed towards possession of things and knowledge of things. We are aware here of the animal's active person in terms of the same kind of particulars in terms of which the animal integrates its own action. An understanding of the hungry animal choosing its food or of an animal on the alert listening and watching, is an act of personal knowledge quite similar in its structure to the animal's personal act which it appraises. Like all personal knowledge of a comprehensive feature this act involves a critique of this feature. It affirms that its particulars are its rational subsidiaries and acknowledges a wide field of such possible rational relations, centering on the achievement of the same total intention. Within this framework every observation has a critical significance, being seen as contributing to the success or as causing the failure of this intention. Since the centre of this particular comprehensive achievement, namely the craving and perceiving animal, is a conscious being and we can share its consciousness to some extent, this allows us not only to understand its achievements better, but also enables us to assess certain failures as errors or as merely subjective satisfactions.

Behaviourists teach that in observing an animal we must refrain above all from trying to imagine what we would do if placed in the animal's position. I suggest on the contrary that nothing at all could be known about an animal that would be of the slightest interest to physiology and still less to psychology except by following the opposite maxim of identifying ourselves with a centre of action in the animal and criticizing its performance by standards set up for it by ourselves.

Once we have acknowledged conscious cravings in an animal, we may proceed to elicit from its acts of intelligent choice. For this purpose the psychologist places the animal in a situation which constitutes a problem for the satisfaction of some of its major drives like hunger, fear or pain. An intelligent act will originate from this arrangement only if first, the animal responds to the problem set to it by the situation and second, if this problem demands an appreciable measure of ingenuity, but not more than the animal in fact possesses.

By an appropriate arrangement of limited alternatives we may force the animal to respond, if it responds at all, in a manner that can be classed as strictly correct or strictly false; and the experiment can be so dervised that the animal's choice between a correct and a false response has to be made at a particular point in time and space. The narrowness of the experimental situation tends to key up the animal's state of perplexity at a choice point to a tension which is not likely to be reached in the wider circumstances of nature, and thus the laboratory spotlights and also intensified the moments of intellectual effort; the level at which it performs an act of intelligent judgment.

In order to compress my argument I shall concentrate on one form of intelligent performance, namely on the recognition of signs pointing towards an event. I shall consider particularly the kind of experiment in which the animal has to discriminate between two alternative signs, one true and the other false. In all such cases we must rely on our capacity to observe a change in the animal's habits. A change of habit which is thought to manifest that the animal has solved the problem set to it is called 'learning'. In a sign event problem, the process of learning clearly amounts to the drawing of a correct inductive inference from observed facts. Take an experiment in which a rat is faced with two different signs, say a white triangle and a red circle laced in a random sequence on either side of a discrimination box, with food presented if and only if the animal chooses the white triangle. The animal who has mastered this situation has arrived at the correct empirical generalisation that a white triangle (p) is a sign of food (q) whereas absence of a white triangle (not-p) signified no-food (not-q); in symbolic terms, if p then q and if not-p then not-q.

This shows that the question, How does an animal learn to recognize a sign? (or if the reflex language is preferred, How is an animal conditioned to a particular stimulus?) co-incides with the philosophic questions, How are correct generalisations drawn from experience? The fact that the animal is generalising about events engineered by ourselves does not distinguish it from us in this parallelism, since as subjects we are both faced with events beyond our control. At this point the three storied structure of biological observations comes fully into view. The experimental setting presented to the animal is at the first level; the generalisation 'if p then q, etc.' referring to the first Level is made on Level Two, and the psychologist's enquiry into the origins of this generalisation is on Level Three. I propose to show now how the analysis of the animal's performance, carried out at this level reveals the rudiments of responsible personhood in the animal.

This analysis of a process of learning entails two antecedent judgments on the part of the psychologist; namely, first that the animal has arrived at some generalisation (i.e. has established a habit implying some

generalisation) rather than is acting obsessively or at random and secondly that the generalisation made by it is correct.

Let me illustrate how we can discriminate between the various alternatives mentioned here. Take first an example or an erroneous generalisation. When grains are spread equally over a dark grey paper A and adjoining light gray paper B the grains on the darker grey ground A being glued to it while those on the lighter grey ground B are loose, a chicken will learn to peck only at the grain on the lighter grey ground B, where the grains are loose. But when the dark grey paper A (which had the grains glued on to it) is replaced by a new strip A of an even lighter grey than B, the chicken will abandon the grains on B and start pecking from A. It turns out then that the animal had not learned to associate the particular hue of B with the looseness of the grains found on B but rather with the relation of B to A as the lighter of two papers. Within the standard procedure of the discrimination experiments this generalisation is false. There is strong evidence (Lashley, Krechewskj) that animals placed in a discrimination box will start by setting on the lines of some usually false generalisation, such as 'Turn right' or 'Choose alternatively right and left', and that learning is arrived at by abandoning these successive errors for the correct solution of the problem.

An animal acting on the lines of any generalisation is acting rationally. If the generalisation is erroneous its behaviour is rational only in view of its own premiss; while we may regard it as objectively rational, if the generalisation is correct. The distinction will depend on the observer's judgment as to what is the true state of affairs confronting the animal. A behaviour sequence lacking either kind of rationality will be classed as random, as senseless or as obsessive, and may be regarded as a symptom of mental deficiency or neurosis.

We may now resume the question "How can we justify the attribution to an animal of the capacity for acquiring a rational mode of behaviour that corresponds to the facts?" and try to answer it in two parts. We should remember first that our standards of intelligence are originally based on ordinary experience, and that intelligence tests are devised to conform with this anterior assessment of intelligence. They are accepted on the grounds that they approximate this informal assessment by a more formalized method. Our conception of intelligence and rationality in animals is likewise anterior to the formal investigation of these faculties. They are personal facts which we know by identifying ourselves with the animal in the same way as with other intelligent beings. Hence follows the second part of the answer; namely that the animal's capacity for establishing correct empirical generalisations can be ascribed to it only with such qualifications as we attach to our own capacity for doing so by virtue of our own similar mental powers.

These qualifications will be found to carry far-reaching consequences, implied in the personal character of all knowledge. Empirical generalisations are personal facts which we discern by our subsidiary awareness of the evidence supporting them. They are comprehensive features of experience of which the particulars are largely unspecifiable and in which we participate by virtue of our own ultimately unaccountable standards of order, coherence etc. They can never be strictly determined by the evidence which can only furnish clues for their discovery; indeed, empirical inferences may set up standards of perfection by which experience itself will henceforth be valued. And finally, true generalisations, true standards, true valuations are the universal pole of a personal commitment. They can only be affirmed by persons who believe them to be true; but these can affirm them only as valid for everybody and thus personal knowledge implies its own universal intent.

If pressed to justify our personal knowledge, we can always be brought to admit having set aside conceivable doubts at some point, by the act of our judgment. We may say therefore that such acts are

indispensable, in order to bridge the logical gap between the evidence and the inference that we draw from it. The great scientist may be said to possess specific gifts for crossing wide logical gaps which afterwards can be much reduced by adducing further evidence. We distinguish here between the initial or heuristic gap, the traversing of which measures the scientist's originality and the residual gap, which persists throughout the process of subsequent verification but is plastered over by current scientific opinion. Our appreciation of a scientist's originality by which he is acknowledged as a scientist, and granted his proper distinction and responsibility, involves an estimate of the logical gaps closed by his discoveries.

Psychologists setting problems to animals in order to study the process of learning, also trust themselves to grade the ingenuity required for mastering these problems, so that they may correspond approximately to the animal's ingenuity, as assessed likewise by the psychologist himself. How well this can be achieved, was shown in his famous experiments on apes by W. Kohler,who was able to devise a large number of problems which his more ingenious animals could just solve by making an effort, while the less gifted members of the group failed altogether.

The act of guessing right by which a logical gap is bridged is inherently unspecifiable, for if we could exhaustively represent it as a process carried out accouding to strict rules the logical gap would be eliminated. Discoveries made according to known rules are not discoveries at all, but merely routine surveys, requiring no creditable measure of ingenuity. Consequently, any explanation of the process of learning in terms of exact sciences must dissolve the conception of intelligence if intelligence is regarded as the exercise of ingenuity.

The exercise of ingenuity (as the acts of belief and understanding) are several forms of tension in which we commit ourselves to the acceptance of a rational structure, such as for example an empirical generalisation. A decision accepting such a view of the facts is usually prepared by a state of suspense during which this tension is specially intense. This can be observed even in animals. Kohler describes how chimpanzees regularly went through a period of perplexity and quiet, before producing the solution which was finally successful. On occasion his ape Sultan made one attempt at a solution, and then a second and a third; "but (Kohler writes) nothing made so great an impression of the visitor as the pause after that, during which Sultan slowly scratched his head and moved nothing but his eyes and his head gently, while he most carefully eyed the whole situation."[1]

I have mentioned before how this intensificationof mental tension is evoked artificially by placing the animal at a choice point in a discrimination test. The exercise of this intellectual effort can be strained to a breaking point by making the problem increasingly more difficult while keeping up the animal's determination to solve it. This is what Pavlov did when he first produced experimentally the nervous breakdown of dogs. A circle or a nearly circular ellipse was established as a sign for immediately forthcoming food, which the showing of a flat ellipse would mean, and be accepted for, "no food just now". The hungry animal would be watching these signs and committing itself, as shown in the variations in secretion of its saliva, to the expectations which they indicated. So long as the two signs of opposite significationce were widely different—the ellipses being either very flat or nearly circular—the dogs reacted to them without developing symptoms of nervous strain. But when the hungry animal was repeatedly shown intermediate shapes, its behaviour underwent a profound change. It turned wild and angrily strained and snapped to set itself free. At the same time it had lost its previous powers of discrimination, giving false reactions to signs to which it had been perfectly conditioned before. After a while the animal would fall into abnormal listlessness and refuse to react altogether to any of the previously established signs.

We can observe here the nervous strain setting in as the evidence for the existence of a rational structure becomes less distinct, or—in the terms which I used before—as the logical gap between premisses and conclusions is widened. As this gap is increased, the burden of decision shouldered by the animal's intelligence is continuously augmented until eventually its powers are pitted against problems of excessive difficulty, which it would not have otherwise recognized or essayed at all. With the consequent breakdown of the animal's rationality its whole person disintegrates emotionally as well as intellectually.

We realize then, if we had not done so before, that the intelligence of the animal and our appreciation of it was a link between his person and ours. The neurotic dog which can only snarl or sulk has ceased to be a companion to us, and even when a rat is driven into an obsession, we are deprived of a personal intercourse in which we stood with it previously.

This is confirmed by the fact that an appeal to the neurotic animal's affection may help to restore its intelligence. A visit by a person to whom the afflicted animal is attached may heal its neurosis. Again, according to Meier and Klee the most effective method for breaking down a neurotic fixation in the rat is to apply gently manual guidance directing it away from its fixated behaviour, "rather in the manner of an animal trainer". The animal responds to personal contacts where all mechanical procedure fails to restore him to sanity.

The neurosis can also be healed by presenting the animal for a while with signs of a clearly distinguishable kind and accompanying these consistently with the offer of food, or the reverse. The successful solution of these simple problems seems to restore the animal's self-confidence, much as occupational therapy helps to restore the shattered personality of the neurotic.

The personal conception of intelligence which I have adopted here by regarding it as a form of guessing right, naturally links the faculty for intellectual judgment to the centre of personal responsibility. The connection is strikingly born out by the fact discovered by Jacobsen that in chimpanzees intellectual frustration no longer leads to neurotic disturbances if the animal's prefrontal lobes are cut off from the stem or eliminated. The animal now ceases to worry and is no longer exposed to any danger from mental stress even though its ability to solve problems has been seriously impaired. A similar operation, when performed on man may relieve neurotic depression and at the same time reduce the depth of personality, rendering it crude, improvident and tactless.

This is as far as I wish to go in my gradual ascent towards the acknowledgment of rising levels of personhood. It suffices to show that a continuous transition has been made from the I-It of the exact sciences to the I-Thou of interpersonal relations. This is the result of attending from the start to our personal participation in establishing what we believe we know. For the participation of the knower in the inanimate things with which the exact sciences are concerned expands gradually in the course of this progression into the knower's participation in the sentient, intelligent and responsible centre of another person.

We can see also how the establishment at this stage of three clear-cut logical levels in place of the original two was pre-figured from the start in the evaluative nature of personal knowledge. For the moment we know something in our own personal way, we set a standard to the things known, grading them according to the extent to which they make sense to us. And as we appreciate comprehensive entities, we criticize their particulars as to their aptitude in composing the whole which they subserve, which leads on smoothly to the appreciation of living individuals from their own point of view.

The shapeliness of a plant can be recognized by a purely contemplative participation in its appearance. But as we pass on to an animal, our participation in the core of the known individual is quickened by our fellow feeling for its striving and sentience. We are then ready to reach out to it and to watch for an intelligent response from it as from its person to ours. And finally, in higher animals then approach brings us into contact with a centre of intelligent commitment. At this point a three-storied logical structure fully emerges, with ourselves situated on the third level and knowing from there a fellow person, who is knowing in the same way some things on the ground level from the level below our own. This confirms the justification we have granted to our personal knowing to start with: for we now know fellow persons who can be understood only by accrediting them with the very faculties which we had and are claiming to exercise in knowing them.

The enquiry, which has thus led us from the knowing of things to the knowing of knowing, can be pursued further only by attempting to give an ultimate justification of our knowledge; but this I have decided to leave for my next and last lecture.

In the meantime let me look round once more from the vantage point that we have so far attained. We have moved a long way from the conception of knowledge as the act of ascribing truth or falsity to declaratory sentences. Knowing has been recognized as part of life: as inherent in the right functioning of living beings. But can all of life be described in terms of knowing: I mean in terms of skilful action and true apprehension? Let me state my beliefs in this respect quite briefly.

I acknowledge unhesitatingly the continuity between the lowest living functions and the world of conscious desires guided by the senses of touch, sight and hearing, from which the whole realm of human thought and responsibility emerges. And I acknowledge that the complex order of living functions is itself pre-figured in the simpler patterns of the inanimate world.

I recognise here the unfolding from apparently sterile beginnings of highly significant beings: of the noblest fruits of creation. By evoking the spectacle of a universe which for billions of years had existed unseen, unheard, unfelt and altogether meaningless, except to its Creator, awaking here and there in tiny clusters of matter to desire, feeling and intelligence—these clusters eventually even coming to participate in the Creator's understanding of the universe and to feel obliged to justify their action before him—I bear testimony to the status of man which I implicitly claim for man by this appraisal of the universe by myself.

The limit of my knowledge is reached when I realize the abysmal depth of these mysteries. We have encountered these mysteries so far only in the unspecifiability of personal knowledge. But if knowing and living are identified, the principle of unspecifiability is generalised to the living beings themselves both as knowing agents and as things personally known.

Thus, to take an eminent example, my own responsible actions can never be specified in terms of my nervous functions. Admittedly, much of my intellectual responsibility is delegated to my nervous system, as when I allow it to carry out important perceptive functions on my behalf. But as a sane person I retain my claims to be the ultimate judge of anything my nervous system decides for me and its deliberate operations are by their very nature under my direct control. I can regard the services of my nervous system, therefore, only as those of a tool which, though it may be operated unconsciously and occasionally may even get out of hand, can yet be said to function rightly only if accredited by me as my tool.

Nor can the responsible mind of another person be encountered except by subsidiarily attending to its workings while focusing on the mind of which these workings are the expressions and instruments. It is misleading therefore to say, as does Professor Ryle, that the workings of the mind are the mind.

Similarly, as my knowledge of sentience is not specifiable in terms of insentient particulars, so sentience itself is also unspecifiable in such terms. Take any sensory quality, for example the hearing of sound. No knowledge of acoustics can break the silence which surrounds the man born deaf. Even if he became an expert in the neural changes which accompany hearing in orther persons' brains, he would come no nearer to knowing what it is they are hearing.

But what is logically unperformable cannot be assumed to have taken place in actual fact. As living beings came into existence from the inanimate, and as these developed gradually into sentient, intelligent and responsible persons, a series of new principles must have come into action to account for the emergence of processes that are not specifiable in terms of their historical antecedents. The unspecifiability of personal knowledge is brought here to coincide with the postulates of emergence of Whitehead and Alexander, though it reproduces emergence in a somewhat more exacting form. It re-appears here rather as an insistent calling of meaningless matter to ever higher strivings of rightness.

This aspect may perhaps be better understood after I have shown how these efforts towards higher conditions of being are accompanied by every more far reaching acts of commitment. Of this I shall speak in my next lecture.

Endnotes

[1]Wolfgang Kohler, *The Mentality of Apes* , translated Ella Winter from Second Revised Edition (London: Kegan Paul, Trench, Trubner and Co. Ltd, 1925), p. 200.

Submissions for Publication

Articles, meeting notices and notes likely to be of interest to persons interested in the thought of Michael Polanyi are welcomed. Review suggestions and book reviews should be sent to Walter Gulick (see addresses listed below). Manuscripts, notices and notes should be sent to Phil Mullins. Manuscripts should be double-spaced type with notes at the end; writers are encouraged to employ simple citations within the text when possible. MLA or APA style is preferred. Because the journal serves English writers across the world, we do not require anybody's "standard English." Abbreviate frequently cited book titles, particularly books by Polanyi (e.g., *Personal Knowledge* becomes *PK*). Shorter articles (10-15 pages) are preferred, although longer manuscripts (20-24 pages) will be considered. Consistency and clear writing are expected. Manuscripts normally will be sent out for blind review. Authors are expected to provide an electronic copy as an e-mail attachment.

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The Epistemic and Moral Authority of Science:

A Discussion of Theodore L. Brown's *Imperfect Oracle*

ABSTRACT Key Words: authority and consensus, epistemic authority of science, moral authority of science, expert scientific opinion, scientific autonomy, science as a network, metaphors for science as an institution. *This book discussion focuses on Theodore L. Brown's* **Imperfect Oracle**. *Richard Moodey, a sociologist, and Jay Labinger, a scientist, raise questions about some of Brown's views on the epistemic and moral authority of science and Brown responds.*

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Individual or Institutional Authority in Science?

Jay A. Labinger

In the Preface to this exploration of the relations between science and society, Ted Brown suggests that science exerts *less* influence than one might expect, given its central role in modern culture, and proposes to try to understand that state of affairs by examining the nature and origin of scientific authority (ix-x). The main text is divided into two sections, respectively titled "Foundations" and "Science in Society." In the first, Brown outlines a categorization of various types and sources of authority, and traces the historical evolution of scientific authority from ancient Greece through modern times. The second section offers more detailed examinations of science's interactions with four segments of contemporary (mostly American) society: the law, religion, government, and public affairs. A final chapter, "The Prospects for Scientific Authority," draws these threads together, and offers some modest suggestions for improvement.

In both his historical survey and the individual topical studies, Brown provides concise but compelling accounts of where we are today, and how we got there. The material and its presentation are commendably informative, as well as entertaining. However, those looking for an overarching explanatory schema will soon realize — as Brown himself clearly does — how elusive that goal remains. Historically, the locus of scientific authority is presented as quite diachronic: while to a large degree there has been a gradual shift from individual scientists to a more institutionalized "science," some individuals continue to hold on to a disproportionate share even today. More importantly, it is far from clear what determines, in any given situation, which scientists will be perceived as particularly authoritative. Brown cites the "fateful" example of Einstein's letter to Roosevelt, calling for development of a nuclear weapon: although Einstein had no particular expertise in the field, he was able to get the president's ear — which the true experts probably could not have done — because of his "enormous charismatic authority" (85). Whence comes such charismatic authority? Brown implies it was a combination of factors, unique to Einstein's particular case. How then can we explain, much less predict, where authority will reside in any general circumstance?

One difficulty lies, at least in part, in the emphasis Brown places on the distinction between epistemic and moral authority — expressed concisely as "the capacity to convince others of how the world is" vs. "the capacity to convince others how the world should be" (23). In the first place, the difference is not so clearcut as Brown would have us believe. His discussion of Pasteur, which is featured prominently in the historical account, provides a good illustration (60-66). Having recognized the role of microorganisms in many diseases, Pasteur recommended that physicians follow sterile procedures; according to Brown, "By instructing the members of the august Academy as to what they *should* do in the course of surgical work, Pasteur was exercising *moral* authority" (63). But that seems debatable. I expect Pasteur would have believed that he was exercising *expert* authority, by trying to teach them what needed to be done to prevent disease. If his advice was not well received (as it was not), that would represent resistance to his claim of expertise, not his moral authority; the latter would be invoked only if the question of whether disease should be prevented were at issue. Is this hairsplitting? Maybe a little. But surely the difficulty of determining whether and how moral authority follows from expert authority is exacerbated if the line between them cannot be clearly drawn.

A further complication is that the important distinction between *trying* to exercise moral authority and actually succeeding is not always kept clear. Brown speaks of moral authority as "the license to argue convincingly about how the world should be" (270). Who issues, or needs, such a license? Anybody is free to argue about anything; whether the argument is convincing depends at least as much — probably much more, in most cases — upon those at whom it is aimed. Brown mentions Linus Pauling among those whose scientific authority (recognized by the 1954 Chemistry Nobel Prize, among other honors) could be extended to the realm of public policy (22, 25, 91). However, his arguments against nuclear testing were (initially, at least) much more convincing to the Nobel Peace Prize Committee than to the US government and public — according to Wikipedia, a headline in *Life* magazine referred to his 1962 Nobel Peace Prize as "A Weird Insult from Norway" — while his efforts on behalf of Vitamin C, a topic much closer to his field of scientific expertise, ultimately proved fruitless.

It is also telling that we see much more of how scientific authority is challenged than of how it is accepted in all four of the chapters on social institutions, even though the institutions themselves operate very differently. Only in the case of science and religion are the two sides portrayed predominantly as natural adversaries, locked in a contest for authority; no such conflict seems to be inherent in the relationships between science and the law, government, or public interest. Indeed, much of the chapter on science and the law presents the legal and scientific establishments as natural partners, engaged in the largely *cooperative* efforts of defining the role of scientific expertise in the courts and dealing with the significant differences between the two domains. (Most important among the latter is, perhaps, the fact that in their respective quests for knowledge, the law relies *much* more heavily on procedural rules than does science.) But because legal proceedings are in and of themselves highly adversarial, in any particular case at issue claims of scientific authority will often meet resistance no less vigorous than in any science vs. religion dispute.

Much the same is true of the chapter on science and government: opposing parties (in the general sense of the word) will try to enlist or discredit scientific authority to further their position, with economic and political considerations playing a much larger role than any factors that could be considered internal to science. Brown's discussion of the "ozone hole" controversy illustrates this beautifully (218-227). Molina and Rowland's initial paper, claiming possible damage to the ozone layer by CFCs, appeared in 1974; its scientific merit was promptly challenged by (among others) DuPont, a major manufacturer. The first regulatory action was issued in 1977, by which time only a limited amount of additional scientific evidence had been accumulated. Nonetheless DuPont had already changed their position and backed regulation, in large part because they had taken the lead in

developing and producing substitute refrigerants, and saw themselves as well placed to profit thereby.

One issue, which is considered at some length in the chapter on government, does not seem so inextricably linked to political or economic battles: the question of the autonomy of science. But here again there is a problem related to definition of terms: are we talking about autonomy as something that belongs to science as an institution, or to individual scientists? And to what degree do the demands of those two attributions come into conflict? Brown quotes Polanyi ("The Republic of Science" in *KB*, 59) as seemingly unconcerned by any potential conflict: "The authority of scientific standards is thus exercised for the very purpose of providing those guided by it with independent grounds for opposing it....Scientists exercise their authority over each other. Admittedly the body of scientists, as a whole, does uphold the authority of science over the lay public." Brown suggests that, although the "elitist overtones" may sound out-of-date, the vision is still valid (104-106); but I'm not sure I would agree.

For example, in his lengthy consideration of the issue of climate change, Brown comments that "the exercise of expert authority depends on the perception of a scientific consensus. When there is an impression that scientists are in significant disagreement on a scientific issue, expert authority wanes" (232). The key question is: what counts as "significant" disagreement, and what does it take to create an impression thereof? Notably, in this controversy, it doesn't seem to take very much! Those "climate change deniers" who contest the existence of a reliable scientific consensus are able to cite heterodox opinions to good effect; the relative numbers and reputations of the scientists on the opposing sides don't appear to matter very much at all.

I suggest that this is a consequence of the existence of an *inherent* conflict between individual and institutional autonomy, which Polanyi and other have largely swept under the rug. Brown again cites Polanyi (104; a paraphrase this time): "Discoveries of the greatest ingenuity are often those that break with accepted communal beliefs. It is this balance, between the guiding role of professional standards and challenges to them, that imparts an authority to science." But the public mostly sees only those individual scientists who make the ingenious discoveries. The communal beliefs, the professional standards and the balance are virtually invisible, in either the news media or popular representations of science in movies, TV, etc. It is perhaps not surprising, then, that heterodoxy is disproportionately accepted in contests of authority, or that the "balance" can, far from imparting authority, often tend to undermine it.

What, then, is to be done? Brown explicitly states that his aim is to be more descriptive than prescriptive, but he obviously feels (as noted above) that science *should* play a stronger role in society. His main suggestion is that we need better public understanding, not so much of the *content* of scientific discovery, but of how the scientific enterprise works: "a turn toward more personal presentations of science, including narratives that relate stories of scientists at all stages of their scientific development, will make science more approachable....A more personal approach that relies on narrative as well as logical argument establishes closer connections with nonscientists, and in doing so enhances science's moral authority" (291-292). I strongly agree with that proposal. I would only delete the word "moral," not only because of the problematic definition discussed above. Improving public awareness of the *human* nature of scientific work, and the importance of an interdependent community as opposed to a small cadre of superstars, could be beneficial for all the ways, in all the arenas, that science and society come into contact.

Institutional Science as Person or Network?

Richard Moodey

Imperfect Oracle is an attempt by a scientist to exercise epistemic and moral authority. Ted Brown defines epistemic authority as "the capacity to convince others of how the world is," and moral authority as "the capacity to convince others of how the world *should be*" (23). He attempts to convince readers of how one aspect of the world is by describing and explaining the historical origins and the current state of scientific authority. He attempts to convince readers of how the world should be by arguing that science ought to have greater authority. In the last three sentences of the book, he sums up much of what he thinks the American world is and how he thinks it should be:

> Scientists and engineers have been instrumental in creating contemporary American society. They have done so by informing us about how the world is. It is vital to the future of humanity that they more fully apply their understandings and skills to helping us decide how the world should be; to forming a just, liberal, and livable society (294).

By writing *Imperfect Oracle*, Brown has practiced what he preaches, applying his scientific "understandings and skills to helping us decide how the world should be."

For me, Brown's moral authority is greater than his epistemic authority. He has been more successful in convincing me of how the world *should* be than he has been in convincing me of how the world *is.* His moral arguments support convictions I had before reading *Imperfect Oracle.* I agree with him that scientists and engineers should pay more attention to making their knowledge accessible to leaders in other institutional domains and to the general public, and I agree with him that leaders and the public should pay more attention to scientific knowledge. He has been less successful in convincing me of how the world is because some of his theoretical propositions are inconsistent with two of my long-standing convictions. First, I believe that it is a mistake, in social science discourse, to write about collectivities as if they were big persons. Second, I am convinced that authority is not something that inheres in a person or collectivity, but is a *relationship* between a social actor and one or more other actors.

Before digging more deeply into my disagreements with Brown, I want to note that I find his stories to be quite convincing. In Part One, "Foundations," he describes the history of scientific authority in Europe and the United States. His chapter on "Scientific Authority in Contemporary Society" also contains chronological narratives of concrete events. He tells stories about Greek science, medieval and early modern science, science and warfare, and science and business. In Part Two, "Science and Society," he has chapters on scientific authority in relation to three specific institutional domains – the courts, religion, and government. His penultimate chapter is on "Science and the Public," and his final chapter is on "The Prospects for Scientific Authority." It is in this chapter that his advocacy for increased scientific authority becomes most explicit. In Part Two, he tells stories about legal controversies over expert witnesses in court, fingerprinting, DNA identification, recombinant DNA, toxic substances, cloning, stem cells, evolution, contraception, abortion, ozone depletion, science education,

and the media. In his telling of these stories, Brown avoids letting his advocacy for increased scientific authority become a bias. He recognizes the legitimacy of non-scientific authority as well as recognizing internal problems within science.

I can illustrate the contrast between my appreciation of his stories and my dislike of some of his theoretical propositions by the story he tells in his introductory chapter, and by the theoretical assertion he makes about the story. In 2001, Eddie Joe Lloyd was released from prison after serving seventeen years of a life sentence for murder. Participants in the Innocence Project at Yeshiva University had worked on his case for several years, gathering evidence, some of which was subjected to DNA testing. Representatives for the Innocence Project presented their findings to the Detroit Police Department and the Wayne Country Prosecuting Attorney's Office. Representatives or agents of these organizations decided that they would add the authority of their organizations to that of the Innocence Project by joining the Project in filing a motion to vacate Lloyd's conviction. One or more officers of the court, including one or more judges, read the motion and ruled favorably upon it, resulting in Lloyd's release (1-2). Brown here tells a story about real people acting and interacting, often in their roles as agents or representatives of organizations. Reading it convinced me that it is an accurate account of what actually happened. I did not say to myself, "I wonder if this is how it happened; I'm going to Google it, to see what other sources say. "

After this convincing narrative, Brown raises a good question about the story, but answers it by asserting something with which I disagree. He asks why it was that DNA testing, a laboratory procedure that few people really understand, had – and continues to have — such powerful effects. He answers: "Society simply takes the word of scientists for all that – it accepts science's authority" (3). Brown boils down all the actions and interactions of the real people into an interaction between science, imagined as an entity capable of speaking a word, and society, imagined as an entity capable of hearing and accepting the word spoken by science. I contend that this language misrepresents how the world is. There are no interacting "big persons" named "science" and "society," capable of speaking and listening, arguing and being convinced. Brown has not convinced me to abandon my long-held conviction that in social scientific analysis, it is a serious mistake to think and write about collectivities as if they were big persons. It was not society that submitted to the authority of the scientists who developed the basic science behind DNA testing, or to the authority of the technicians who conducted the tests on the biological materials, or to the authority of representatives of the Innocence Project, who vouched for the authenticity and relevance of the materials tested in the laboratory. Rather, real people who acted as agents of the police department, the prosecutor's office, and the court read the motion prepared by agents of the Innocence Project, and agreed that Lloyd was mistakenly convicted. These individuals had the power to act as they did because of the positions they held in their respective organizations. Neither science nor society performed any actions.

If Brown had made the same assertion in a casual conversation, or even in popular journalistic writing, I would not object to his saying that society accepted science's authority. In common sense discourse, we regularly use the big person metaphor for collectivities, and only a fool would attempt to reform common sense discourse. But in scientific discourse, it is important to get the words right. Members of scientific networks monitor and criticize what others in the network say and how they say it. Brown repeatedly praises Michael Polanyi's analysis of this process in "The Republic of Science"[1] (26; 94; 104-107; 266; 274-5). In common sense discourse, we regularly speak of the sun rising in the east and setting in the west, but that way of expressing the relations between the earth and the sun is not acceptable in scientific discourse. Writing about collectivities as if they were big persons should not be acceptable in social scientific discourse.

Brown repeatedly uses the big person metaphor to write about the relations between science and society. In his preface, for example, he says that he uses "the concept of 'authority' as a kind of lens through which to view science's interactions with the larger society" (x). Brown expects his readers to assume, as he does, that "science" and "society" refer to the kinds of things that can interact with one another. I say that he expects his readers to assume this, because I have not found any passage in *Imperfect Oracle* in which he presents arguments or evidence that "science" and "society" refer to entities that have the ability to interact. I contend that these words refer to highly abstract ideas that cannot interact. Each of us experiences interactions daily, and we can observe the interactions of others. Treating science and society as if they were big persons implies that they can interact, even though we can't see them do it. By saying that "authority" acts as a kind of lens, Brown suggests that authority is something like a microscope or a telescope that enables us to "view" interactions we are unable to see with our naked eyes.

When Brown focuses explicitly on what he means by "science," he does not say that it is a "big person:

> I will not attempt here what may in any case be impossible: to produce a kind of litmus test for what constitutes "science" or "scientist." Nevertheless, I think that we can draw some boundaries, albeit rather flexible or even in some cases indistinct, around a body of knowledge and current practices that represents a characteristic outlook toward the physical world, acceptable approaches to the study of nature, an avowed ethic of practice, commitment to critical evaluation of findings, and a commonality of social practices of communication, such as peer-reviewed journal publication (11-12).

This seems reasonable, but it does not seem reasonable to assert that "a body of knowledge and current practices" interacts with society. Of course, Brown does not say this. When he personifies science, he slips into a common sense way of talking about it and ignores the inconsistency between the big person metaphor and what he says explicitly about the meaning of "science." The big person metaphor is also inconsistent with Polanyi's image of science as a network, within which scientists in overlapping neighborhoods monitor one another's work (104-107).

My criticism of Brown's personification of science and society does not come from a belief that metaphors have no place in scientific inquiry. I agree wholeheartedly with his emphasis on the importance of metaphors in understanding and expressing abstract ideas. In *Imperfect Oracle*, Brown summarizes the argument he makes at great length in *Making Truth: Metaphor in Science*: [2]

> For the most part, abstract ideas are understood in terms of core metaphors and concepts that form a largely unconscious set of understandings that we apply to interpretations of experience.[3] Embodied realism essentially dismisses much of the traditional arguments regarding reality and definitions of truth as largely irrelevant to an understanding of the nature and limitations of human knowledge. It affirms the idea that there is a mind independent physical world, but contends that our understanding of it in terms of abstract concepts is expressed metaphorically, drawing on the core physical and social experiences that make up our lives. Thus, there is no general, abstract, truth-bearing language that states how the world is. Rather, scientific observations and concepts are understood largely in metaphorical language (96-7).

I criticize Brown's use of the big person metaphor, not because I object to using metaphors to express our understanding of either the physical world or the social world, but because I think the big person metaphor is the *wrong* metaphor to use in our attempts to understand and write about science and society. I think that the network metaphor is heuristically much more fruitful.

The situation is a bit like one Brown discusses in *Making Truth.* He describes J.J. Thomson's "plum pudding" model of the atom. The positive charge of the atom was analogous to the pudding, and the negatively charged electrons were analogous to the plums scattered throughout the amorphous mass of pudding. "By 1910," Brown reports, "Thomson's plum pudding model of the atom had taken center stage." But in 1911, Ernest Rutherford published a paper that introduced a different metaphor or model, in which the positive charges were all concentrated in a tiny nucleus, and the electrons were outside of the nucleus, surrounding it and occupying most of the volume of the atom. The plum pudding model was gradually abandoned in favor of a model that was more consistent with empirical observations and held out greater potential for further development.[4]

Polanyi's network metaphor offers greater potential for further development than does the big person metaphor. This is the case for both "science" and "society." The heuristic potential of a metaphor depends upon what Mark Johnson and George Lakoff call "cross-domain cognitive mapping."[5] The cross-domain mapping suggested by the big person metaphor leads to looking in the collectivity for analogues to parts of a person – head, brain, heart, hands, etc. None of these analogies are very fruitful. The mapping suggested by the network metaphor leads to more fruitful analogues. Individual persons correspond to the knots or nodes in the network, and social relationships and/or social interactions correspond to the strings connecting the knots. This opens up network analysis to systematic treatment of the implications of different kinds of social relationships serving as connecting strings, including relationships in which the person at one end of the "string" has the capacity to give orders to, or to convince, the person at the other end.

In the definitions of epistemic and moral authority I quoted in the opening paragraph, Brown calls authority a *capacity* to convince others. He seems to locate that capacity within either a person or a collectivity. I say this because of the way he words the questions he says are "at the heart" of his inquiry: "Does scientific authority inhere in individual scientists, in science as an institution, or in both? On what grounds can science claim to exert authority? What are its limits? Can science itself claim to exert moral authority?" (13) The words "inhere in" suggest to me that Brown thinks of auth ority as something that can be contained within an individual or an institution. I prefer to think of individual authority as a *relationship* between persons; it is a function of both the person who attempts to exercise authority and of the reactions of the person or persons whom the first person attempts to convince or command. No matter how great the would-be superior's powers of persuasion, her capacity for convincing another person depends upon the other's openness to being convinced, and her capacity for successfully commanding another person depends upon the other's willingness to be commanded. Brown's capacity to convince me about how the world should be is greater than his capacity to convince me about how the world is because of differences in the convictions I brought to my reading. His moral and epistemic authority will vary from one reader to another, not because he says different things to different readers, but because different readers bring different predispositions to their readings. I believe that this relational variability holds true, not just for different readers of books, but for all interactions in which one actor attempts to exercise authority over one or more of the other participants.

Brown does hint at both the variable and relational dimensions of authority. In his introduction, he calls authority "a measure of the capacity to instill belief; to engender not only understanding, but also assent; to move those affected toward changed attitudes; and to encourage actions" (5). Saying that authority is a *measure* of the capacity implies variability, if not specifically relational variability. He hints at the relational dimension of authority in his chapter on "Science and the Public," when he says, "the idea that the relationships between science and society are, in a sense, bilateral is 'intrinsic' to the discussions of science and society" (249). But I believe that an adequate theoretical definition of authority must be explicit about this relational variability. The relational and variable aspects of authority do, however, come out in his stories. For example, in discussing conflicts about teaching evolution in the public schools, he makes it very clear that state legislators, school board members, and citizens in local school districts vary in their willingness to accept what the vast majority of biologists and anthropologists assert to be true (184-5; 286). The capacity of any one of these scientists to convince another person of how the world is depends as much upon the predispositions of the other as it does upon the knowledge and eloquence of the scientist. The epistemic authority of that scientist will vary from relationship to relationship.

Brown acknowledges that it is harder to conceptualize the authority of science as an institution than it is to conceptualize the authority of individual scientists. After reviewing sociological models that explain how the authority of scientists depends upon the social organization of science, he says:

> The challenge for such models is to move from the authority of the individual scientist, which will be highly variable and limited in scope, to a more general scientific authority. Writing in the post-World War II period, Michael Polanyi attempted just this leap. His intriguing essay "The Republic of Science" anticipates much that has been written since (104).

My quarrel is not with Brown's exposition of Polanyi's position, but with his failure to develop either Polanyi's network metaphor for science or his own explicit definition of science. The network metaphor has been used by a few sociologists since the 1930s, but was not widely used until the very end of the twentieth century. Brown's question about the authority of individual scientists can be framed in terms of "egocentric networks," in which an individual is the central node, connected by social relationships and interactions with many other individuals. And his question about the authority of science as an institution can be framed in terms of "whole-network" analysis, in which a set of individuals is treated as a collectivity with some sort of boundary, however fuzzy.[6] This conceptualization of a whole-network is compatible with Brown's characterization of science as "a body of knowledge and current practices that represents a characteristic outlook toward the physical world" (11). The social network is a collectivity of people who sustain that body of scientific knowledge, who engage in those current scientific practices, and who support that characteristic scientific outlook toward the physical world. Moreover, there is a similar, fuzzily bounded, network of people who constitute social science, a network that overlaps, but is not identical to, the network of natural scientists.

I believe that there is a connection between Brown's personifications of science and society and his tendency to use the word "authority" to refer to something that can be contained within an individual social actor. When individual authority is conceived as something contained within one person, rather than as a relationship between two persons, it becomes very tempting to think of collective authority as analogous, something that is contained within one collectivity, imagined as a big person. But the big person metaphor is a sociological dead end, very much like the plum pudding metaphor of the atom. It will continue to be used, because it is so deeply embedded in our common sense discourse, but my hope is that it will gradually disappear from scientific analyses

of the social world.

In spite of my disagreements with some of Brown's theoretical propositions, I recommend his book to those who are interested in the authority of science. The stories are interesting, informative, and convincing, and Brown does an excellent job of summarizing positions taken by participants in the past as well as the more recent "science wars."

Endnotes

[1] Michael Polanyi, "The Republic of Science: Its Political and Economic Theory," *Minerva* 1(1962): 54-74.

[2] (Urbana and Chicago: University of Illinois Press, 2003).

[3] "For example, the abstract idea of time is expressed in terms such as movement ('In the coming weeks we will see a change'), distance ('That is a long time into the future'), and money ('You're wasting my time'; 'I'm running out of time'; 'If if I could just buy a little time')" [Brown's note].

[4] *Making Truth*, pp. 79-84.

[5] *Philosophy in theFlesh : The Embodied Mind and Its Challenge to Western Thought* (New York: Basic Books, 1999).

[6] Cf. Peter Marsden, "Recent Developments in Social Network Analysis" in Peter J. Carrington, John Scott, and Stanley Wasserman (eds.), *Models and Methods in Social Network Analysis* (New York: Cambridge University Press, 2005), pp. 8-30.

Author's Response to Jay Labinger and Richard Moodey

Ted Brown

I very much appreciate the thoughtful readings of my book by both Dick Moodey and Jay Labinger. They have offered insightful commentaries and focused attention on specific topics that in their views require clarification or that might have been better addressed. I'm happy to try to respond to some of their points.

I begin with some of Jay Labinger's comments. He begins by questioning my attempt to distinguish between epistemic and moral authority: "the difference is not so clearcut as Brown would have us believe." His reservations notwithstanding, it is important to attempt this very important distinction. The *expert* authority of the scientist rests on knowledge held of some aspect of the physical world; knowledge gained through study, experimentation, analysis, critical evaluation by other scientists – the array of activities that we think of as the scientific method. To the extent that the scientist has expert authority, she can speak of how some aspect of the world is. Moral authority is something else; to quote from Wiktionary: "The quality or characteristic of being respected for having good character or knowledge, especially as a source of guidance." Given the topic of the book, this definition is consistent with one I gave (117): "the capacity to instill beliefs as to how the world *should* be – to convincingly argue for particular actions that will presumptively change the way the world is." Though scientists may be recognized as having expert authority on some topic, when they give advice as to what actions

should be taken in light of that expert knowledge, there is no assurance that those toward whom the advice is directed will accept it. They might turn down the advice for any number of reasons which do not involve rejection of the underlying expert authority. Labinger questions my assertion that Pasteur's attempts to convince the French medical establishment to adopt hygienic practices illustrate a failure of his moral authority even though his expertise was not directly challenged. But a reading of Debre's account of Pasteur's struggles to bring about more hygienic practices clearly points to factors other than simply a rejection of Pasteur's expert authority in the physicians' negative responses to his urgings (Debré, Patrice, *Louis Pasteur*, Johns Hopkins University Press, 1994, Chapter 10). I readily acknowledge, however, as I did in the book, that the two aspects of authority are inextricably mixed. Where there is dubiety about the expertise of one who would give advice, there is little ground for moral authority to stand on. Conversely, in the face of reservations regarding moral standing expert advice may fall upon deaf ears.

In a related vein, Labinger points out that the exercise of scientific authority is essentially a bilateral transaction. I am entirely in agreement. There are many reasons why scientists or science generally may not succeed in exercising either epistemic or moral authority, or both. One point on which I might comment, though, is Labinger's impression that the book deals more with challenges to scientific authority than with its acceptance. It seemed to me that the nature and limitations of scientific authority in society are best brought home by looking at instances in which science's authority is challenged. I hoped that by analyzing particular episodes I might be able to illuminate facets of science's roles in society in relation to those of other sectors. Attempts from any particular social sector to exercise authority in society are frequently challenged by other social actors. In the resolution of the resulting conflicts we can discern the grounds on which authority is claimed and challenged. For example, we learned much about how science operates in the public sphere by examining the "ozone hole" controversy to which Labinger alludes. I'm not sure what Labinger is driving at by arguing that "economic and political considerations play[ed] a much larger role than any factors that could be considered internal to science." in the resolution of the controversy. He seems to be implying that the science had only a limited role to play in the "ozone hole" story, but I don't believe that to be the case. Of course the epistemic authority of the scientists was challenged. Of course there were political machinations and economic argument of huge moment as the story played out. But wasn't it the authoritative voices of a couple of scientists that forced the powers that be to take the matter seriously in the first place? As the epistemic issues were sorted out through continuing research (Labinger's factors "internal to science") they carried the day. It was by no means inevitable that the Montreal Protocols would evolve to put an end to chlorofluorocarbon production: it happened for a variety of reasons, but science's epistemic *and* moral authority played vital roles.

Finally, I want to comment on Labinger's take on the concept of autonomy. He seems to suggest that I have failed to properly distinguish between the autonomy of the individual scientist and that of scientific institutions. I thought I had covered this rather completely in Chapter 1 (35-37), and at many other places in the book. Beyond that point, however, Labinger argues that there is an "*inherent* conflict between individual and institutional autonomy, which Polanyi and others have largely swept under the rug." He alludes to Polanyi's view, spelled out in his "Republic of Science" paper, that science advances in part through breaks with conventional thinking, through challenges to the accepted state of affairs. It is this continual testing of the accepted wisdom that imparts vitality to science and helps to buttress its epistemic authority. Labinger worries that relatively few scientists come to public attention, that instead a relatively few luminaries dominate the limelight. That may be so, but it is not clear that this is relevant to the issue of autonomy. The magnitude of a scientist's public presence need not bear on his or her autonomy as a working scientist.

There is the separate question of how individual scientists, as opposed to institutional science, claim authority in discussions of controversial topics such as climate change or stem cell research norms. In "The Republic of Science"[1] Polanyi envisioned networks of overlapping expertise that combine to create a consensual view, a "scientific opinion" that would have authority in society by virtue of the processes by which it was formed. Although much has changed since Polanyi's day, there is no doubting the existence of a communitarian culture in contemporary science. It is simply a fact that many scientists tend to be disputatious, jealous and skeptical, and where the science involved is salient in the public sphere, those qualities become more apparent. The non-scientific public does not fully comprehend how science really works in the matter of sorting out what counts as significant science, in particular that the standing of research being actively pursued differs in significant ways from more established work that has been subjected to numerous tests. Highly visible controversies have the potential, therefore, to weaken the authority of science, because the perception of consensus has been lost.

Dick Moodey finds much to like about the book, but he expresses two major reservations that call for responses on my part. The first, which mirrors one of Jay Labinger 's concerns, is that I am not always as careful as I might have been in describing the social dynamics of the exercise of authority. Moodey quotes a phrase from the introduction: "Does scientific authority inhere in individual scientists, in science as an institution, or in both?" This choice of words does suggest that authority is something inherent, and – taken alone – would seem to ignore the bilateral transactional nature of non-coercive authority. I might better have written at this point of "the potential for exercise of scientific authority" or something to that effect. A reading of the book as a whole, however, reveals that I am fully aware that the successful exercise of epistemic or moral authority is predicated on its acceptance by those to whom it is directed. Indeed, much of the book is about the limitations of science's authority. The transactional nature of the exercise of authority is emphasized throughout: "To comprehend the authority of science we will need to understand the processes by which it gains legitimacy, against what other sectors of society it contests for authority, and the circumstances in which authority is exercised." (25) Chapters 9 and 10 emphasize the roles of cultural forces in determining acceptance of scientific authority, and the importance of effective communication. There is really no disagreement between me and either reviewer on this point.

The major part of Moodey's review is taken up with his fundamental disagreement with the way in which I have portrayed science. Moodey believes it is a "serious mistake to think and write about collectivities as if they were big persons." And later, "Writing about collectivities as if they were big persons should not be acceptable in social scientific discourse." I am at something of a loss as to how to address this objection, because I don't fully comprehend his "big person" metaphor. I can't imagine how one could talk about many aspects of "science" without thinking of it as an entity. Conceptualizing science *solely* as a horde of individual agents with individual characteristics and capacities, does not leave us with something that operates in society in a significant way. Surely this is not what Moodey has in mind. It is not John Smith the chemist, or Susan Brown the biologist who can individually constitute what we think of as science. Rather, science is a collective, an organized center of knowledge and social activity (11-13). I don't think that Moodey would disagree with this; his objection seems to be that it is improper to think of science as speaking, testifying or arguing as though it were a person, metaphorically speaking.

Moodey illustrates his position by referring to the Eddie Joe Lloyd story I told in the introductory chapter. In that episode Lloyd's previous conviction for murder was overturned on the basis of DNA evidence. I asked how it was that a murder conviction based on what was at the time deemed to be strong evidence could

be overturned by a presentation of scientific data relating to DNA analysis, when people in general, presumptively including those involved in overturning the conviction, really don't know the theoretical constructs that connect DNA to individual identities, the methods of carrying out the tests, and so on. Yet they are willing to accept the scientific evidence as truthful accounts of something in the real world, evidence of sufficient persuasiveness to warrant overturn of a murder conviction. How does this happen? I said "Society simply takes the word of scientists for all that – it accepts science's authority." (3) Moodey writes: "Brown boils down all the actions and interactions of the real people into an interaction between science, imagined as an entity capable of speaking a word, and society, imagined as an entity capable of hearing and accepting the word spoken by science." That is not just what I intended to say, but let's count it as close enough. Yes, real people spoke and listened that day; they were agents that brought about the courtroom result. But let's imagine that someone named Fred Sylvester was the one who presented the DNA analysis that day, and answered whatever questions were raised. No, wait, Fred was out sick that day and Karen Alexander went to the courtroom in his stead. The people in the courtroom didn't say, "We can't proceed with this. We need Fred." Assuming that Karen Alexander presented qualifications for describing the DNA work and responding to queries about it, she served as well as Fred. Neither Fred nor Karen as particular individuals were essential to the exercise of scientific authority. Rather, it was acceptance on the part of those representing "society" in the proceedings of an extensive body of knowledge and practice, consisting of the contributions of countless people over time. It is true that Karen, in presenting to the court that day, gave science a human face. I think I made it abundantly clear in the book that communications by individual scientists and representatives of science play powerful roles in the exercise of scientific authority. But the source of scientific authority and its legitimacy rest to a substantial degree on the acceptance of science as a social institution. Moodey objects to my suggestion that "science" and "society" were actors in this drama. I did indeed write, "The story with which I have begun is a simple illustration of science exercising authority. In this case, it is acting as our hypothetical unimpeachable witness." Moodey seems comfortable with the uses of metaphor, and in fact is quite discursive on this subject in the review. But I have trouble in accounting for his countenance of metaphorical usage in one case and objection to it in another. He does at one point say that he doesn't object to metaphorical usage in general, but that the "big person metaphor is the *wrong* metaphor to use in our attempts to understand and write about science and society." In making his argument he falls into critiquing the big person metaphor (his term, not mine) because he can't locate the "analogues to parts of a person – head, brain, heart, hands, etc." But it is a commonplace in metaphor theory that every metaphor has limited scope for application. Moodey has clearly driven his "big person" metaphor beyond what he has a right to expect from it. Had he not chosen the unfortunate term "big person" he might not be looking for hands or feet. For that matter, I have trouble thinking of individual persons as knots or nodes in the network model that he espouses.

I should emphasize that this is a book about the authority of science in society. It is not meant to be a general treatise on the nature of science as a social entity, though I believe I have said enough on that topic to justify my view that science is in many respects best thought of as a discrete social entity. Indeed, many distinguished sociologists of science, from Ludwik Fleck, Robert Merton, Michael Polanyi, and Thomas Kuhn to the many who have written about the social structure of science more recently (Chapter 4) take as their point of departure the idea that science is a discernably discrete social entity, and that it has effect in society as an entity in its own right. It is true that society's perceptions of and reactions to science are in substantial measure the products of its experiences with individual scientists, who may exercise authority as individuals . However, the authority exercised by individuals is grounded in their credentials as members of that larger social entity.

Because this is a journal of Polanyi scholarship I want to say a bit in defense of my interpretation of Polanyi's model of science. He begins "The Republic of Science" as follows:

> My title is intended to suggest that the community of scientists is organized in a way which resembles certain features of a body politic… The first thing to make clear is that scientists, freely making their own choice of problems and pursuing them in the light of their own personal judgment, are in fact co-operating as members of a closely knit organization. …Both the criteria of plausibility and of scientific value tend to enforce conformity, while the value attached to originality encourages dissent. This internal tension is essential in guiding and motivating scientific work. The professional standards of science must impose a framework of discipline and at the same time encourage rebellion against it. They must demand that, in order to be taken seriously, an investigation should largely conform to the currently predominant beliefs about the nature of things, while allowing that in order to be original it may to some extent go against these. Thus, the authority of scientific opinion enforces the teachings of science in general, for the very purpose of fostering their subversion in particular points.

What these lines show is that Polanyi conceived of science as a closely knit community, one that acts, for example to enforce the teachings of science, impose frameworks of discipline and so on. He goes on to describe overlapping fields and networks of competences and expertise: "And, of course, each scientist who is a member of a group of overlapping competences will also be a member of other groups of the same kind, so that the whole of science will be covered by chains and networks of overlapping neighbourhoods. Each link in these chains and networks will establish agreement between the valuations made by scientists overlooking the same overlapping fields, and so, from one overlapping neighbourhood to the other agreement will be reached on the valuation of scientific merit throughout all the domains of science." Thus it is clear that the structure involves networks and neighborhoods *of knowledge and practice*. Scientists create and maintain them through their individual activities and cooperations. Tellingly, he says,"This network is the seat of scientific opinion." This scientific opinion is active in the world outside science: "Representatives of scientific opinion will pounce upon newspaper articles or other popular literature which would venture to spread views contrary to scientific opinion. The teaching of science in schools is controlled likewise. And, indeed, the whole outlook of man on the universe is conditioned by an implicit recognition of the authority of scientific opinion." He goes on to say, "Moreover, only a strong and united scientific opinion imposing the intrinsic value of scientific progress on society at large can elicit the support of scientific inquiry by the general public. Only by securing popular respect for its own authority can scientific opinion safeguard the complete independence of mature scientists and the unhindered publicity of their results, which jointly assure the spontaneous co-ordination of scientific efforts throughout the world."

The world has changed a great deal since those words were written. However, despite enormous changes in the scope and complexity of contemporary science the organizational structure, ordering and coordinating of views *within* science still proceed much along the lines Polanyi outlined. Ironically, they come to public attention most apparently in cases where they might be thought to have failed. As a recent example, the intense public attention on lapses from good practice and evidences of questionable behavior on the part of a few prominent scientists working in the area of climate change has exposed how tightly networked a given area of research can be, and the processes by which an authoritative voice is formed. This example illustrates that science's capacity to exercise authority in the public domain as an institution rises and falls with the reputations of individual scientists. Thus, as I pointed out in the book, there is an inextricable coupling between the scientific authority exercised by science as an institution, and that exercised by individual scientists whose epistemic authority ultimately derives from their places in the world of science.

I am grateful to Jay Labinger and Dick Moodey for their consideration of my book . Their thoughtful comments have helped me to see how I might have done better in some places in writing the book, but they have also encouraged me to believe that my efforts to shed light on an important topic were not entirely off the mark.

Endnotes

[1]Michael Polanyi, "The Republic of Science: Its Political and Economic Theory," *Minerva* 1(1962): 54-74.

WWW Polanyi Resources

The Polanyi Society has a World Wide Web site at http://www.missouriwestern.edu/orgs/polanyi . In addition to information about Polanyi Society membership and meetings, the site contains the following: (1) digital archives containing all issues of *Tradition and Discovery* since 1991; (2) a comprehensive listing of *Tradition and Discovery* authors, reviews and reviewers; (3) the history of Polanyi Society publications, and information on locating early publications not in the archive; (4) information on *Appraisal* and *Polanyiana*, two sister journals with special interest in Polanyi's thought; (5) the "Guide to the Papers of Michael Polanyi," which provides an orientation to archival material housed in the Department of Special Collections of the University of Chicago Library; (6) photographs of Polanyi; (7) links to a number of essays by Polanyi as well as audio files for the McEnerney Lectures (1962) and Polanyi's conversation with Carl Rogers (1966).

The Concept of Person: Philip A. Rolnick's *Person, Grace, and God*

ABSTRACT Key Words: Trinity, person, angrace, gift, incommunicability, altruism, naturalism, transcendence, the true, good and beautiful, deconstruction, analogy, Polanyi, Aquinas, Boethius, Nietzsche, Rorty, Lyotard, Derrida.
This article is a discussion of Philip A. Rolnick's Person, Grace, and God *with comments by Andrew Grosso, Paul Lewis and Paul Gavrilyuk and a response by Philip Rolnick.*

Philip A. Rolnick, *Person, Grace, and God*. Grand Rapids and Cambridge: Wm. B. Eerdmans, 2007. Pp. x + 270. ISBN 978-0-8028-4043-1. $28.

Incommunicability, Relationality, and Self-Donation: Philip Rolnick on Persons Divine and Human

Andrew Grosso

In *Person, Grace, and God*, Philip Rolnick undertakes a two-fold task. First, he demonstrates that a Christian understanding of the concept of the person is able to withstand the critiques of both empiricist naturalism and postmodern deconstructionism. Second, he outlines what a personalistic account of knowing and being implies for our understanding of both God and humanity. His approach to this task is chiefly axiological, and more specifically ethical; although he touches on matters of truth and beauty, his primary concern has to do with the question of the good, especially as it is embodied in acts of compassion and altruism. Rolnick suggests that his work can be seen as an extended commentary on the "paradoxical" teaching of Jesus (see esp. Mk 8.35, 12.28-31) that it is only in losing our lives that we find them (*PGG*, 7).

As one might expect, Rolnick's opening gambit involves a survey of the development of the Christian concept of the person. After providing some advance organizers intended to orient the reader to the nature and scope of his project, Rolnick plunges in with an examination of several Hellenistic antecedents that influenced the early theological tradition. He marks the emergence of Nicene theology as a watershed in the development of the concept of the person, and goes on to outline the way both the Cappadocians and Augustine elaborated this tradition. He devotes significant attention to Boethius and to Richard of St. Victor, especially the way they each articulated the notion that personhood involves incommunicability. Rolnick gives surprisingly little attention at this point to the way Aquinas both received and extended the theological legacy to which he was heir, but Rolnick circles around later (in the fourth, constructive section) to pick up Aquinas. He offers a passing glance at contemporary Eastern Orthodox theology (i.e., Zizioulas) before wrapping up his survey and moving on.

The second major section is, like the first, delimited to a single chapter, and is dedicated to examining the challenges that arise from theological attempts to engage evolutionary naturalism. Specifically, Rolnick tackles the neo-Darwinian critique of the concept of the person, especially as it relates to the problem of altruism and, less so, the possibility of affirming a transcendent order. He first demonstrates that the presumed critique

of the concept of the person by some neo-Darwinian thinkers is not nearly as devastating as its proponents imagine. Next, he suggests that evolutionary naturalism has not been able to provide a satisfactory naturalistic account for altruism. Finally, he proposes that it is possible to accommodate the contributions of the empirical sciences without mitigating a commitment to moral virtues such as altruism as well as the reality of a transcendent order.

The third major section of the book is dedicated to engaging another contemporary challenge to the traditional concept of the person, namely, postmodern deconstructionism. Over the course of three interwoven chapters, Rolnick considers the work of a number of theorists (including Nietzsche, Lyotard, Rorty, and especially Derrida) whose rejection of the concept of the autonomous self is often taken to amount to a comparable rejection of the concept of the person. Eschewing combative rhetoric, Rolnick adopts an irenic stance and acknowledges the contributions of postmodernism even as he identifies those features that he believes are problematic. He appreciates the postmodern "opening" of the concept of the person (i.e., an approach that avoids both reductionism and essentialism, and instead favors relationality) as well as its emphasis on alterity (he sees here a potential point of contact with Christian ethics). However, he judges deconstructionism to be too beholden to a dualistic manner of conceiving human knowledge and action; over and against what he sees as the false antithesis of strict univocity or strict equivocity, he charts a third way, one that is characterized by an emphasis on the *via media* of analogy.

Committed as it is to a metaphysics of radical participation (even though, as Rolnick acknowledges, most postmodern thinkers would deny that they are committed to *any* metaphysics), postmodernism provides a useful starting point for thinking about the contingency of the world. When seen from the perspective of Christian faith, this contingency is not a curse but a blessing: our experience of the world "is a particularly lovely gift of the creation that is susceptible to the mixed phenomenon of givenness and construction, for it allows a three-fold integrity: the integrity of the world that communicates its act of being in sundry but dependably law-like ways; the relative integrity of persons who can progressively understand this world; and the interactions of persons and world that becomes the intervening phenomenon of culture" (*PGG*, 136). There seems to be here a pattern at work that is comparable to Polanyi's account of the triadic structure of the tacit dimension, but Rolnick does not elaborate this correspondence.

Rolnick begins to track towards the more constructive section of his project by following up his consideration of the participatory character of our knowing and being with an analysis of the postmodern critique of the concept of the gift. He affirms (*contra* naturalism, deconstructionism, and the anthropology of Marcel Mauss) the possibility of the gift, and maintains that it is precisely the concept of the gift that enables us to apprehend the possibility of affirming transcendence and freedom within a context conditioned by contingency and radical relationality. Rolnick's essential insight here is to highlight the correspondence between the concept of the gift and that of the person: he argues that "person and gift are mutually constitutive," both arising from and being disposed towards creativity and freedom (*PGG*, 167). Affirming this correspondence allows us to recognize that contingency and relationality need not be taken to signify "failure, lack, or deprivation," but should rather be seen as "a summons and invitation to participate in an utterly new expression of divine being" (*PGG*, 173). Here again, we find an implicit similarity between Rolnick and Polanyi: the former's analysis of the gift and its correspondence to personal knowing and being bears no small similarity to the latter's account of the responsibility that is engendered when one indwells concepts and values that orient one to a transcendent horizon.

In the fourth and final section, Rolnick outlines the parameters of a personalistic theology that makes use of the insights developed in the previous sections. This section is comprised of two chapters, the first of which takes up the question of divine personhood and the second of which takes up the question of human personhood.

Reflection on divine personhood, Rolnick suggests, involves consideration of the ways that the concepts of person, nature, and grace enable us to understand something of the being and action of God. Appreciation of the tension between divine simplicity and trinitarian relations has the "salutary effect of keeping us from the self-deception of conceptual mastery of the being of God" (*PGG*, 193). Rolnick's purpose here is to argue that the being and action of God is best understood in terms of "self-donation" (*PGG*, 190-191), that is, in terms of the communication of truth, beauty, and goodness in the relations between the divine persons. In other words, Rolnick proposes that the trinitarian being and action of God can be understood precisely in terms of gift, each divine person both actively communicating and actively receiving the "beauty, delight, and love" (*PGG*, 198) that is offered by the other persons.

This pattern of mutual donation becomes the foundation for thinking about contingent personal being and action. After carefully identifying several errors to be avoided relative to our understanding of human personhood, Rolnick suggests that human personality is best understood to be "incommunicable, expansile, continually identifiable in the midst of change, and functions as a relatively unified unifier" (*PGG*, 222). Rolnick borrows Ricoeur's notion of "attestation" as a way of making sense of the perdurance of human personhood, but disagrees with Ricoeur with regard to the nature of attestation: whereas Ricoeur grounds perdurance in the cultivation of character, Rolnick suggests that its very malleability renders character incapable of accounting for the continuity of personal being. Instead, Rolnick suggests that the exercise of self-donation (one might call it "being as gift"), grounded as it is in faith and trust, is what makes the cultivation of character possible and is thus that which constitutes the nature of persons.

Rolnick concludes with some observations about the ramifications of his understanding of personal knowing and being. For example, he notes that personal being necessarily "interrupts" the natural order, given both its transcendent origin and its transcendent telos (*PGG*, 235); the chief example of this is the incarnation, "a personal opening that disrupts any closed and self-sufficient ontology" (*PGG*, 256). Likewise, he touches on the dialogue between theology and neuroscience: he appreciates some of the insights of nonreductive physicalism but wants to say more about the way that human persons are oriented towards God and the salvation he provides, a salvation that seeks to raise the creation to new life in a way that does not overwhelm either the integrity or the freedom of the creation but rather fulfills them.

Polanyians will find much throughout Rolnick's book that will be familiar to them. He explicitly acknowledges his indebtedness to Polanyi relative to such themes as the fiduciary component in all knowing, the dynamics of emergence, the necessary role of tradition in all discovery, and the paradoxical way whereby obedience and submission provide us with the means to freedom. As noted above, he also seems to lean decisively towards Polanyi in his exposition of our experience of the world and his account of the responsibility of persons who find themselves oriented towards a horizon of transcendent concepts and values. Borrowing Alister McGrath's distinction between the "illuminative" as opposed to the "foundational" use of Polanyi's thought, we would probably be better off saying that *Person, Grace, and God* is characterized more so by the former than the latter, although the apparent correspondence between certain important elements of Rolnick's

arguments and Polanyi's thought at times takes it close to the latter as well.

There is one noticeable lacuna in Rolnick's work, namely, his neglect of the doctrine of the *enhypostasia* and its elaboration by John of Damascus. This was, of course, a significant clarification within the Nicene tradition that Rolnick justifiably regards as the foundation of the Christian concept of the person. The Damascene's efforts would have been especially useful at that point, late in the fourth section, when Rolnick finds himself arguing that any consideration of contingent personhood will necessarily involve "some form of *twoness* and a way of *unifying* the twoness" (*PGG*, 246-247). Granted, the doctrine of the *enhypostasia* is intended to express the idea that the two natures of Christ are united in and by the one person of Christ, and is thus something that can strictly be said to apply only to the incarnation. However, given the fact that the doctrine provides a means of approaching some understanding of how "twoness" might be unified (and within a distinctly personal form of being, at that), it's somewhat surprising to find that Rolnick makes no mention of it. One wonders how Rolnick's efforts might have been abetted had he given further attention to this aspect of the Nicene tradition, and to the Eastern theological tradition in general.

Do We Need to Go Through Trinity to Relate *Person, Grace, and God*?

Paul Lewis

Some Opening Observations

In *Person, Grace, and God*, Philip Rolnick develops an understanding of personhood that is both sensitive to the historical development of ideas about the person and responsive to contemporary criticisms that arise from sociobiology and post-modern critical theory. He seeks to overcome these criticisms by appealing to classical Christian Trinitarian theology since it is his conviction that human personhood is best understood as analogous to divine personhood (189). That conviction requires Rolnick to explore Christological and Trinitarian debates, for those debates have shaped a Christian (and western) understanding of the person.

The book does more than recount doctrinal developments, however, for Rolnick's task also requires him to engage a wide range of non-theological sources, including evolutionary biology, psychology, physics, cultural anthropology, and various post-modern philosophers. Rolnick treats these sources irenically and acknowledges insights that Christians should take from them, even if their larger claims are ultimately untenable.[1] In short, the book exemplifies the kind of mutually-critical conversation that should take place between theology and other intellectual disciplines. Interestingly, Rolnick brings Polanyi to bear on the argument at two points.

There is much to like about this book. It is clearly written, effectively structured, and engages a topic of interest to philosophers, theologians, and ethicists. However, I do offer for our reflection two issues raised by Rolnick's project. One is theological in nature and I suspect arises from differences in theological method and temperament. The other is more philosophical or ethical in nature. Before getting to those issues, however, I begin with a summary of Rolnick's arguments, painted with an admittedly broad brush.[2]

An Overview of *Person, Grace, and God*

Rolnick develops his account of person in three stages, the first of which is to offer a genealogy, if you

will, of the concept of the person (Chapter 1). He begins by summarizing etymological developments in ancient Greek, Etruscan, and Latin cultures. Of the emerging ancient, pre-Christian concept of person, Rolnick concludes, "The route taken was evidently from a type of mask, to a type of dramatic character, e.g., a young ingénue or an old miser. Eventually a social or moral conception arose that was proper and unique to the individual" (14). Whatever insights into the nature of personhood developed in these ancient cultures, little was done to expand upon them until the Christian tradition was forced to clarify its claims about Jesus as the incarnation of the divine, a task that led to a more detailed account of Trinitarian relationships.

According to Rolnick's narrative, there are several key turning points in the concept of the person that emerges by the Middle Ages. The first is the Cappadocian innovation of using *ousia* to refer to what is common in the godhead and *hypostasis* to what is distinct within the godhead. In so doing, the Cappadocians distinguish between two terms that had heretofore been treated as synonyms (17-20). In addition, since *ousia* is often translated into Latin as *natura* or nature, Rolnick understands the Cappadocians to distinguish between person and nature, a distinction Augustine later affirms (28). As with the Cappadocians, Augustine contributes to the development of the concept of the person indirectly, since the goal of his relevant writings is to clarify Christological and Trinitarian doctrines in light of the views of his opponents. What Augustine puts into play are two ideas that would bear later fruit. The first is that persons exist in relationships and the second is that human personality is in some way analogous to Trinitarian processes (25-26, 33). Chalcedon's innovation is to treat personhood as something that unifies (34). The final development begins with Boethius, extends through Richard of St. Victor, and culminates in Thomas Aquinas. Trinitarian thought now comes to associate person with incommunicability, a term that refers to the unique, untransferable quality of a human being. Thus, "each person knows itself to be a center of freedom, thought, and action that can only be itself; it cannot be another center" (54). In sum, Rolnick suggests that in the Middle Ages, the person comes to refer to that which is a unifying center, distinct from but related to nature, as well as unique or unrepeatable.

In the second stage of his argument (Chapters 3-5), Rolnick deals with two developments that undercut this received notion of personhood. One is biological science and the other is post-modern thought. The biological science that arises with Darwin challenges the belief that human persons somehow transcend nature, but then runs into difficulty trying to explain the existence of seemingly altruistic behaviors in the animal world. After recounting theories of kin selection and reciprocal altruism, Rolnick creatively draws together insights from psychological experiments, Michael Polanyi's ontology of hierarchical levels, and Thomistic theology in order to defend the Christian tradition's view that a qualified self-love and love of kin can provide training for the expanded circles of love to which Jesus calls us. Thus persons participate in nature (self-love), but are not rigidly determined by it.

The second challenge to person comes from post-modern theorists who treat the person, (sometimes called the self or subject) as variously, a "fiction" (Nietzsche), "just complicated animals" (Rorty), a "fabric of relations" (Lyotard), or "a pause" (Derrida). These ideas about the subject are themselves embedded in a worldview that existence is so contingent and conflictual that no metanarrative can make sense of it. Rolnick responds to these claims in two ways, the first of which is to point out their internal incoherence. In their denial of metanarrative, Rolnick argues that Derrida and his ilk, are in fact, committed to their own metanarrative, which post-modern thinkers would realize if they understood how language works analogically (123 ff) and were aware of their own colonizing efforts (137ff). On this last point, Rolnick again brings Polanyi to bear, arguing that Polanyi's understanding of dwelling in and breaking out offers a more satisfactory way of relating person, community, and language (138ff).

Rolnick then devotes a chapter to gift giving, a topic of recent fascination among cultural anthropologists. In their analysis, gifts are never free because they are part of a cycle of obligation in which exchange is calculated to serve one's self interest, a position that echoes that of sociobiologists who say that altruism and sacrifice are illusory. Derrida takes the anthropological analysis and applies it to religion to conclude that religious claims of giving and receiving gifts maintain the pattern of exchange, only it exchanges infinite rewards for finite (154). These views on gift giving therefore seem to threaten the Christian claim that life is gifted or graced in creation and Christ. In response to this perceived threat, Rolnick draws from and supplements his earlier counter-arguments to assert the point that persons and gifts constitute each other in that they "arise from and are disposed to creativity" (167), a fact that is disclosed in friendships that are based on the good (183-185).

Having disposed of criticisms of person found in sociobiology and postmodern thought, Rolnick then enters the final stage of his work by articulating his view of the person (Chapters 6 and 7). He begins by delving more deeply into Trinity, guided by the conviction that by discovering how grace, nature, and person are related in God we can illuminate human personhood (190). Rolnick begins by working through some of the logical and philosophical difficulties that accrue when one tries to affirm both God's simplicity and multiplicity. In order to solve them, Rolnick sides with Aquinas' move to make relationship one of the attributes or perfections of God (196). Doing so allows Rolnick to claim that, by willing the highest good (the well-being of the divine nature), God wills what is necessarily personal and relational (196-198). That personal/relational nature is characterized by giving and receiving, which are best understood as two dimensions of the same action that lead to the perfection of the divine nature's simplicity (203-205). In the end, then, God as Father, Son and Spirit are related by both nature and grace, for God's nature is graceful gift-giving and receiving that makes personal life possible (206-207).

In moving from Trinity to human persons, Rolnick develops four major affirmations. First, human beings are relational creatures whose very existence is from the very beginning always already imbedded in webs of natural, social, and divine histories. In short, life begins as graced or gifted. Secondly, human personhood ultimately remains indefinable mystery that can be shared with but never possessed by others. Some of that mystery is exposed in various polarities found in human existence (e.g., permanence and growth; see 225-231). Rolnick's third affirmation is that human persons represent the unity of body, mind, soul, and spirit. Finally, human personhood is transformed by our participation in the teachings, leadership, and mission of Christ.

Theological and Ethical Issues Raised by *Person, Grace and God*

There is much about this book that I wish to affirm, especially its appreciative, but critical engagement with non-theological sources. Rolnick achieves a degree of clarity in his treatment of the post-modernists that I wish they could achieve in their own writing. Moreover, Rolnick offers solid and sensible answers to the challenges they pose to theology. His emphasis on persons as always already graced by their embodiment in the physical world, as well as their embeddedness in social and spiritual worlds is well-taken. Nonetheless, I want to press Rolnick on two points.

The first is the centrality of the Trinity for his understanding of the person. I am simply not persuaded that Trinity is particularly helpful in getting us to where Rolnick wants to go. For one thing, Trinity does no work in Rolnick's deconstruction of either the biological or postmodern challenges to personhood. Instead of grounding his objections in Trinity, Rolnick disposes of those challenges in other ways. Sometimes he simply

exposes logical inconsistencies in the arguments, as mentioned above. At other times, he brings additional data into the conversation, such as his appeal to the psychology experiments on altruism by Batson and Shaw (78-82) or situating the biological world in the cosmic history described by contemporary physics (155-157). Along these lines, Rolnick could have drawn from more of the richer, less reductionist accounts of psychology and biology to show that those fields are not monolithically reductionist.[3] At still other times, it is not Trinity, but Jesus (e.g., 82-90), Aristotle (e.g., 184-185), Aquinas (e.g., 243), or the doctrine of creation (168-169) that provide Rolnick with the leverage that he needs. In sum, as I look more closely at the arguments, I am left wondering if Trinity does enough of the "heavy lifting" to be that important to Rolnick's argument.

But I have another problem with making Trinity the cornerstone of the work (and to be fair, I must admit that I have long been tone deaf when it comes to this particular doctrine). I am happy to accept the Trinity as an integral part of Christian confession, but I see it as a theological construct intended to make sense of a wide range of biblical and experiential data. Moreover, when I read the history of theology, I am struck by the historical contingency, political expediency, and terminological vagueness that accompanies these formulations. The creedal formulations of Christology and Trinity emerge out of controversy, are the result of (at least in the case of Nicea) political pressure from the emperor, and clearly represent linguistic innovations in that they try to equate Greek and Latin terms that are not exactly interchangeable.[4] Thus the doctrine of Trinity, by my way of thinking, represents an enduring—and therefore still valuable but nonetheless contingent—attempt by Christian thinkers to affirm that the divine power that is experienced variously as creative, redeeming, sustaining and convicting is not many, but ultimately one.[5] Schleiermacher therefore seems more sensible to me when, instead of using Trinity as the organizing principle of his *Glaubenslehre*, he makes it the conclusion. Doing so seems to me more in the spirit of Augustine, Aquinas, and Calvin, among others, who caution that we should be very circumspect when talking about Trinity. To be sure, Rolnick acknowledges the warnings of both Augustine (24) and Aquinas (189), but I still worry that he says more about Trinity than can or should be said with such confidence—even analogically. (Of course, Rolnick is in stellar company at this point, for Augustine, Aquinas, and Calvin are often guilty of failing to heed their own cautionary words.)

However, beyond these concerns, I also think we are better served by beginning theology at a different spot. Whereas Rolnick wants to start with knowledge of the Trinitarian God in order to understand human existence, I find it more sensible to work from the bottom up. I suspect that behind this preference lies a different understanding of revelation that puts less emphasis on God revealed from above than on God revealed in and through the details of concrete human experience. On this point, I, like Rolnick, appeal to Calvin, whom we obviously read differently. Rolnick rightly notes that Calvin sees knowledge of God and knowledge of humanity as intricately intertwined and thus legitimate starting points for a theology (208). However, Rolnick claims that Calvin is reluctant to begin theology with knowledge of humanity because of his appreciation for the "human defect." Calvin does say explicitly, however, that he makes the choice to begin with knowledge of God in order to follow "the order of right teaching."[6] I take it that Calvin decides on his starting point more because of custom—perhaps even a desire to avoid controversy—than conviction. Trying to discern Calvin's actual intentions is futile, of course, but it does seem to me that, regardless of what they were, he legitimates a theology done from the ground up.

What difference might such a change make? Consider the analogical use of language, a use Rolnick contrasts with the univocal or equivocal.[7] Take, for example, the claim that God is father. On Rolnick's terms, that claim made univocally assumes that there is no difference in the meaning of the term father when it is applied to God or a human male. Made equivocally, such a claim means that God is not *really* a father (biologically or

sociologically speaking), but that there is still poetic value in using the term to describe God. Analogically made, the claim that God is father means that God is at the same time both similar to and different from human fathers. Analogy, according to Rolnick, thus provides us with a way of relating and distinguishing between finite and infinite, thereby allowing us to chart a course between certainty and skepticism (124 and 182). I do not have a quarrel with these specific points, but it seems to me both historically and methodologically more plausible to say that we begin from our experience of human relationships and then draw analogies to the divine.

To adapt a favorite example of Polanyi's, in my view we use human experiences, images, metaphors, and imagination to probe the divine reality like someone might use a stick to probe the entrance to a cave. These all-too-human perspectives comprise the "stuff" that we indwell as we strive to discover the meaning of a reality that always remains tantalizingly beyond our ability to grasp completely. Put differently, and with apologies to Jonathan Edwards, human existence provides us with images and shadows of the divine, rather than knowledge of the divine providing us with images and shadows of the human.

Finally, I have my doubts about betting the ranch on Trinity because I wonder if Rolnick adequately acknowledges the pervasiveness of the human fault. To be sure, Rolnick does talk about sin and evil at several points in the book. In good Augustinian/Thomistic fashion, evil is best understood as the negation of good (142) that can neither be the first nor the last word about human existence, given the pervasive reality of grace (175). Human sin is best understood at its most basic point as a denial of the gift of relationship with God (250), a denial that leads to a radical myopia, (Luther's *incurvatus in se*), a situation that can only be overcome by grace (178-182). But are there epistemological consequences of this fault that need to receive their due? I think there are and that makes me a bit uncomfortable wagering too much on any understanding of Trinity.

The second issue I raise for our consideration—much more briefly—is more philosophical or ethical in character. Does the emphasis placed on incommunicability as central to personhood defeat Rolnick's intent to provide a richer account of personhood than either the modern or post-modern? One point Rolnick and I agree on is that the modern autonomous, individualistic, disincarnate self is problematic—but does stress on the unrepeatable, unique, and ultimately mysterious nature of each person not lead to another form individualism that obscures the commonalities between and interdependencies among persons? I worry that it can, unless it is more carefully elaborated and qualified. Perhaps extending the analogical method that Rolnick likes so much would help us better identify how persons are similar to and different from one another.

Topics for a Convivial Conversation

To conclude, I have tried to articulate what I see here as two issues in *Person, Grace, and God* that warrant further critical discussion. The first, and the one that I have spent the most time developing, has to do with Rolnick's appeal to the doctrine of the Trinity, an emphasis that leads me to ask three questions. First, does Trinity, in fact, do the work that Rolnick wants it to do? Secondly, should it do the work he wants it to, given the history of doctrine? Finally, can it do the work that he wants it to, given the epistemological humility that the reality of human sin would seem to require? The second issue has to do with the moral implications of his emphasis on the uniqueness of persons—does it unintentionally lead to a new individualism?

Despite our differences and these criticisms, I do celebrate the publication of this book. It offers an able example of a much-needed critical conversation between theology and a range of non-theological discourses. His selective and constructive use of Polanyi keeps that name before readers who will likely be unfamiliar with

his ideas. Rolnick's claims about persons have merit. In the end, therefore, I trust that whatever disagreements he and I have are those between friends who are together seeking to grow in friendship with God and one another.

Endnotes

[1]See, for example, his treatments of Derrida on p. 138 and Levinas on p. 181.

[2]I do so in part because the arguments are intricate and detailed, and in part because I am not yet sure I have grasped all the implications and connections.

[3]See for example, Raymond W. Gibbs, *Embodiment and Cognitive Science* (Cambridge: University of Cambridge Press, 2006 or Jeffrey M. Schwartz and Sharon Begley, *The Mind and the Brain* (New York: HarperCollins, 2002).

[4]See Douglas F. Ottati, *Jesus Christ and Christian Vision* (Minneapolis: Fortress Press, 1989), pp. 23-34, and 138-140.

[5]I am also influenced by H. Richard Niebuhr's treatment of the Trinity throughout his analysis of the various types in *Christ and Culture* (New York: Harper and Row, 1951). For Niebuhr, Trinity functions to affirm that the God who creates is also the God who redeems.

[6] John Calvin, *Institutes of the Christian Religion*, John T. McNeill (ed.) and Ford Lewis Battles (transl.) (Philadelphia: Westminster Press, 1960), p. 39.

[7]For Rolnick's more comprehensive treatment of analogy, see his *Analogical Possibilities: How Words Refer to God* (Atlanta: Scholars Press, 1993).

Rolnick on the Metaphysics of the Person

Paul L. Gavrilyuk

Philip Rolnick's book *Person, Grace, and God* opens a new chapter in the development of Christian theological anthropology by offering a deeply original account of the metaphysics of the person. The book aims at accomplishing three things: first, to provide a metanarrative of the development of the notion of the person; second, to engage select contemporary deconstructions of the robust metaphysical notion of the person; third, to offer the author's own constructive vision of the person.

How does one write a history of the subject as elusive as person? From the perspective of evolutionary anthropology, such a history begins with the emergence of humanity and will continue more or less indefinitely, as long as there are persons (humans or their evolutionary successors) in the universe. To state the obvious, much in the discussion depends upon the context in which the person is discussed. Human persons have been construed as masks, political animals, loci of social interaction (or, even more reductively, as products of social engineering), consumers, commodities, gamers, pieces of physics and chemistry, genetically programmed automata, evolutionary successors of apes, free intentional agents, embodied or disembodied souls, living mind-body problems, species of rational substance, subjects, levels or streams of consciousness, entities uniting the ideal and real worlds, monads without windows, microcosms, bundles of perception, the actors and writers of history, the mysterious selves capable of "I-Thou" relationship, beings who share human, or angelic, or divine nature, and last but not the least, those created in the image and likeness of God. (My learned readers are welcome to add their own favorites to my list).

Clearly, writing a history of the person is no easy task, given such a baffling plurality of contexts. While most of the just mentioned understandings of person are at least alluded to in Rolnick's rich account, anybody writing on the subject would have to approach the matter selectively. Rolnick focuses on important etymological questions, as well as the development of personhood in some patristic and medieval Christian authors. Such selectivity is inevitable, for no book, even Charles Taylor's *Sources of the Self*, can cover all contexts in which the concept of the person can be conceivably discussed.

As far as the historical metanarrative is concerned, Rolnick proposes that we do not have a robust metaphysical notion of the person until the arrival of the central Christian doctrines of the Trinity and incarnation. This point, I suspect, is bound to be controversial, for surely Rolnick does not want to dismiss the Socratic turn from 'physics' (as conceived by the pre-Socratics) to the phenomenon of man and attendant moral questions. Should one discount, for example, the profound insights of Plato's *Republic* and *Phaedrus*, or Aristotle's *De anima*, as altogether irrelevant for our theme? I suspect that Rolnick, whose metaphysical project involves a recovery of Plato's transcendentals, would agree that such a move is too dismissive. While pre-Christian Greek philosophy had a highly developed psychology, I would agree with Rolnick that pre-Christian philosophy lacked a developed intuition of personhood, and especially of personal uniqueness and interiority. I think there is a danger in Platonism to emphasize the metaphysical centrality of the transcendentals to such an extent that the centrality and metaphysical uniqueness of the person is lost. (One interesting indication of this is the controversy in the Platonic and Aristotelian circles over the question whether the body alone is the *principium individuationis* indwelt by an originally non-individualized soul).

Rolnick proposes—and this I take to be one of his central claims—that the key elements of the metaphysics of human personhood are latent in the account of the Trinity. He highlights three crucial aspects of patristic and medieval discourse about the Trinity: the three divine persons are united in one divine essence; the three persons subsist in relation to each other; the three persons are distinguished from each other by their relational characteristics (e.g., the Father begets the Son, and the Son is begotten from the Father). By analogy, the human person is that which unites, relates, and distinguishes. Building on his previous work on analogy, entitled *Analogical Possibilities: How Words Refer to God* (1993), Rolnick emphasizes that the analogy does not amount to identity. For example, the divine Trinity is perfectly simple, meaning that the three divine persons are perfectly unified among themselves and hold their attributes in perfect unity. Human beings, in contrast, are imperfectly unified unifiers, unfinished projects of unification.

It is fruitful to compare Rolnick's theological anthropology to what is commonly referred to as St Augustine's psychological images of the Trinity. If Augustine draws his analogy from certain features of human existence (love, will, understanding, etc.) to the Trinitarian relations, Rolnick's project moves in the opposite direction. The doctrine of the Trinity, far from being only an exercise in negative theology, turns out to have explanatory potential for the key metaphysical aspects of the human self: namely, unity, relation, and difference. While Augustine does not insist on the analogical possibilities of his psychological models, Rolnick's account, in contrast, builds on Aquinas's theory of analogical predication. Rolnick's proposal turns the Augustinian psychological model on its head by developing an analogy from the features of the triune God to the self, not vice versa.

Another important notion, which Boethius stumbled upon and later medieval authors developed, is that of *incommunicabilis*, i.e., the irreducible, non-transferable uniqueness of each person. By insisting on the

importance of *incommunicabilis* Rolnick does not mean to suggest that somehow all aspects of human personality are unique and unrepeatable. If this were the case, these aspects could not be generalized about or perhaps even meaningfully discussed at all. But if *incommunicabilis* is not any one particular property of the person, what is it precisely? Rolnick addresses the question indirectly, when with great elegance he develops his notion that the person is always nature/ essence-transcending. According to Rolnick—and this idea takes its inspiration from Michael Polanyi—persons are always *more than*, their nature is to transcend their nature. Clearly, *incommunicabilis*, the incommunicable, has something to do with human freedom, freedom to transcend all definitions, freedom to be open to the transcendent. But precisely, again, what is the incommunicable? If we say that it is a unique way in which each person transcends the context, we are only begging the question. What is at stake here is the issue of how precisely each person is unique. One could say that the question is potentially unanswerable, since to answer it is to define the person in a particular way and ultimately reduce the person who is always *more than* to a specific context. Still, one could probe a bit further the content of the incommunicable. If the incommunicable is not a property among other properties, maybe it is a meta-property, a way in which the self unifies all other properties? Or, perhaps, the incommunicable is the freedom which allows the self not to be deterministically conditioned by any of its properties? That is, the *incommunicabilis* refers to irreducible subjectivity, ineffable interiority, and free unification of all personal properties.

In the second part of the book, Rolnick engages two main challenges: (1) the claim of some evolutionary biologists that a genuinely altruistic behavior is impossible, and (2) the deconstructions of the person by various post-modern philosophers. In response to the first challenge, Rolnick observes that the description of the animal behavior in terms of egoism or altruism involves anthropomorphic imagery, which could be as misleading, as it could be illuminating. More importantly, altruism is not an exercise in masochistic self-destruction, but rather the losing of the self for the sake of the other in order to find the more authentic self. For Rolnick, the crucified love of Christ on the cross, which culminates in the resurrection, is the paradigmatic case of altruism. Far from being a denial of the self, altruism is a higher form of self-affirmation, uniquely characteristic of free agents.

Rolnick begins to address the post-modern challenges to person (or subject) by questioning the coherence of Jean-François Lyotard's celebrated dictum that the postmodern condition is characterized by the denial of all metanarratives. Rolnick observes that the denial of metanarratives is itself at least an implicit metanarrative (p. 123). The author follows John Milbank in describing the post-modern project as an "ontology of difference." Rolnick's central point seems to be that the denial of the transcendentals is fraught with as many difficulties as the assumption of the transcendentals. The post-modern thinkers have not freed the world of all metanarratives, but have only replaced various modern metaphysical proposals with their own.

Building on this point, Rolnick enters into a recent discussion of the possibility of genuine gift-giving. Derrida, along with others, has argued that any form of the acceptance of the gift annuls the gift. Rolnick explores the complex moral logic of gift-giving and receiving, and admits the difficulty of genuine gift-giving. However, *pace* Derrida and company, Rolnick contends that at least some ways of giving and accepting the gift *intensify* the gift, rather than annul it. More strongly, Rolnick also argues that the reality of persons, commonly denied by the postmodern authors, is the condition of the possibility of gift-giving. Without persons, who freely enter into the reciprocal relations of gift-giving and receiving, there could be no genuine gift-giving. The triune metaphysics, the metaphysics of personhood, and gift (which Rolnick subsequently translates in terms of grace) are bound up together.

In relation to Rolnick's valuable discussion of the gift, I would like to raise my second main question

(the first question being the nature of *incommunicabilis*). Rolnick soundly argues that the postmodern denial of the enduring, unifying subject is both performatively and self-referentially incoherent. If I am denying the subject, I am denying the denier. The claim that there is no subject, but only self-perpetuating discourse is simply incoherent. But in this regard, I have a problem with Rolnick's tendency to identify persons with gifts, or even more strongly, the fullness of divine life with grace. I would agree that the life of the Trinity could be aptly pictured as eternal gift-giving of the Father reciprocated by the Son and the Holy Spirit. But the gifts, as understood in everyday discourse, cannot give themselves. Therefore, in this particular context the analogy of trinitarian self-giving and human giving appears to be stretched. Just as any discourse requires a speaker, the gift requires a giver that could be meaningfully differentiated from the gift itself. Since, in Rolnick's own terms, persons are always *more than*, persons by extension must be *more than* gifts too (unless the gifts themselves are ever self-transcendending).

The most significant and controversial insight that I took from Rolnick's book is that the metaphysically robust notion of the person "rises" and "falls" together with Christian trinitarian metaphysics. The rudimentary pre-Christian accounts of personhood, if one can speak of them at all, do not do justice to interiority and the incommunicable—two crucial characteristics of personhood. The post-Christian deconstructions of personhood are predicated upon the denial of the reality of grace and of trinitarian metaphysics. Rolnick's insightful book reminds us that there is always a danger to depersonalize persons, to acquiesce in a version of reductionist anthropology, when one denies that grace and the infinite love of the triune God are at the core of all being.

Responses to Responses to *Person, Grace, and God*

Philip Rolnick

In the *Confessions*, Augustine observes that everyone knows what time is until someone asks what it is. Likewise, everyone thinks they know what persons are until someone demands an account. When I set out to write a book on *person*, I did not intend to write something difficult and abstruse. However, as issues presented themselves, especially possible "defeaters" like evolutionary biology and most postmodernist writing, it became impossible to render a plausible account that did not get into some deep conceptual water. Given the difficulty of the topic, I would like to thank Andrew Grosso, Paul Lewis, and Paul Gavrilyuk for their efforts in responding to *Person, Grace, and God*.

Response To Andrew Grosso

Andrew Grosso's account catches many of the central features that I intended. With only a few exceptions, I find his comments accurate and insightful.

Grosso rightly sees that Jesus' paradox is central to the work: "For those who want to save their life will lose it, and those who lose their life for my sake, and for the sake of the gospel, will save it" (Mark 8:35). Grosso's understanding of the history/genealogy of the person is also quite good. I would only add that my historical account obliquely continues through the postmodern engagement of the modernist subject. Grosso again rightly sees altruism and transcendence at the heart of the issue with biology and postmodernism. Transcendence is actually more basic because without it altruism itself would not be possible.

Grosso's claim that my overall account is "axiological" or "ethical" comes as something of a (minor) surprise. I hold that (1) the true, good, and beautiful are mutually implicative; and (2) the true, good, and beautiful constitute the ground of ethics (once these transcendentals are themselves grounded in the being of God). Nonetheless, Grosso's remark set me to thinking further about the issue, and at least he perceives how central transcendence is to the overall endeavor.

Postmodernists are not really dualistic, as Grosso interprets me to represent them. Following Heidegger, postmodernists reject univocity because in their judgment it is only applicable to Being, and they assert that Being is not accessible to us except through beings and becoming. In other words, we live among and can only perceive flux, change, and heterogeneity. Postmodernists generally deny that unity is available to us. Hence, the postmodern focus is a dizzying metaphysics of change and the new, without a stabilizing sense of tradition or a unifying possibility of transcendence. From Nietzsche to Rorty, transcendence is seen as a sort of con game, where what is allegedly transcendent, i.e., *beyond* us, is then incongruently claimed as the anchor of our discourse. Their skeptical question is: Is it beyond us or not? If it is beyond, then let us not talk of it. In this postmodern picture of change without transcendence, reason, divorced from faith, cannibalizes itself.

There is no knock down argument for convincing skeptics that the true, good, and beautiful are real—infinitely real in the being of God and increasingly real in the experience of those who pursue them. We are "relatively unified unifiers" (*PGG*, 222) because there is always more to be known of truth, more to be accomplished that is good, and more to be appreciated of beauty in others and in nature (science) and perhaps to be increasingly accrued in our own souls and society. The true, good, and beautiful are coterminous with the infinity of the divine being, but graciously, in creation, these qualities are progressively accessible to human experience. The true, good, and beautiful are also the ingredients of love and of every real gift. Relationships all too often include what is false, evil, and/or ugly, but these occurrences are failures of love and gift, not their achievement. Analogy, as a theory from Aquinas to the present, is a way of expressing the relation between divine and human; but the use of this language depends upon faith, not merely argument. Hence I present an *alternative* to postmodernism, not a knock down refutation of it. Whatever Polanyi's religious affirmations and limitations, he clearly had a keen sense of transcendence, and he even characterizes himself as a Platonist—but one who sees the import and potential of history.

I must differ with Grosso's claim that postmodernism is "committed … to a metaphysics of radical participation." Participation, which is at the heart of the analogical tradition, means that we have a *part* or share of being, and hence a share of the true, good, and beautiful. At its root, it is really a metaphysical elaboration that presupposes creation. By contrast, the postmodernist writers that I engage would not allow anything like participation in something greater. For them, there is no transcendence, nothing greater, nothing privileged. Lyotard, for example, does not advocate conversation as a way of mutual edification and advancement. Instead, he claims: "to speak is to fight" (*PGG*, 104, citing *Postmodern Condition*, 10.) In fact, I frame my response to postmodernism as "A Dispute about the Finite" (*PGG*, 123-137). Hence, I would not say, as does Grosso, "postmodernism provides a useful starting point for thinking about the contingency of the world." Anyone who maintains that, "In the beginning God created the heavens and the earth," has the kind of grand narrative—and starting point—that postmodernism dogmatically prohibits. I think that Grosso and I would agree that the universe is contingent because creation is not automatic; rather, it is a gift (grace).

The way Grosso links aspects of my work to Polanyi's thought is very helpful. Grosso's use of Alister

McGrath's distinction between "illuminative" and "foundational" application of Polanyi is likewise instructive.

Grosso nicely grasps the cumulative nature of what I am trying to do: "In the fourth and final section Rolnick outlines the parameters of a personalistic theology that makes use of the insights developed in the previous sections." He likewise has a knack for lifting up key points, as when he writes: "Appreciation of the tension between divine simplicity and trinitarian relations has the 'salutary effect of keeping us from the self-deception of conceptual mastery of the being of God'" (*PGG*, 193). Theology, if it is to be something more than human construction, can never be about conceptual mastery, only about conceptual faithfulness to the gifts that we have received and may continue to receive.

Lifting up the phrase, "person and gift are mutually constitutive" (*PGG*, 167), Grosso raises another key issue. A gift is elusive because it is not natural; likewise, persons, if there are any, are not natural, as opposed to "subjects" or "individuals." Like gifts, person is distinct from nature without being removed from it. The very name "person" historically carries a greater dignity than a mere individual. Person, gift, and the possibility of transcendence live or die together. Derrida's obsession with gift as "the impossible" is really his way of chasing transcendence—which he has a priori ruled out. Ultimately, if there is no truth, goodness, and beauty that transcend us, then we might as well not talk about *persons*. If we choose to speak about persons as opposed to individuals, then we must *believe* in some higher reality toward which persons are oriented. There is an inherent excess about persons, what I have thematically developed as "more than," and this excess is also found in gifts, and in our participation in the true, good, and beautiful.

Neuroscience and the Soul

A somewhat stronger objection to Grosso's account is his understanding of my section on neuroscience and the soul (*PGG*, 239-255). Here Grosso mischaracterizes the text in two ways en route to an unnecessary critique: "[Rolnick] touches on the dialogue between theology and neuroscience; he appreciates some of the insights of nonreductive physicalism …" First, a 17 page engagement of theology and neuroscience might be considered a bit more than "touching" on the subject, especially since this particular section has already been excerpted (*Global Spiral*, Dec. 2007). Second, and more importantly, the section attempts to show the incoherence of nonreductive physicalism. Advocates of nonreductive physicalism, e.g., Nancey Murphy, rule out talk of "soul" as a presumed condition for being able to engage neuroscience. They variously attempt to show that mind emerges from the body but is never a separate entity. Leaving much aside here, my basic argument against nonreductive physicalism is: If there is only one level of human being, then the physicalism is reductive; if there are two levels, either the upper level is real or it is not. If it is real and not identical with the brain, then it must have being, ontology. Hence, for anyone who believes in God and thus wants to be nonreductive, there must be "some form of *twoness* and a way to *unify* the twoness" (*PGG*, 246-247). Throughout Christian history, especially since Chalcedon (451 AD), person has played that unifying role, but the nonreductive physicalists, who are Christians, neglect this historical solution. The name assigned to the upper level, aspect, property, or even substance, does not much matter. I oppose naturalism but consider it a coherent position. I embrace both mind and soul because I do not think that the most important aspects of human experience can be accounted for without them. Impossibly, nonreductive physicalism tries to locate itself between these two positions. However, it can only do so by obfuscating its commitments—something Polanyi never much liked.

Grosso claims to find a "lacuna" in my account because I omit "the doctrine of *enhypostasia*," which "is intended to express the idea that the two natures of Christ are united in and by the one person of Christ …"

Grosso apparently missed the theological punch line of my argument against nonreductive physicalism: "Since the hypostatic union settled upon at Chalcedon, in which the two natures of Christ were unified in one Person, Christian thought has consistently opposed dualism through the unifying force of the *person*. Just as the one Person unifies the two natures of Christ, so too are the different levels of body, mind, soul, and spirit unified in each human person" (*PGG*, 247). What Grosso is demanding from a later source, I utilize from an earlier and more foundational one, the very one that John of Damascus (8th century) was trying to defend with *to enhypostaton*. Furthermore, I also cite the argument as Aquinas employs it (*PGG*, 55, citing *ST* I.19.1. *ad* 2).

The theological payoff from these complex arguments is twofold. First, even God respects the dignity of the person. Human nature is assumed by the incarnate Logos, not a human person. Second, person *unifies* diversities, whether we are talking about the one person of Christ unifying divine and human natures, or, in the debate with nonreductive physicalism, how person unifies body, mind, and soul.

Nonetheless, I hope that Grosso, who has generally given such a fine account of my work, will give us a future publication on the Eastern tradition and person. I look forward to being instructed by it.

Response to Paul Lewis

At the end of his critical response to *Person, Grace, and God*, Paul Lewis reminds his readers and me of our friendship: "I trust that whatever disagreements [Rolnick] and I have are those between friends who are together seeking to grow in friendship with God and one another." So noted and mutually affirmed.

While hesitating to respond to my friend Paul Lewis's paper, I thought of an (unfortunately) popular song from *Jesus Christ Superstar*: "I Don't Know How To Love Him." When a theologian publicly confesses, as Lewis does, that he is "tone deaf" to the Trinity, but then dares to publish a critique of a work because its central topic historically emerges from and theologically engages Trinity, what are we to make of it? Should the tone deaf also write public reviews of a symphony orchestra's performance? Should the orchestra conductor respond?

Questioning The Trinity

The understanding of God as Trinity arose because, in stark contrast to *Jesus Christ Superstar's* Mary Magdalene, who sings: "He's a man. He's just a man," every Christian thinker of the patristic period agreed that Jesus Christ was more than a man, that Jesus was the Son of God, a revelation of God the Father, and the Logos incarnate. In response to the revelation in Christ, and the conviction that Father, Son, and Spirit must be equal, relation becomes understood to be at the heart of divine being. God is understood as Father, Son, and Spirit; not as me, myself, and I. The incipient notion of *person* emerges as the solution to how Father, Son, and Spirit can be at once distinguished, related, and infinitely, intensively one. Basically, Jesus' teachings (e.g., Mark 12:28-31) are about relationship to God and relationship to people, and these teachings are beautifully harmonious with the *ontological* relationships within the divine being.

Following Lewis, let us assume that God is not really Trinity, that God is monolithically One. Having no equals, such a God would have to bear the frustration of never being able to communicate fully (see the arguments of Richard of St. Victor in PGG, 46-54). Aquinas charmingly portrays the problem of a non-trinitarian Deity: "If plurality of persons did not exist in God, He would be alone or solitary. For solitude is not removed by association with anything that is extraneous in nature; thus anyone is said to be alone in a garden, though many

plants and animals are with him in the garden. Likewise, God would be alone or solitary, though angels and men were with Him, supposing that several Persons were not within Him" (*PGG*, 204, citing *ST* I.31.3 *ad* 1). It is a historical fact that the concept of the person, upon which most contemporary people place great value, emerges as the early church thinks through the trinitarian and christological controversies. As Polanyi notes, making a move in the right direction often bears greater results than the initial explorer could imagine (PK, 310).

Because *Person, Grace, and God* does not merely repeat trinitarian formulas of the past, but reworks them in connection with other themes in exploration of *person*, I was disappointed to read what amounts to a critique of Christianity, rather than my interweaving of Trinity, person, and the metaphysics of action and receptivity. Rather than launch a mini-meta-critique of the last 20 centuries of Christian teaching, I would strongly prefer that Lewis, who is after all a Christian theologian, had attended to the particular trinitarian articulation that I gave. For example, Chapter Six, "Trinitarian Simplicity: the Unification of Nature and Grace," presents a revaluation of medieval metaphysics that proposes a certain kind of receptivity as a divine perfection (*PGG*, 196-205). With this metaphysical reversal in place, the Son, who receives his being from the Father, can be thought of as grace or gift. Hence, grace is soteriological for us because it is first and foremost ontological within the being of God. Just as listening is a verb, a chosen action, so too can receptivity be conceived as a willed action proper to a being of love. Hence, we can conceive of the Son as the Listener/Logos. The Son, the Eternal Listener, the perfection of receptivity, is also the Word who has much to communicate in his life and teachings. For human beings, listening is a way that we give ourselves to another; it is a necessary ingredient of love. When loved ones do not listen to us, we are sometimes deeply hurt. A God who could speak but could not listen would be something less than perfect.

In its eternal stability, the Trinity is also the infinite realization of dynamic movement toward and for the other—i.e., God is love. Likewise, human love is only accomplished by turning attention away from self and toward the other. Movement toward the other is the movement of grace that escapes the ruinous turning back onto the self (*incurvatus in se*) and its endless self-concerns.

With a passing nod to my repeated citations about being careful and modest when speaking of Trinity, Lewis nevertheless charges: "I still worry that he says more about Trinity than can or should be said with such confidence—even analogically. (Of course Rolnick is in stellar company at this point, for Augustine, Aquinas, and Calvin are often guilty of failing to heed their own cautionary words.)" Now let me see if I have this right: Lewis, acting as a one-man magisterium of Christian doctrine, finds Augustine, Aquinas, Calvin, and me *guilty* of believing that God is Trinity and offering articulations of the doctrine? Presumably, all of us should have kept silence. However, Lewis has a great deal to say about the doctrine: The Trinity is not something that arises from the revelation in Christ; rather, it is a "construct" qualified by "historical contingency, political expediency, and terminological vagueness," "the result of … political pressure from the emperor," and a muddle of "linguistic innovations." Drawing upon my former teacher and Polanyi scholar Charles McCoy, I would like to ask Lewis: From what ontological peak do you render these judgments? Counseling circumspection to all others while saying so much himself, Lewis even suggests that my account lacks "epistemological humility." And he places this accusation in a section called "Topics for Convivial Conversation"?

Of course Lewis has the right to honest dissent from the doctrine of the Trinity. There is a place for Unitarianism (Boston, 19th c.) and the noble tradition of Reformed Judaism. However, it is rather weird to critique Trinity, a central feature of Christian faith, in a work in a series called *Sacra Doctrina*. It is like someone who has been invited to a tennis meet demanding that the game be played without racquets.

Lewis's claim that "Trinity does no work" in my responses to evolutionary biology and postmodernism is tendentious. He complains that my responses to these challenges, rather than arguing from Trinity, sometimes point out logical inconsistencies in their arguments, at other times appeal to psychological experiments, and sometimes use Jesus, Aristotle, Aquinas, or the doctrine of creation. Could Lewis possibly think that using any of the above responses is somehow mutually exclusive with understanding God as Trinity? When dealing with an interlocutor who is not only atheistic but also denies transcendence—a central feature of my book that is tellingly absent from Lewis's critique—what conversational purpose could be served by beginning with Trinity? The fact that I do not butter bread with my chainsaw is not a refutation of the chainsaw.

Bottom Up or Bottoming Out?

Lewis proposes that it is better "to work from the bottom up." He then offers what can only be called a bizarre critique of my very non-controversial reading of the opening of Calvin's *Institutes* (*PGG*, 208). In a paragraph beginning and ending with the virtues of starting from the "bottom up," Lewis maladroitly cites Calvin, who famously and explicitly chooses to start with knowledge of God (not exactly bottom up). Highlighting this massive counter-example to his own thesis, Lewis even notes that Calvin does so "in order to follow 'the order of right teaching.'" Staring at evidence pointing in the opposite direction from where he is heading, Lewis asserts that, "Calvin decides on his starting point more because of custom—perhaps even to avoid controversy—than conviction." That old chicken-hearted Calvin. Well, having heard again from the ontological peak, at least the world now knows what made the Reformer tick. Yet there is more to come. Apparently conscious that he is psychologizing Calvin, Lewis incoherently adds, "Trying to discern Calvin's actual intentions is futile, of course, but it does seem to me that, regardless of what they were, he legitimates a theology done from the bottom up." Fantasy has now replaced fact. Moreover, it is rather irritating to read about the futility of discerning Calvin's motives while Lewis is in the act of doing so.

Historically, heresy trials represent the most perverse Christian behavior; nonetheless, we can glean some gallows humor from Lewis's embrace of Calvin. When the Spanish physician Michael Servetus fled from the Catholics and appeared in Calvin's Geneva, he was arrested for heresy as soon as he was recognized. Servetus, who had a doctrine of Trinity indistinguishable from Lewis's, was burnt at the stake there in 1553.

Lewis's plea that human sin should lead us to take a bottom up approach to theology is topsy-turvy. If he is as serious as he claims to be about human sin, then why trust "human experiences, images, metaphors, and imagination to probe the divine reality"? Lewis, like Sallie McFague, adopts a "from here to there" approach that is incoherent with his own claims about human inadequacy. By contrast, the discourse of revelation presupposes a "from there to here" starting point. We can only speak if we have first been spoken to.

Grad School Cant

Lewis's accusation that *Person, Grace, and God* could "lead to a new individualism" is residual cant from graduate school days. In particular, Lewis cites my treatment of *incommunicabilis* as prone to this dreaded individualism. However, without incommunicability, personal permanence evaporates. If we become something other than ourselves every time we enter into a relationship, progress in character, or change in important ways, then all accounts of personhood become absurd and the promise of eternal life becomes meaningless. Incommunicability, as developed from Boethius to Berdiaev, is the sine qua non of meaningful relationship, community, and love.

Problematically, Lewis never mentions the biblical theme of the entire work, i.e., Jesus' paradox in Mark 8:35, where the way to save our lives is to lose them for Jesus and for the gospel, i.e., for the sake of *others* (not exactly individualistic). In a reasonably good summary of my treatment of the human person, Lewis in part writes: "First, human beings are relational creatures whose very existence is from the very beginning always already imbedded in webs, of natural, social, and divine histories. In short, life begins as graced, or gifted." Once again Lewis cites evidence (in this case strongly anti-individualistic evidence) which argues against his critique. My advice to Lewis: Drop the metaphysically impoverished attack on the individual. Any sane discourse, such as Polanyi's "Dwelling In and Breaking Out" (PK, 195-203), needs both individual and community.

Conclusion

To his credit, Lewis tells us that he has painted my constructive work "with an admittedly broad brush." Lewis then adds in an endnote: "I do so in part because the arguments are intricate and detailed, and in part because I am not yet sure I have grasped all the implications and connections."

In contrast to Lewis's critical remarks, I found his summary of *Person, Grace, and God* quite well done (apart from the noted absences of "transcendence" and the thematic use of Mark 8:35). In his critical remarks, I appreciate Paul Lewis's honesty, and hope that some good will come of our public exchange.

Response to Paul Gavrilyuk

I am grateful to Paul Gavrilyuk for having seen so much of what I intended in *Person, Grace, and God*. We are in agreement about most things, but even when he raises questions or criticisms, he ends up answering them much as I myself would.

Development of the Concept of the Person

As an internationally prominent scholar of church history, it is not strange that Gavrilyuk ruminates about the origin of the concept of the person—as I did myself. Under the section "Conceptual Development," in a brief sub-section "Pre-Christian," I wrote:

> Before Christian theologians … the concept of the person was here and there foreshadowed but never given sustained, diachronic development …. As early as Heraclitus, there are incandescent moments at which some key notions briefly appear. But nowhere is the concept presented and then built upon by subsequent thinkers. This lack of development is a sign of the importance and power of *ekklesia*, the church community that is so integral to Christian life and thought. (15)

Those familiar with Polanyi will not be surprised to see that *tradition,* i.e., a community that sustains itself through time, is the launching pad of further development. I do not think it possible that all the depth of *person* could be uncovered by a single person or generation. A community sustained over time, and one with a vital interest in the question, was required. As Gavrilyuk suggests, Plato and Aristotle nibbled around the edge of the question, especially the somewhat different but related question of the soul, but as Gavrilyuk concludes, "I would agree with Rolnick that pre-Christian philosophy lacked a developed intuition of personhood, and especially of

personal uniqueness and interiority." I would add that Plato's development of the good, the true, and the beautiful (the transcendentals) are great contributions to and correlates of the Christian development of the person. As Jacques Maritain suggests, these are the food of the personal (*PGG*, 171). Likewise, John Paul II contends that "transcendence … is to a certain extent another name for the person" (*PGG*, 6). Perhaps we could say that Plato and Aristotle, by their great influence upon Christianity, especially their work on transcendence and soul, indirectly contribute to developing the concept of the person.

Three Insights About Persons

What is so clear and helpful in Gavrilyuk's analysis of *Person, Grace, and God* is that he seizes upon the central insight about persons gained from trinitarian controversy and development: person distinguishes (the Father is not the Son; the Spirit is neither Father nor Son); person relates (there can be no Father without a Son); and person unifies (each of the three is said to be perfectly unified with the entirety of the divine *nature*). Analogously, these three insights about *person* apply to human beings made in the divine image and likeness. In the human case, however, unity is a quest rather than a state of being, so that we are "imperfectly unified unifiers" (*PGG*, 222, as slightly modified by Gavrilyuk). While the analogy works well, there are important differences. As Gavrilyuk notes, "analogy does not amount to identity."

Incommunicability

Gavrilyuk raises the issue of how persons are *incommunicabilis* (incommunicability) and once again convincingly answers his own question. First used by Boethius, *incommunicabilis* means that the reality (and value) of a given person is absolutely unique; it cannot be taken or given to another. If my best friend dies, I cannot put on a list of things to do tomorrow: get new best friend. Over time, I may be fortunate enough to develop another great friendship, but that new friendship, like the one now lost, will also be unique. The splendor of relationships is made possible by the uniqueness and irreplaceability of the persons who enter into them.

By contrast, *nature* is common and can be given (communicated) to another. Hence, God gives rise to God in the Trinity, and human beings give rise to human children; we do not give rise to oak trees. But while common human nature can be given to another, the personal reality of each parent cannot be given to the child. Gavrilyuk captures the sense of this distinction between nature and person: "person is always nature/essence transcending"; "persons are always *more than*, their nature is to transcend their nature." Persons have "freedom to transcend all definitions, freedom to be open to the transcendent." As Aristotle explained, a definition gives the essence of a substance or nature, i.e., what is held in common. But the point of speaking about persons is that each person is unique, even though nature is commonly possessed. In Gavrilyuk's excellent summary, "*incommunicabilis* refers to irreducible subjectivity, ineffable interiority, and free unification of all personal properties." In Polanyian terms, we might slightly enhance Gavrilyuk's summary by substituting "*tacit* unification" for "free unification," although both terms are helpful.

Person and Transcendence

Gavrilyuk's summaries of the chapters on evolutionary and postmodern chapters are again very helpful. I would only add that the issue of transcendence is in many ways decisive. The denial of transcendence is typically accompanied by the denial of *person*, as when postmoderns prefer to speak of *subject*—if only in order to

deconstruct it. The possibility of transcendence, of the progressive discovery of the true, good, and beautiful, renders personal life meaningful; the denial of transcendence renders life absurd. One way leads to meaningful and progressive education; the other to inculcation of propaganda, where instruction devolves to the views of the powerful. The denial of transcendence bets against itself and civilization. Such denial is the antithesis of Polanyi's life work.

Person and Gift

Gavrilyuk's only real objection is my alleged "tendency to identify persons with gifts, or even more strongly, the fullness of divine life with grace." I do say that person and gift (grace) are mutually constitutive, mutually implicative, and that if either one turned out to be falsified, the other would share its fate. However, I do not believe that I anywhere equate person and gift without remainder, and I notice that Gavrilyuk does not supply any specific quotations that would support an identity *simpliciter* of person and gift. Gavrilyuk agrees "that the life of the Trinity could be aptly pictured as eternal gift-giving of the Father reciprocated by the Son and the Holy Spirit. But the gifts, as understood in everyday discourse, *cannot give themselves*."

Respondeo: First, discourse about Trinity, and analogously, discourse about the highest sort of human self-giving, is not "everyday discourse." The doctrine of the Trinity is strongly counter-intuitive and a prima facie contradiction of divine simplicity—which was Arius's objection. It definitely requires some stretching of normal discourse. Since the Son is "begotten of the Father," let us assume that the Father does not completely give himself in this begetting. In this case there would be an inequality, Arius would once again prevail, and Trinity would not be possible. In one sense, the self-giving must be complete. However, as is often the case in discussing the divine reality, we must say more than one thing. For the Father does not give himself in such a way that he disappears in the Son, for the Father is *incommunicabilis*. Derrida might demand that sort of giving for a gift to occur, but here the reality of *person* is present in all its force: the Father gives himself so that the Son is begotten in equality to the Father, but the Father remains Father—remains incommunicable.

After examining the question, Gavrilyuk once more answers his own objection: "Since, in Rolnick's own terms, the persons are always *more than*, persons by extension must be *more than* gifts too …" Precisely. Gavrilyuk's statement has, I think, uncovered the logic of personal incommunicability. Gavrilyuk would agree that the Son gives himself in incarnation, human life and teachings, the cross, and communion. But even when the Son gives himself, even when he gives the gift of his death on the cross, he remains incommunicable; he remains the Son—in this case raised up and glorified.

Likewise, human beings give themselves in marriage, childbirth, nurturance and instruction of the young, in every event of what M. Buber calls the I-Thou relation, and sometimes in martyrdom. Movement away from self and toward the other is the basic direction of human love, the movement of grace; it is, *mutatis mutandis*, the love that constitutes the trinitarian being of God. Gavrilyuk sees how person and grace (gift) are intertwined: "Post-Christian deconstructions of personhood are predicated upon the denial of the reality of grace."

We really do need something more than our own wits to succeed in answering the most basic questions of our lives. Whether or not I have successfully answered his objection(s), I think Gavrilyuk and I share some basic understandings of how the close interrelatedness of person, *grace*, and God begins to orient us toward answering those basic questions.

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Morality: Emergentist Ethics and Virtue *For Itself*

Charles Lowney

Key words: post-critical epistemology, meta-ethics, emergentist ethics, virtue, tradition, utilitarianism, deontology, moral psychology, tacit knowing, emergent being.

New moral ways of being are answers to fundamental problems in the human condition regarding the best way to be and the best way to be with each other. Entering a new way of being entails crossing a logical gap into a new interpretive framework. Michael Polanyi's from-to structure of knowing and discovery is used to show both how we can acquire the state of the good person through an imitation of their behaviors and why those behaviors must be practiced for themselves. The good person experiences a happiness that the person pursuing happiness as a goal cannot fully understand. One thus practices virtues, and heeds their codification into law, not for the sake of one's own happiness, but for the sake of the happiness of the person one will become.

In a paper titled "From Science to Morality: A Polanyian Perspective on the Spirit and the Letter of the Moral Law" (*TAD*, 36:1 [2009-2010]: 42-54), I embarked on a Polanyian exploration of moral philosophy by presenting an answer to the riddle posed by a tension between the letter and the spirit of the law. Here in this paper I continue to develop this emergentist moral philosophy by solving the riddle of why we must practice virtues *for themselves*, when virtues are purportedly designed to bring about the goal of happiness. In "From Morality to Spirituality," a third and final paper in this series to be published in a later *TAD* issue, I will explore how Michael Polanyi's notions of tacit knowing and emergent being can apply to the problem of whether or not there is an ultimate fixed goal towards which we are developing.

To solve the first riddle, I showed how an extension of Polanyi's post-critical epistemology of tacit knowing into ethics produces strong similarities to Aristotelian virtue ethics, with its reliance on practical wisdom developed through experience. This epistemological-ethical framework also brought forward a role for sentiments and intuitions as tacitly conditioned guides capable of validating moral knowledge. Polanyi's concepts of commitment and universal intent also conveyed the importance of Kantian aspects of moral knowing and displayed an objective content that could command our assent. A picture began to form of how different moral theories fit together by the light of Polanyi's conceptions of tacit knowing and emergent being. Solving the second riddle will now provide a richer picture of how consequentialist and deontological ethics may come together and be surpassed.

According to Polanyi's structure of tacit inference, background clues are integrated into a focal meaning, which then may act as a lens or "interpretive framework" by which particular actions are understood. Furthermore, this integration in knowing can reflect an integration in being. By looking at Polanyi's approach to discovery in science, I proposed that the way of being of the good person was the emergent answer to questions in the community or tradition about the best way to live. The good person sets the standard, and principles or explicit rules are important but incomplete expressions of his or her way of being.

In "From Science to Morality," I focused on Polanyi's conception of knowing as a skill based in tacit knowledge and the heuristic nature of the question which drives the emergence of an answer. Here I will build

on these conceptions and also develop Polanyi's intentional, *from-to* structure of experience to answer some problems Aristotle leaves us with (e.g., How do *we* know who the good person is? Why should we perform virtues *for themselves*? What conditions are required for happiness?). In "From Morality to Spirituality," I will raise questions that Aristotle does not address (e.g., Given the structure of moral discovery, what can be said about spirituality?). Polanyi's notion of how interpretive frameworks shift and develop without one antecedent eternally fixed *telos*, will point beyond Aristotle's conservative approach and allow more radical possibilities for moral development and spiritual transformation.

I. The Evolution of Achievements: Moral Emergence

Polanyi's understanding of emergence and discovery allows for the possibility of moral, as well as biological, evolution or change. Just as a particular person can have questions that drive him forward in search of truth, a particular society can have questions that drive it forward in its development. By looking at the process of personal discovery and the manner in which entire interpretive frameworks can shift, we will begin to see how new, discontinuous developments can take place at the individual, social and historical levels. Traditions have longstanding questions that drive them and humanity in general has its fundamental questions, and, when answers come, they can be far-reaching and transformative.

1. Heuristic Achievements Leap Across a Logical Gap

What Polanyi shows us in his *epagoge* from experience to principles that Aristotle does not is the extent to which heuristic striving crosses a "logical gap" (*PK*, 125).[1] For Polanyi, subsidiary clues that are logically incompatible at a lower level of meaning can be integrated in a joint focal meaning by which they are coherently comprehended. This structure is exhibited in the performance of a skill, the development of concepts and conceptions, and in basic cognition. An example is the way in which images from two eyes are integrated in the joint meaning of three dimensional vision. We will now see how this same sort of achievement happens when one makes an important discovery, both at the level of individuals and at the level of societies.

Polanyi develops Poincare's stages of discovery to show how truly novel advances are made. First, there is the emergence of the question. An engaging problem itself can reflect a dissonance between the present structure for understanding, and a structure by which the answer can be obtained. Second, there is a stage of conscious striving. Information is collected and ideas are explored. This sets the imagination to work. The seeker, fully engaged in the problem, with a focus on the solution, has "anticipatory intuitions" which guide the search (" Creative Imagination"[*Society, Economics and Philosophy: Selected Papers, Michael Polanyi*], 262; *KB*, 149). But then there can come the dark night of the soul in which all understanding appears to be lost. At this stage, the normal ways that clues or information are integrated into focal meanings have broken down. Finally, in the successful search, there is the *Eureka!* moment, when the answer appears, as if on its own. The old clues and the new have re-formed, some take on less significance, some take on more. The prior system of meanings changes as the novel integration provides the new lens from which the answer to the question becomes apparent.

This model of creative discovery, which Polanyi uses to describe the emergence of new interpretive structures in science, also describes the emergence of moral knowledge in a tradition or culture, with the proviso that moral knowledge affects the person more comprehensively (*PK*, 215).

Moral laws and maxims that guide behavior are essential for an apprentice. If the novice is *seeking* a new way of being that has emerged as a moral discovery, he *cannot understand* experiences and events properly from his *current* tacit background and his current integration from clues to focal comprehensions and back. He cannot fully understand the explicit statements made by the moral exemplar or the laws that attempt to express that way of being. Only after he has come to authentically embody the new principles himself, i.e., after he has leapt across a logical gap—that "dark night" in which his old framework collapses—can he understand the meaning of the prior activities that he engaged in as an apprentice to that way of life.

In contrast to Aristotle's conservative approach, the strong parallel Polanyi makes between intellectual and moral knowing leaves open the possibility of radical developments on the order of scientific revolutions. The entire interpretive framework of moral understanding can shift. In the realm of intellectual achievements, paradigm shifts can be of the order of a Copernican revolution, or the shift from Newtonian to Einsteinian physics. In moral achievements, these shifts can be epoch-making transformations of personal or historical consciousness, such as a shift in moral conceptions from those that allowed for slavery to those that see it as a great evil. As the transition is made, the explicit expressions of one comprehensive doctrine are now understood in the light of the meaning generated by a new comprehensive doctrine. And so the statement of a principle, such as "All men are created equal" receives a new meaning in the new moral framework.

Alasdair MacIntyre's work charts such developments in history, both within a tradition and between traditions, in a manner consistent with Polanyi's insights. He provides an example of the shift in framework that took place in the development from the Homeric virtues to the virtues of the *polis* of classical Greece.[2] He also shows how the intersection of two incommensurable traditions can be combined in a creative synthesis that leaps across that logical gap to bring a new understanding. He describes how Augustine's Platonic view of Christianity came together with Aristotelian philosophy in Aquinas' theology. It is particularly important to note, as MacIntyre does, that when a shift in moral framework occurs the same words can be used with a new meaning. This is natural, since from the vantage point of the seeker who becomes the innovator, the new meaning can be seen as the fulfillment and realization of what the old concepts and their signs were striving toward; for instance, Plato's "Good" becomes identified with the Christian God in Augustine's understanding. This shows us that words like "courage," "justice" and "love" are likely to have different meanings for the moral novice, than for the moral virtuoso, especially if that virtuoso is displaying a way of life that is a Herculean achievement, which has yet to find the behavioral and structural support of a shared community.

As a tradition achieves a new comprehensive response to old and new challenges, the conception of *who* the excellent person is will change. Aristotle proposes such a development synchronically, distinguishing the life of pleasure, the life of honor and the life of contemplation, but that development may also be construed diachronically as an evolution of discovery. Just as Polanyi places living beings in a hierarchy of achievement, so there might be answers to the best way to live that mark important accomplishments in an emerging human consciousness. It is thus possible that the moral exemplars of an age exhibit the objectively best way of life for that area, that era, or for humanity at large in that stage of its formation.

2. Recognizing the Excellent Person

Polanyi's understanding of the question as a heuristic that calls forth an answer, applies not only to remembering a name, or making a scientific discovery, but also to the moral and aesthetic dimensions of our lives

at individual, social and historical levels. Such answers are not always amenable to discursive explanations, e.g., a symbol, a poem, or even a person may fit as an answer that satisfies the restlessness excited by an explicit or a subliminal but driving question. The moral virtuoso embodies an answer to questions about living that are more comprehensive than intellectual questions. But how do *we*, who are novices or at best competent, recognize the excellent, good person? Polanyi may help Aristotle here.

Customs, laws, and moral principles are explicit expressions of tacit knowledge, but like a craft's rules and techniques, they bring about a goal of living well, and so are subordinate to that goal. We are trained in society's customs and laws, just as the virtuous person is. We share in a form of life common to human beings and we share the same special knowledge of our culture and tradition (*PK*, 375). We can recognize the excellent person, not because we are all excellent people, but because we share so much of the background knowledge and the heuristic striving of our society. Just as a scientist, who is working toward a solution to a problem can recognize when he, or a fellow scientist, is following clues in the right direction to find an answer, we too can (or *should*) recognize an action as good and be able to locate the moral exemplar as an answer to our comprehensive moral questions about the right way to live. The reformer who is an innovator is thus not always wrong in a tradition that values inquiry; she can be the herald of solutions to problems that have arisen and gripped the social conscience for generations.

As members of the same society, we are embroiled in the same questions. We can have anticipatory intuitions and recognize the proper direction in which to find an answer. Through our own moral passion we can recognize the virtuous person. This is why we can attempt to discover a sense of what the virtuous person would do in thought experiments, and we can affirm that course of action as right with universal intent, even if our habituated character does not make it easy for us to choose it with ease. Rather than being an actual person, the *phronomos* can be an ideal that acts as an effective procedure.[3] When we ask, "What would the virtuous person do?" we take the actions of the virtuous person and attempt to integrate them into a comprehensive whole that would show us how certain rules of action might apply in particular new cases. This, of course, does not always issue in what the virtuous person would actually do. Not only are we missing many actions that would provide background clues toward a correct frame of judgment, but the integration here is primarily an intellectual exercise and the resulting maxim is an external prescription rather than something that flows from a way of being.

The expert is still the best judge, but this does not mean that we cannot recognize when the virtuous person has fallen by the light of his own standards. As the Dalai Lama says….

> I normally recommend to Buddhist practitioners not to see every action of their spiritual teacher as divine or noble. There are specific, very demanding qualities that are required of a spiritual mentor. You don't simply say, 'It is good behavior because it is the guru's.' This is never done. You should recognize the unwholesome as being unwholesome.[4]

So we may trust the judgment of the expert, but not blindly, since we have our anticipatory insights as well. When the excellent person is not a member of our society or tradition, and we can still recognize her authority, we do so at a level at which we share a common background or aspirations with her society or with our deeper humanity; we appreciate the answer she provides to questions we have that arise from the human condition.

Aristotle does give us one general feature that helps us to locate the excellent person. The virtuous, excellent person lives in such a way that his or her life is a happy one. *Eudemonia*, blessedness or *happiness*,

is the end to which all other actions are subservient. Aristotle defines happiness as an activity of the soul in accordance with virtue over a complete life (NE,1098a16-19).[5] Happiness is not simply pleasure, but the happy person experiences the highest and best pleasures. This highest sort of pleasure is the affect of a way of being that expresses the excellences of character and intellect. The current use of the term "happiness" presents it as more of a sentiment than an enduring state. We can reconcile our use with Aristotle's somewhat by calling the pleasurable affect of the state of happiness "the experience of happiness" in a qualified sense, since the total experience would, among other things, involve the activity of the virtues, which those pleasures accompany.

So, if Aristotle is right, finding the virtuous person to whom we should apprentice ourselves would entail finding the person who we would rightfully consider happy or blessed.

II. Behavior and Consciousness are Integrated in a Way of Being

In this next section, we will look at the mechanism by which the moral apprentice might become a virtuous person. The way of being of the good person, i.e., the moral exemplar, becomes manifest in his or her actions. The actions, though they naturally flow from the good person (as if from spirit), can be assembled into maxims for action (laws) for the moral novice to follow as he seeks initiation into the expert's way of being. Dwelling in such actions can help one to achieve the state of being lived by the exemplar, but such actions necessarily form incomplete clues towards that transformative joint significance and they can be misdirected and misunderstood. Skillful means may therefore be required to transform the novice into the way of being of the moral virtuoso.

1. Knowing the Mind as an Integration of Behaviors

Skilled living is a way of being that is contiguous with actions/doings and affects/feelings. For Aristotle, the moral expert is happy; the virtuous person experiences *eudemonia*. Polanyi's way of understanding the body as clue to mind and mental states, shows that by doing what the master does we can better become like him, better understand him, and even experience as he experiences.

According to Polanyi, if we share enough background knowledge, then through someone's behavior we are capable of knowing his thoughts. Intelligent behaviors are clues which we can integrate tacitly and unify into the focal awareness of another person's mind. When we dwell in particular behaviors subsidiarily, when "we observe these particulars comprehensively, we are in fact focusing not on the behavior, but on the mind of which they are the workings" (*PK*, 373). In "The Logic of Tacit Inference," Polanyi says, "…the human mind works and dwells in a human body, and hence the mind can be known only as working and dwelling in a body. We can know it by dwelling in that body from the outside (*KB*, 152).

We can also better attend *from* a person's behavior to his mind by imitating his behavior. "Chess players enter into a master's thought by repeating the games he played. *We experience a man's mind as the joint meaning of his actions* by dwelling in them from the outside" (*KB*, 152). Dwelling in a set of intelligent behaviors can provide access to a way of thinking and, by extension, dwelling in set of moral behaviors can provide insight into a way of being.

Even in attacking behaviorism, Polanyi recognizes that behaviors provide important clues. "Thus the behaviourist analysis is intelligible only because it paraphrases, however crudely, the tacit integration which it pretends to replace" (*KB*,152). Polanyi acknowledges that simple descriptions or re-enactments of behavior are

inadequate to catch a higher-order phenomenon, such as mind, that supervene upon the behavior and other bodily clues. Similarly, our appreciation and performance of virtuous acts is inadequate to provide us with the state of being of the moral virtuoso. But, the behaviors are important clues. Just as the body and its actions are contiguous with the state of mind that supervenes upon them, so the virtuous behaviors are contiguous with the state of consciousness of the exemplar.

Religious ritual is a way of engaging in the behavior of the faithful and participating in ritual, according to Polanyi, can help one to experience a religious way of being. Polanyi says that ritual

> is potentially the highest degree of indwelling conceivable. For ritual comprises a sequence of things to be said and gestures to be made which involve the whole body and alert our whole existence. Anyone sincerely saying and doing these things in a place of worship could not fail to be completely absorbed in them. He would be partaking devoutly in religious life (*PK*, 198).

This seamlessness between the subsidiary clues (ritual actions) and focal experience (being engaged in worship) shows why acting "as if" one had faith, as Pascal advised, can assist a person in coming to genuinely have faith. It shows why imitating the master can lead one to become like the master, not just in affect but in substance.

2. Focus on the Unknown to Discover without Awareness

Along with behavioral clues, another important ingredient toward seeing what the virtuoso sees, and experiencing life the way the virtuoso does, is to fix one's intentions on a focus beyond the clues. This technique assists in the proper integration of those subsidiaries activities that act as clues.

In tacit knowing we move from tacit clues to focal knowledge. When the clues change or are differently integrated, the focal experience changes. It may happen that all the clues appear to be the same but are integrated differently into an alternate focal awareness. Polanyi uses the example of inverted spectacles. If one puts on spectacles that turn the world upside down, eventually one will reintegrate the same visual clues and be capable of moving masterfully through the world once again. We learn to function with what we see as if it were right-side up. We accomplish this re-integration by looking ahead to the new framework one cannot yet perceive, and not by attempting to relate particular clues in the framework in which they are currentlypresented.

> Telling ourselves that what we see above is really below may actually hinder our progress, since the meaning of the words we use is inappropriate. We must go on groping our way by sight and touch, and learn to get about this way. *Only by keeping our imagination fixed on the global result we are seeking, can we induce the requisite sensory re-integration and the accompanying conceptual innovation* ("Creative Imagination," 259, my italics).

Having the right questions and the right forward focus is part of what brings about the ability to shift into a new interpretive framework. Organizing the clues into the appropriate order involves establishing and experiencing the right focal intent.

In discussing how a scientist can have an anticipatory sense of the right direction in which to search for an answer, Polanyi introduces the notion of *subception*. Subception is "a process of learning without awareness" (*KB*,143). This is the way a dog or a person can be trained by being shocked or rewarded, without consciously realizing that his body is learning new behaviors. Polanyi reasons that if there is "learning without awareness" there is also "discovery without awareness, since discovery is but learning from nature" (*KB*,143). This form of subception accounts for how the scientist pursuing a question can come to guess correctly. He has "anticipations" that "contain a deepening sense of the nature of things and the facts that might serve as clues to a suspected coherence in nature" (*KB*,143). He has these anticipations and others do not because he is steeped in the question, focused on the goal of its answer, and he is tacitly as well as explicitly learning information that can bring about a solution.

Focusing on a goal, i.e., aiming toward the answer to the question, however nebulous, helps us to achieve the means of reaching the goal. This focus allows the subsidiary clues to fall into place differently than how we might explicitly engineer. We can gain a new perspective that solves problems by focusing ahead to the goal and letting this focus help re-arrange, re-rank order, and add to or subtract from the clues that go into the focal understanding.[6]

What is the focus when we are groping in search of an answer? Polanyi quotes Polya on mathematical discovery: "*Look at the unknown. Look at the conclusion*" (*PK*, 127, his italics). Polanyi says, "a heuristic striving evokes its own consummation" (*PK*, 127). The process, as Polanyi sees it, is similar to recalling a forgotten name:

> By directing our attention on a focus in which we are subsidiarily aware of all the particulars that remind us of the forgotten name, we form a conception of it; and likewise, by fixing our attention on a focus in which we are subsidiarily aware of data by which the solution of a problem is determined, we form a conception of this solution. The admonition to look at the unknown really means that we should *look at the known data, but not in themselves, rather as clues to the unknown; as pointers to it and parts of it* (*PK*, 127-128 , his italics).

To discover and live a new way of being—that of the virtuous person—the behaviors, i.e., the virtuous actions, will need to be understood in a way that is different from how we currently conceive them. Unlike simply remembering a forgotten name, discovering a new way of being is heuristic act that "leaps across a logical gap" (*PK*, 125) to provide a new interpretive framework. When the novice reaches his goal, the subsidiary clues—virtuous behaviors, and the moral rules—will be understood in the light of a different meaning.

III. Toward Transforming One's Way of Being: Rules Out of Duty and Virtues *For Themselves*

Rules are understood differently from below, by the apprentice, than from above, by the virtuous person. Rules bear content, but they function instrumentally. They are the explicit rendition of knowledge that acts subsidiarily in the goal of living right and well, hence they are guidelines and useful means to right and good actions. Similarly, performing such virtuous actions is a means to achieving happiness. Now that we have seen that the way of being of the virtuous person is a discovery, and we have seen how subception works to achieve

discoveries, we are in a position to see two reasons why virtues should be performed *for themselves*. Understanding the mechanism behind the reasons why virtues should be performed for themselves shows in what ways, from a Polanyian perspective, Kant is misguided in his emphasis on duty to the law, Mill misconceives the relation of the virtues to happiness, and Aristotle is most on target in approaching both the nature of the law and the role of virtue.

1. Happiness is Intrinsic to a Way of Being

Are virtues means to an end? Are they practiced in order to achieve a state of being that we call happiness? At one extreme, Kant and othe deontologists advocate performing virtuous acts, those in accord with the moral law, for their own sake and not for the sake of *any* benefit of pleasure or happiness. In sharp contrast, Mill and other utilitarians believe that virtues get their value from the consequences that they can generate. For Mill a virtue was originally a means to an end, rather than an end, or a part of the end, in itself.

> Virtue, according to Utilitarian doctrine, is not naturally and originally part of the end… There was no original desire of it, or motive to it, save its conduciveness to pleasure, and especially to protection from pain. But through the association thus formed it may be felt a good in itself, and desired as such with as great an intensity as any other good.[7]

Mill makes an analogy between practicing virtue for its own sake and the desire to accumulate wealth. Money initially has its value for the sake of the goods it can buy. Nonetheless, according to Mill, money can become strongly associated with the good ends it can procure, and in turn becomes valued as a good in itself. One might then enjoy the pursuit of money and enjoy attaining riches as much as one would enjoy the goods that money, as a means, could procure; similarly, the virtues brought good and pleasurable results. Courage, for example, brought victory in commerce and war, and so courage itself became valued, even when it showed no result. Although there are utiles to be gained in the simple performance of a virtuous act itself, this utilitarian conception of virtue justifies the practice of skipping over the good feeling that the courageous act might bring, in a particular case, to look at whether the act is likely to increase the overall happiness of the individual or procure the greatest happiness for the great number. If being cowardly can tally more utiles, turn tail and run.

Mill's analysis of the virtues would be much to Aristotle's distaste, for Aristotle considered the pursuit of money for its own sake a perversion. For this reason Aristotle did not consider the life of a moneymaker choiceworthy; its concern was with means and not legitimate ends that are good (*NE*, 1096a6-8). Mill does do his best not to denigrate virtues; he emphasizes that their pursuit makes one a "blessing" to others, while the pursuit of money, power and fame as ends in themselves can make one "noxious" (Mill, 1153), but by instrumentalizing the virtues in a way that makes their practice external to genuinely pleasurable affects, he misconstrues the function of their practice.

Aristotle agrees with Kant that we should treat acting virtuously as a duty and an end itself rather than as a fungible means to an end. Aristotle acknowledges the virtues as ends in themselves by seeing the life of honor and the life of contemplation as each choiceworthy (*NE*, 195b15-30). Along with Kant, Aristotle honors the courageous act for itself, he honors an act of benevolence, and he respects the laws. Unlike a utilitarian, the *phronomos* may judge that the right thing to do is act according to the law, or act virtuously, even when it does not bring happiness to us or others. And yet, according to Aristotle, we also practice the virtues in order to achieve happiness (*NE*, 1097b).

Aristotle discusses the virtues as being both ends in themselves and as being subservient to the end of happiness. While this sounds like Mill's answer, for Aristotle simple psychological association is not the solution, otherwise any act could be just as valuable to happiness and its pleasure as any another.

The disposition to virtuous acts, and their performance, is not so easily separable from the condition of happiness that is the goal of the virtue. This is shown in the contiguity between the tacit clues and the focal experience. The experience of happiness, i.e. the pleasurable affect that the utilitarian would measure, is not simply an end extrinsic to the performance of the virtues; it supervenes on the way of being of the virtuous person.[8] This is similar to the way pleasure supervenes on a natural activity and completes it for Aristotle (*NE*, 1174b32-35).

For Aristotle, the source of happiness is the state of character that provides the disposition to virtuous behavior and which naturally engages in virtuous activities. There are also other conditions such as having friends, having leisure and having enough money. These give the structural support that provides the capabilities for sustaining some of those virtuous activities that the feelings intrinsic to happiness supervene upon, such as engaging in friendship, having time for contemplation, and being generous. Each virtuous practice has its own completing pleasure. "The pleasures that complete the activities of the complete and blessedly happy man…will be called the fully human pleasures to the fullest extent" (*NE*, 1176a27-28).

The contiguity between behaviors and states we see in Polanyi's *from-to* structure of tacit knowing shows us why virtues should be practiced for themselves. Virtues do not merely get value from a strong association with the good or pleasurable end they produce, as Mill thought. To perform the virtues in the right way is not performing them for an extrinsic end, but it is behaving—and being—the way a virtuous person behaves and is. The way of being of the virtuous person is happy, regardless of whether he is slain on the battlefield or whether his right actions do or do not produce the good and sort of happiness that we, with a utilitarian mentality fostered by consumer society, believe should be the end of moral actions. The excellent person is happy doing the right thing, i.e., performing virtuous acts, and doing the wrong thing pains him.[9]

2. Habitual Integrations Must Be Disrupted

Polanyi's logic of tacit inference also gives a second reason why virtuous acts must be performed for their own sake: the novice must practice virtues for themselves in order to be reconstituted in accord with the character of the master. In the transition from competence to mastery a logical gap is crossed. In crossing the logical gap to attain an answer to a comprehensive question, the habitual integration of clues that the novice is accustomed to in his old way of being must be disrupted.

At the stage in which the apprentice seeks the transformation of his way of being, the performance of the virtues should be *for themselves* and the adherence to the rule or law *should* be from duty. Such actions are part of the *method* for achieving the way of being of the moral master and achieving his level and sort of happiness.[10] This approach provides an openness to the restructuring of the meaning of behaviors. It helps take the actions out of the interpretive framework and way of being of the apprentice and makes it possible to take on the way of being of the master, whose actions are naturally contiguous with these sorts of virtuous activities.

We can see how this works by looking back at how Polanyi understands the process of discovery. One must pass through the "dark night of the soul" where clues lose their meaning and are reevaluated—as they must be—in order to be reconstituted in terms of the new interpretive framework that jumps the logical gap and provides the solution to the inquiry. During this dark night, one focuses ahead toward the unknown solution.

The transformation into a new moral framework would thus involve three tasks 1) disrupting the old integrations, 2) practicing the behaviors of the moral virtuoso, and 3) focusing ahead on an unknown goal. These tasks are accomplished by practicing the laws out of duty and the virtues for themselves. Accomplishing these tasks allows the clues to take their more natural integration, i.e. as behaviors of the virtuous person, and assists one in understanding and truly becoming a virtuous person.

I am suggesting that when the clues are already seen as best fitting together in a certain way, in an old vision that must be surpassed, one must break apart the clues and disrupt any current integration in order to be able to gain a grasp of the new vision all the way through. We dwell in aspects of the new framework in order to break out of our own. Performing the virtues for themselves thus plays a double role. It disengages the clues/ behaviors from their current context of understanding and simultaneously provides the sort of experiences required that allows one to dwell in the behaviors of the virtuous person and come to experience and understand as the virtuous person does.

In the operation of a skill, there are many behavioral clues working together subsidiarily that come together in a focal performance. For instance, in playing the piano masterfully, the pianist is not attending towards what her fingers are doing; she is focused ahead at producing the music. If the fingers become the focus, the performance can be disrupted.[11] Similarly, when a word is repeated over and over again, the focal meaning dissolves. Our attention gets directed toward the sound, which was a subsidiarily working tacit clue that helped bring us the focal meaning.

When the tacit clues are focused upon directly, the focus that those clues would typically subsidiarily support for us gets disrupted. Performing the virtues for themselves has the same effect as *looking at the clues* in isolation from their current joint meaning. Polanyi says specifically *not* to look at the clues in themselves, but to "look at the unknown" goal so that the clues acquired and amended *via* subception may take their proper place. More properly, however, we are not to look at the clues *as we currently understand them*, and focusing on the clues or behaviors directly for themselves can disrupt the current integration and create an openness to alternate configurations of meaning. Focusing ahead on a vague and generally empty notion of good allows for the emergence of a new understanding and experience of the acts performed; clues are compiled, reformed and submerged into a new focal whole *via* which we can better understand what we have done.

When we, as moral novices, perform examples of virtuous acts and obey maxims and principles that encourage virtuous behavior, we do not understand them as the moral master does. In the novice's way of being, with its old vision, for example, I might look to some incidental but inessential benefit of doing a virtuous act and thus commodify the act.[12] Perhaps I would see courage, as an expression of power that elevates me in a particular way. Or I would see charity as a precautionary move, just in case I ever needed a helping hand myself later on.

If we perform the acts from our old frame of mind, with our old focus, we are reinforcing those old habits of integration. So for the novice, the right focal goal. Even for a moral virtuoso happiness itself is not the goal. As we see with Aristotle, the experience of happiness comes together with the activity of the virtues, when the

acts are done in the right way for the right reasons. The experience of happiness is not sought by the virtuous person but comes as an accompaniment of a virtuous way of being. Happiness itself is not the focal goal, but neither is the good person focused on the rules. Just as the good judge is focused not on the explicit letter of the law, but on justice, the moral virtuoso is not focused on the rules and obedience to them; his focus is ahead, engaged in a vision or *telos*. For a morally virtuous person, the focus might simply be on excellence, or the Good, or a loving God, but the focus is *not* on the subsidiary clues that support his excellence.

In our apprenticeship to the good our focus is similar but different. We are focused on the actions of the good person in a rough imitation. His or her actions are not natural for us and will not have the same affects. The good person expresses his way of being in natural actions, i.e., virtuous behaviors, but until we have transformed our own way of being, those actions are not natural for us in the same way. Just as we might attempt to understand the mind of a chessplayer through imitating his moves, we attempt to get into the way of being of the good person by imitating his actions. For us as apprentices, this is an effort at sense-reading confounded by the difference in frameworks between us and the good person. Just as the mind is the joint comprehension of actions, the joint comprehension that the good person lives out from, that center from which his actions flow, is the nebulous answer to our question. When we have shifted frameworks at a comprehensive level, we will live out from that center and do good actions naturally and experience their attendant pleasure; we will experience the way of being of the good person and live in that state of happiness.

By performing virtuous acts without attending to a further purpose colored by a current framework, we free ourselves for a new integration from acts to meaning, and from doings to being. If we focus on the virtues for themselves, and *do not* focus ahead to what we *imagine* is the happiness they bring –because *that* focus is what's getting in the way of our transforming achievement— we can disrupt the established pattern. At this stage, actions will lose their customary meaning but thereby become free to be experienced differently. Since the sort of behaviors that characterize the virtuous person are contiguous with his way of being and state of happiness, practicing *those* sorts of behaviors *without* the wrong focal meaning, but looking ahead to the unknown, can allow those clues to fall more naturally into place.

Dwelling in those sorts of behavior that the master engages in, without the wrong ideas about what they may bring, is a way of achieving the state of the master. This is similar to the way a chess player can dwell in the mind of the master chess player, and similar to the way a person engaging in religious practices can come to authentically participate in religious life. We engage in the virtues for themselves because by doing so we are preparing for a transformation of our understanding, dispositions and feelings in the light of a different integration of clues that comes with a new way of being.

The tacit knowledge by which good behaviors are understood and integrated by the novice needs to be radically changed. Looking *at* the behaviors—the virtuous acts—for themselves is a way of stopping the automatic, customary way we look *through* them to a purpose. If we can disrupt the habitual way of integrating those behavioral clues into a focus, we have a better chance of achieving the way of being that replicates that of the master. Old patterns of integration must be disrupted, in conjunction with practicing the behaviors of the moral virtuoso.

3. Goals and the Good Will

Along with Kant, we respect those who can abide by their principles even when the outcome is not the happiness of the individual nor the society. Perhaps we respect the person who, like us, is part way there and must fight himself and baser instincts to be virtuous. But Aristotle is right: the truly virtuous person no longer has to struggle, hence he or she is more apt to be congratulated as blessed rather than praised (*NE*, 1101b25). The truly good person acts not out of dutiful resolve to the moral law, but out of what Kant calls the "good will". Polanyi might call this good will the joint comprehension of meaning towards which the laws and their prescribed behaviors point and out of which the laws are properly understood. The good will might then be a name for the center out of which the good person acts. This will of the good person has attendant feelings and inclinations that point it in the right direction, for if it did not the act might not be done in the right way, according to Aristotle. While Kant recognized and valued this motivating force, he quickly progresses to discount all emotional inclination in the assessment of morally good action. A human will that acts for the sake of duty is a good will and to act for the sake of duty is to act out of reverence for the law. Kant goes on to say that "an action done from duty must altogether exclude the influence of inclination."[13]

There is certainly a sense of duty toward doing what is right, and Polanyi emphasizes this commitment in *Personal Knowledge*, but Polanyi also notes that this sense of duty cannot be restricted to the explicitly formalizable laws. Kant emphasizes that following the law out of duty and not inclination is what gives an action its moral worth. Perhaps this emphasis originates in his noumenal-phenomenal divide, since we are never in a position to *know* whether or not we are acting from an impure psychological inclination, and thus merely obeying a hypothetical imperative rather than a categorical command of reason. Perhaps this emphasis originates from Kant's conception of freedom, which we acknowledge in our ability to act against our inclinations and in accord with reason. Kant recognizes and Polanyi praises the commitment to the law that one makes for oneself; the categorical imperative reflects the universal intent of a personal yet objective truth. But in his moral work Kant fails to give proper emphasis to the way in which *inclination* and *duty* are united in the good will of the good person. What the moral novice must perform out of duty to the law, the good person performs out of natural inclinations.[14]

From a Polanyian perspective, we also see that the inclination of the good person may be right when it conflicts with the letter of the law. The emphasis on duty over inclination reveals that we are not yet imbued in the moral framework Kant's philosophy aspires toward. Acts directed by the good will are not understood via the inclinations or desires we typically possess, thus we must constrain our inclinations in order to behave as the virtuous person does.

In the moral-epistemological approach we have been considering, we can see the source of the good will as the gestalt integration that acts as the consummatory source from which individual actions are motivated and the lens through which they are understood. Acting from the good will is acting from a different, developed moral framework *via* which the actions of the virtuous person might indeed be understood as associated with a positive feeling or desire. This way of being, with its inclinations and affects, transcends the inclinations and feelings at work in the current frameworks that we might use to understand our maxims. Kant provides the example of a tradesman who demonstrates the good will when he acts honestly—but only because acting honestly is *right* and *not* because it would promote the future success of his business by insuring his reputation. Kant understands the moral act to be in accord with the good will because it is done out of duty. But following the good will presents itself as duty for us, rather than a joy, because we do not fully comprehend the happiness that can result from acting in accord with a better way of being, and a better way of being together.

Kant recognizes that we do not live out of the proper moral framework. If we did, our inclinations could play a functional role in making the moral decisions that promote the good we seek. Mill's mistake is to believe that we do have an adequate conception of what will make us happy and that this collection of goals can be divorced from the actions of the virtuous person. Mill is working with a more instrumental notion of reason in a more primitive framework, even though he ameliorates that deficiency by acknowledging higher pleasures. Kant recognizes that the goodness that answers to our higher nature is placed in a higher moral framework towards which we must aspire.

IV. Breaking Out

We sense the promise of a new way of being as a resolution to deep and abiding questions. We seek to be like the moral master, the exemplar, but we bring a lot of baggage. We are cast in our old ways of seeing and will not perform the virtuous act in the right way for the right reasons until we have broken out into a new way of being. This is what training with the master is geared to achieve.

The joint focus that gives the clues their meaning is different for the expert than for the novice. If our clues to the new focal center, the virtuous behaviors, are already conceived in a particular way, it is difficult to let them serve a new, largely unknown, vision. The same act performed by the moral virtuoso and performed by the novice will not foster the same sort of experience. Virtuous behavior will be co-opted into the skins of old understanding. Old conceptions will block the manifestation of the focal experience that is the solution of the sage. The moral apprentice must thus attempt to understand the virtues dissociated from the benefits he can understand from his old framework. Disrupting habitual ways of integrating behavioral clues into an established focal performance provides an opportunity for the transforming achievement of an enriched moral state. Polanyi's from-to structure of tacit integration shows us how practicing virtuous acts for themselves aids in this disruption, while his understanding of the contiguity between behaviors and mind shows how integral virtuous acts are to the good person's understanding and experience of the world.

We dwell in a framework that is beyond our current understanding in order to break out of our current way of being. Focusing on rules or moral laws as categorical and not hypothetical imperatives aids in dissociating the actions from their current joint significance, while it simultaneously encourages the practice of the actions that the good person naturally performs and the good person's good will naturally commands. Focusing on performing the virtues *for themselves* rather than for the end of pleasure or happiness advances the end of reconstituting the person toward *being* the good person, who in turn experiences the sort of happiness that only the transformed person can experience.

One thus practices virtue, not for the sake of one's own happiness, but for the sake of the happiness of the person one will become.

Endnotes

[1] See Lowney, *TAD*, 36:1, 2009, 48-49 regarding this *epagoge*.

[2]See *After Virtue* (Notre Dame: University of Notre Dame Press, 1981)and *Whose Justice? Which Rationality?* (Notre Dame: University of Notre Dame Press, 1989) for an account of matters noted in this paragraph. In "From Science

to Morality," I showed how MacIntyre's notion of a *tradition* of *inquiry* can be considered a development of Polanyi's notions of *superior knowledge* and *heuristic passion* (*TAD*, 36:1 [2009-2010]: 47-48).

[3]The *perfect* moral exemplar need not actually exist, but that *a person* is conceived as the ideal shows the degree to which this knowledge is embodied in doings, and how these doings form a joint comprehension through which we judge a particular situation. For Polanyi, perfection is an ideal, which gives the rules and duty more force. "The notion of perfection in any pursuit is an imaginative projection of what the full and unlimited operation of the principles governing these higher mental levels would look like" (*Meaning*, 209). Socrates notoriously had difficulty finding moral exemplars, but this concrete ideal does seem to have instances, indicating we can move beyond our rule-based conceptions and share in the way of being of a moral exemplar. There exist connoisseurs and experts according to Polanyi, with their foibles and imperfections, who can still act as exemplary guides.

[4]Carol Kelly-Gangi, ed., *Dalai Lama: His Essential Wisdom* (New York: Fall River Press, 2007), 112.

[5]Happiness for Aristotle comes from engaging in all the virtues, including and especially the intellectual virtues that Polanyi describes so well. Happiness is not a fleeting emotion. Just as a virtuous character is not formed or judged by one virtuous act but requires the constancy of a habituated character, so a happy person is not judged by one or several days, but over the course of a lifetime.

[6]An example of this learning is staring at a two dimensional holographic image with the intent of seeing a three dimensional picture that it can project. Eventually, you learn to integrate the clues in a way that reveals the picture.

[7]*Utilitarianism* in *Classics of Western Philosophy*, ed., Steven M. Cahn (Indianapolis: Hackett Publishing, 1995), 1152-1153.

[8]As John Dewey might say there would only be an arbitrary cut here between what is instrumental and consummatory; the event is continuous and contains both. See *Experience and Nature* (Chicago: Open Court Publishing, 1929).

[9]Sorting out differences in the orientation of the moral philosophies of Aristotle, Kant and Mill is extraordinarily complex. For example, Kant and Mill have a more instrumental view of reason than Aristotle, and they each have different understandings of what " happiness" means. Not only are they asking slightly different questions from their basis in different cultures, the presuppositions of the questions can be viewed in the light of historical changes. Charles Taylor in *Sources of Self* (Cambridge: Harvard University Press, 1992) provides an analysis of such complexity.

[10]In "From Science to Morality" I argued that moral rules should be followed out of duty as a methodological tool toward achieving a way of being. Here we see the Polanyian mechanism for why that works: doing the behaviors out of duty provides an openness to a transformation of the meaning of the action that is consistent with the way of being that naturally produces such behaviors. It should also be noted that by "method" I now mean a pathway that includes tacit knowing and not a strictly explicit method the sort of which Polanyi criticized in his work.

[11]Looking explicitly at the clues that we are normally subsidiarily aware of when performing a skill masterfully can throw a monkey wrench into the performance (*Meaning*, 40). Focusing on the subsidiaries, e.g., attention to what the fingers are doing, can also improve skills and help the next performance, when the integration once again is properly performed. So there is another benefit to practicing the virtues for themselves, we can refine subsidiary skills while aiming for the way of being of the master.

[12]See Ursula Goodenough and Terence Deacon: "The commodification of morality is, to our mind, one of the most dangerous things that we do, quite as dangerous as fundamentalism or moral relativism " ("From Biology To Consciousness To Morality," *TAD* 30:3 [2003-2004]: 18).

[13]Kant, *Grounding for the Metaphysics of Morals* in *Classics of Western Philosophy, op. cit.*, 1067.

[14]Robert Pirsig captures the role of inclination for one who has learned to dwell in the law when he writes: "You want to know how to paint a perfect painting? It's easy. Make yourself perfect and then just paint naturally" (*Zen and the Art of Motorcycle Maintenance: An Inquiry into Values* [New York: Morrow, 1974], 293).

REVIEWS

Michael S. Gazzaniga, *The Ethical Brain: the Science of Our Moral Dilemmas*. New York: HarperPerennial, 2005. Pp. xix + 218. ISBN 0-06-088473-8. $14.95. Paperback.

In this intriguing, yet ultimately exasperating book, the director of the SAGE Center for the Study of the Mind at UC Santa Barbara and a member of President Bush's Council on Bioethics attempts to bring insights from the neurosciences to bear on moral issues raised by the latest biomedical technologies. Arranging these essays into four sections, Gazzaniga addresses issues at the beginnings and endings of life (Part I), the possibilities of brain enhancement/increasing intelligence (Part II), the implications of the neurosciences for concepts of free will and personal responsibility as they apply in the legal arena (Part III), and calls for the development of a universal ethic based on shared brain structures (Part IV). Each chapter essentially follows the same trajectory: it begins with a dilemma raised by new biotechnologies, reviews the science, reviews the leading arguments about the dilemma, and concludes with a section entitled "Perspectives" in which Gazzaniga states his own position. For example, in the first chapter, devoted to the moral status of the embryo, Gazzaniga summarizes the process of fetal development, reviews arguments for granting or not granting status based on the potentiality of the embryo to become human, its continuity or discontinuity with fully-formed human life, and arguments based on human intention. In the end, he affirms the practice of using the fourteen-day limit for experimentation, since the embryo's nervous system has not yet begun to develop.

Whatever the issue, Gazzaniga generally takes the most optimistic and libertarian stance possible, thus adopting something of an anti-Kass position (Leon Kass chaired President Bush's Council on Bioethics and typically advises caution in the face of new biomedical possibilities). For example, while acknowledging that he could not choose euthanasia, Gazzaniga wants to allow freedom of choice in a pluralistic society (33). He is happy to allow brain enhancement via genetic engineering and/or drug therapy. When confronted with the worries such as those expressed by Michael Sandel, he says,

> Tampering with the evolved human fabric is playing with fire, to be sure. And yet I also firmly believe we can handle it. In the end, we humans are good at adapting to what works, what is good and beneficial, and, in the end, jettisoning the unwise, the intemperate, the silly, and self-aggrandizing behaviors that will always be present in certain proportions of our species (53).

Rather than seeing such expressions of "hyperagency" as Promethean, he interprets them as nothing but "the human, evolutionary drive to engineer our survival" (40). His point is well-taken, for human beings are inevitably creative, experimenting creatures. Nevertheless, one wonders if he downplays too much the dangers and costs of trusting in human beings to self-correct. Gazzanaga notes that previous attempts at social engineering in the name of science have failed, but he does not address the millions killed by the Nazi or Soviet experiments he mentions explicitly (53). Might the price of waiting for such "self-correction" be too high? One wishes that his optimism reflected a more Niebuhrian realism, or at least was grounded in a thicker historical/sociological analysis.

His writing is also sometimes careless. Whether he does so intentionally or not, Gannaziga makes claims that can easily be misinterpreted or gloss over significant debates. For example, in discussing the moral status of the embryo, he makes the claim that the brain makes us distinctly human (4). This statement

ignores the fact that legions of living creatures have brains. No, what makes human beings distinctive is that we have brains that are distinctive in size and structure. That may be what he means, but it is not what he says. Other claims that he blithely takes as true—such as the modularity of the brain (147) or the existence of a moral sense (167, 177) are at best disputed, if not rejected by many other neuroscientists.

At other times, some parts of Gazzaniga's analysis at best rest uneasily with others. Take, for example, Gazzaniga's claims about brains and personhood. At several points, he makes clear that human beings are nothing but their brains (e.g., 31). As noted above, this claim gives him warrant for *not* granting moral status to an embryo—which does not have a brain. However, Gazzaniga argues that one should not withdraw moral status from someone in a persistent vegetative state because the person exists "in you" even if the brain is functioning at a level that no longer is humanly distinct (32). Thus Gazzanaga lets the social dimension of personhood trump issues at the end of life, but does not explain why it applies only then, rather than at the beginning; after all, embryos exist in relationships and have significance to others.

This social dimension of personhood is also central to Gazzaniga's defense of personal responsibility in Part III of the book, where he takes pains to argue that "brains are automatic, rule-governed, determined devices, while people are personally responsible agents, free to make their own decisions" (90; see also 99). But if we are our brain, and our brains are automatic, etc., then what happens to responsibility? Gazzaniga is frustratingly silent on how these two realms might coexist. The resources are out there; as members of this Society well know, Polanyi's ideas about multi-leveled reality and dual control provide such tools, as do others, but Gazzaniga makes no attempt to identify or use them.

The book is at its strongest when Gazzaniga sticks to the basics of the neurosciences. His descriptions of fetal development (4-7), the biology of the aging brain (23-28), basics of genetic engineering (41-49), neuroplasticity (59-68), and the workings of memory (126-139) are among some of the most lucid summaries this reviewer has seen. Gazzaniga therefore does an excellent job of communicating complex matters of science to a lay audience.

In the end, the book offers an eminently readable, but confounding attempt to bring neuroscience and ethics together. I have no doubt that we are wired to form beliefs (xviii) or that a scientific understanding of brain mechanisms can make important contributions to ethics. At the same time, this book serves as an example of what can go wrong when an expert in one field colonizes another. Just as philosophers and theologians need to be wary about pretending to be scientists, scientists need to be more careful when taking on the role of philosopher or ethicist than Gazzaniga appears to be in this work.

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Tibor Frank. *Double Exile: Migrations of Jewish-Hungarian Professionals through Germany to the United States, 1919-1945.* Oxford: Peter Lang, 2009. Pp. 501. ISBN 978-3-03911-331-6. £50. $85.95.

Tibor Frank's *Double Exile* presents a thoroughly-researched and well-thought-out account of the emigration of intellectuals from Hungary during the interwar period. One portion of chapter 5 deals specifically with Michael Polanyi, although there is much more that this: Polanyi appears throughout the book as an example of many of the points Frank makes about emigrants and their experience. In fact, Frank draws, in his concluding chapter, on a quote from Polanyi to sum up what the book is about. "Polanyi spoke for, and spoke of his generation when discussing originality and invention, discovery and the heuristic act, investigation and problem solving" (432). Polanyi, Frank explains, offered his own understanding of genius.

Frank, who is Professor of History and Director of the School of English and American Studies at

Eötvös Loránd University in Budapest, has published a number of articles about Hungarian scientists and migrations of Hungarian intellectuals. This book appears in the Exile Studies series (vol. 7) by Peter Lang Publishers, a series that includes titles in German and English. *Double Exile* is a social history of Hungarian scientists and artists, mostly Jews, who left Hungary after the First World War. It is the biography of the interwar generation, a research strategy Frank refers to as "prosopography," by which he means, "a vision of a group rather than a series of personal biographies" (13). He brings together the experiences of these travelling intellectuals, most of whom migrated through Germany, and many of whom ended up in the United States, to identify the conditions for Hungarian genius. To carry out this project, Frank collected documents at some forty archives located across the United States, as well as Germany, Austria and Hungary. His biographical sketches are drawn from archival materials. For some, there is abundant material; for others, the material is much more limited.

Frank discusses the social origins of Hungarian genius, the social tension of 1918-1920 which motivated emigration, Germany as a port of call, the situation concerning refugees in the United States, the experience of the migrants, and their contribution to the American war effort. He explains the Hungarian contribution to the war effort with reference to George Pólya, Theodore von Kármán, John von Neumann, and Leo Szilard. The origins of the genius behind the Hungarian contribution can be traced to the Hungarian economy and its emphasis on technology advances, social chemistry within the city of Budapest, the Hungarian school system (largely influenced by German pedadogy), and cultural transfer from Germany. His approach is "social historical rather than biographical." He includes an appendix with the names of more than 250 notable Hungarian-Americans. These include composers, authors, journalists, playrights, actors, photographers, chemists, singers, mathematicians, engineers, painters, sociologists, filmmakers, physicians, psychoanalysts, historians, economists and designers.

Many, although not all, of these Hungarian émigrés, were Jewish. The dissolution of the Austro-Hungarian empire at the end of the First World War brought about a vastly different period in Hungarian history, particularly with respect to Hungarian Jews. "Some of the best minds, most of them Jewish-Hungarian mathematicians, scientists, and musicians [were] compelled to leave the country" (15). The fact that many of these individuals were "more Hungarian than Jewish" did not shield them from the anti-Semitism that came to expression in the Horthy regime after the failed Bolshevik-style revolution of 1919 in which Jews were perceived to have played an important role. They represented "mostly an assimilated, Magyarized, typically non-religious middle or upper class" (15). They gravitated to one of the German-speaking countries, and as Hitler claimed power, left for the United States. This category includes the Polanyi family. Polanyi was born into a non-observant Jewish family, and he learned to appreciate the wonders of science rather than the traditions of Judaism. He left Budapest for Germany, found his way to England, and would have entered the United States if it were not for a misunderstanding on the part of US immigration authorities about his political commitments.

The details Frank provides about Polanyi will not be new to those familiar with Polanyi's life and work, but the larger canvass on which Frank presents Polanyi's portrait offers fresh insight and understanding. There are many interesting comparisons that can be made. One of the fascinating aspects of the book is the way in which the émigré intellectuals pursued individual solutions to collective problems. In many cases, the solutions they found were more positive than negative, particularly from the standpoint of contributing to the defeat of Hitler's Germany. That said, the toll on the individuals themselves was often a high price to pay. Many left family members behind, in Hungary and Germany; most experienced recurrent psychological dilemmas and these were by no means positive. Leo Szilard retained "psychological complexes" that drove him to live "always in hotels or rented rooms instead of setting up his own residence" (149).

This brings us to the "double exile" of the title. There are two senses in which this can be understood. The Hungarian emigrants of Polanyi's generation were *doubly exiled* in the sense of being Hungarian and Jewish. When in Germany, and in the United States, they represented a subset within a set, a minority within a minority community. They were also double exiles in the sense of being *twice exiled*; first from Hungary, then from Germany. While in Hungary, many had absorbed German language and culture, and the escape from Germany amounted to a profound loss. Polanyi's "Copernican turn" illustrates this well. "Polanyi chose" Frank says, "a very special, complex form of emigration: first he left medicine, then Hungary and the Hungarian language, then he left Germany for Britain, as well as science for philosophy, and chose English rather than German as an exclusive language of publication" (268).

Actually, Polanyi's life changes illustrate something more along the line of a triple exile, or in Frank's language, "multiple exiles" (243). Polanyi's conversion meant that he was estranged from Jewish identity as well as German and Hungarian identity. Frank proposes that conversion to Christianity represented "a certain type of mental pattern that enabled and prepared some of the émigré intellectuals and professionals to adapt to the challenges of life outside Hungary" (45). Conversion may have reduced some of the difficulty of exile, although even assimilation or integration on this level was problematic. Frank quotes Hannah Arendt who spoke of the "quick identity changes" immigrants were advised to make on arrival in the United States. "We were told to forget; and we forgot quicker than anybody ever could imagine...after four weeks in France or six weeks in America, we pretended to be Frenchmen or Americans" (208). If, while in Germany, Polanyi had managed to forget his Jewish background, he was reminded in the 1930s. Baptism meant nothing to the National Socialist regime—a converted Jew was a Jew. But, it signified a great deal to Jewish relief committees; they regarded converts as apostates and overlooked them in arranging assistance.

Frank raises a question that applies to many of the scientists and scholars he considers, including to some extent, Polanyi. In thinking about national origins of scholars, is it their country of origin, or that of their training, which matters? (321). As a matter of research methodology, it is a practical question, and as a matter of explaining genius, it is a substantive question. In Polanyi's case, it raises a question about his "republic of science." Polanyi had envisioned a community of scientists, guided by pursuit of the truth, committed to mutual criticism. Scientists formed their own nation above and beyond the nations in which they were born, educated and worked. In becoming a scientist, he sought to transcend national identity. Frank concludes that "the bulk of this outstanding group lived a relatively happy and successful life in America" (438), as evidenced by their enviable life span. About a third reached 85 years of age or more. It seems a reasonable conclusion, although what Frank explains about US immigration policy demonstrates that America was not always happy to receive them.

Double Exile offers an interesting and evocative read for anyone interested in Polanyi or his contemporaries. Frank has unearthed a wealth of archival data to support a thoughtful account of Hungarian émigrés, intellectuals who had such an important role in the events of the twentieth century; his book will remain an invaluable resource for years to come.

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Keith Clements (ed.). *The Moot Papers, Faith, Freedom and Society, 1938-1947*. London: T &T Clark, 2010. Pp. viii +740. ISBN: 978-0-03257. $295.

This massive new volume contains the minutes of the first twenty meetings of "The Moot," running from April 1-4, 1938 through June 23-25, 1944. What was "The Moot" ? It was a remarkable British discussion group of intellectuals who were gathered together by an extraordinary figure, J. H. Oldham, who was an important British religious intellectual but was also a very effective change agent. "The Moot" aspired to analyze the contemporary world and catalyze a wider

movement drawing on the resources of Christianity to transform the social order. This was a group vitally concerned about the emerging world in the era of wartime Europe. The discussions in "The Moot" were quite diverse, but perhaps Clements captures the general orientation when he says that "The Moot" discussed "the nature of modern society, the relationship between social planning and freedom, and the role of religiously-based values in shaping society" (1). Those who participated in Moot discussions were an important but diverse set of intellectuals including T. S. Eliot, Karl Mannheim, John Middleton Murray, Walter Moberly, John Baillie, and, very late in this group's life, Michael Polanyi. "The Moot" was convened in 1938 and chaired by J. H. Oldham, who was possibly the most important leader in British and international Christian missionary affairs from l9l0, when he chaired the Edinburgh World Missionary Conference, until the middle of the last century. Oldham loomed large in the ecumenical movement and as a Christian activist engaged in the affairs of the world in the first half of the twentieth century; he was honorary President of the World Council of Churches from 1961 until his death at 94 in 1969.

Polanyi was invited to "The Moot" as a guest at the June 23-26, 1944 meeting, and this was the last of "The Moot" meetings whose records are in this volume. "The Moot " had one member, Eric Fenn, who attended nearly every meeting and took almost verbatim notes on these gatherings that often lasted several days, and these notes became the official Moot minutes which Oldham circulated (along with papers by participants and others) to prepare for subsequent meetings. Fenn's notes of the June 1944 meeting indicate that, although Polanyi was a "guest," he was a very lively participant who had much to say about science. Polanyi was invited back to the December 1944 meeting where he, as well as Karl Mannheim, provided a formal response to a paper by T. S.Eliiot on the role of the clerisy. Polanyi's nascent ideas about the operation of the scientific community and the importance of tradition seem to have jelled as he was interacting with the ideas of figures like Eliot and Mannheim. According to correspondence with Oldham, Polanyi also provided another paper for this meeting, "Scientific Materialism and the Modern Crisis." There are, unfortunately, no notes for Polanyi's second meeting because Eric Fenn was absent. Fenn also missed the one Moot meeting held in 1945, 1946 and January 1947, but Polanyi was almost certainly involved in at least two of these, providing a paper or response. Oldham officially disbanded "The Moot" in early 1947 after the death on January 9th of Karl Mannheim, another Jewish Hungarian émigré and a friend of Polanyi who was at least partly responsible for Polanyi's original invitation to "The Moot." Mannheim was in many ways the central figure in "The Moot" and his earlier work in Germany as a sociologist of knowledge interested in the crisis in modern culture made him a natural to recruit for "The Moot" with its interest in transforming the social order. Mannheim's ideas about "planning for freedom"—ideas that Polanyi at least in part disputed in his interaction with Mannheim outside "The Moot"—were central to the discussions of "The Moot." Less than a year after Mannheim's death, Oldham convened the first of several successor groups which were very like the original Moot and in fact included a number of former Moot members. Michael Polanyi was likely involved in as many as ten of these successor group meetings over the next thirteen years and perhaps, as Clements implies, the agendas of many of Oldham's successor group meetings reflect "the decease of Mannheim and the advent of Polanyi," since the meetings become "more focused on issues of scientific interpretation and belief rather than on society" (17). Certainly, it is clear that many Polanyi essays and elements of Polanyi books originate and are worked over in the context of the serious discussions in Oldham's groups (e.g., one meeting in September 1953 apparently was devoted to discussion of themes in Polanyi's Gifford Lectures). Perhaps this is one reason that Michael Polanyi told Richard Gelwick in 1962 that participation in Oldham's groups did more to influence his thought than anything other than his experience as a scientist (see Gelwick's dissertation, "Michael Polanyi: *Credere Aude*, His Theory of Knowledge and Its Implications for Christian Theology," Th.D. Dissertation, Pacific School of Religion, 1962, p. 11, note 8).

Clearly, Oldham was one of Michael Polanyi's most influential friends from 1944 until Oldham 's death. Polanyi openly acknowledged that Oldham and his circle played a role in expanding his intellectual life; they seem particularly to have been important in broadening Polanyi's interest in religion and culture. There are more than a hundred letters to and from Oldham—as well as some materials from "The Moot" and successor Oldham groups in which Polanyi participated—in the Papers of Michael Polanyi in the Department of Special Collections at the University of Chicago Library. Oldham was one of the five people who read the whole draft of *Personal Knowledge* and his letter to Polanyi of May 11, 1957 (Box 15, Folder 5) led Polanyi to rewrite the final chapter of his *magnum opus*. Polanyi's *The Study of Man* (1959) is dedicated to J. H. Oldham (see my analysis of Oldham's influence in "Michael Polanyi and J. H. Oldham, In Praise of Friendship," *Appraisal*, v. 4, n. 4 [Oct. 1997]: 179-189). Nobody knows more about J. H. Oldham than Keith Clements, who in 1999 published the definitive biography of Oldham, *J. H. Oldham: Faith on the Frontier*. *The Moot Papers* is in many ways a natural extension of Clements' work on Oldham since "The Moot" was such an interesting and influential creation of Oldham.

Clements is aware that most people now know little about the British context of World War II. He goes to great lengths to see that readers will understand these Moot minutes in their proper wartime context. His book begins with a short overview chapter on "The Moot" and its formation, who its members were, the pattern of Moot meetings, the themes that are developed and run through sets of meetings, published material outside "The Moot" that draws on Moot discussions (e.g., Eliot's *Notes towards the Definition of Culture* [1948]), and finally, Oldham's termination of "The Moot." There follows a more extensive discussion of who "The Moot" members were. Since Mannheim was the central figure in the group, a short chapter is devoted to the development of his ideas, showing how "The Moot" proved to be a natural incubator for this new refugee. There are shorter bibliographic notes helpful for orientation on other Moot members, including Polanyi. The twenty primary chapters following the introductory materials are, of course, focused around the minutes to the successive meetings, but Clements provides with each chapter several helpful elements. There is a brief comment on the immediate context of each particular meeting which outlines events on the world stage (e.g., the first touches on events leading up to the war) and also often notes more local activities of figures like Oldham. There is a short discussion of what Clements dubs "preparatory material." Each Moot meeting in some ways built on its predecessor. Not only were the minutes circulated, but also papers prepared by members or non-members, which members were expected to study before the meeting. Clements often summarizes at least some of the papers, responses to papers and other circulated materials. Sometimes the bulk and the range of the reading were significant. Oldham seems to have been something of a circus master who put together (often in consultation with members) and sent out materials and worked out an agenda for meetings which covered most of the material. Finally, it is worth noting that in the meeting minutes themselves, Clements has added many footnotes; these identify figures or ideas referred to in Fenn's often very concise summaries of points made in discussion. In sum, Clements does an outstanding job of "surrounding" the minutes with resources that allow the reader to follow the discussion.

While the price of this book is steep, it certainly is the sort of solid scholarly resource that one hopes to find in a good library. Keith Clements has carefully assembled here an important set of materials; anyone interested in Polanyi who takes a look at these materials will certainly better understand the British milieu in which Polanyi's philosophical ideas take shape.

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