

Tradition & Discovery

The Polanyi Society Periodical

Volume XLI

Number 2

2014-2015

ARTICLES

“Visual Presentation of Social Matters” as a Foundational Text of Michael Polanyi’s Thought	6
<i>Eduardo Beira</i>	
Visual Presentation of Social Matters	13
<i>Michael Polanyi</i>	
“Visual Presentations of Social Matters” and Later Changes in Polanyi’s Social Theory	25
<i>Richard W. Moodey</i>	
Comments on Polanyi’s “Visual Presentation of Social Matters”	35
<i>Phil Mullins</i>	
Polanyi and Newman: A Reconsideration	45
<i>Martin X. Moleski, SJ</i>	

JOURNAL AND SOCIETY INFORMATION

TAD Information	inside front cover
Preface.....	1
News and Notes.....	2
Reports from the Polanyi Society’s 2014 Annual Meeting.....	4-5
Submissions and Style Guide.....	56
Notes on Contributors.....	inside back cover
Polanyi Society Information.....	back cover

General Editor

Paul Lewis
Roberts Department of Christianity
Mercer University
1400 Coleman Avenue
Macon, GA 31207
lewis_pa@mercer.edu

Associate Editor

Andrew Grosso
Nashotah House Theological Seminary
2777 Mission Road
Nashotah, WI 53058
atgrosso@icloud.com

Book Review Editor

Walter Gulick
Montana State University Billings
Billings, MT 59101
wgulick@msubillings.edu

Editor Emeritus

Phil Mullins
Missouri Western State University
St. Joseph, MO 64507
mullins@missouriwestern.edu

Editorial Board

Araminta Johnston
Independent Scholar
Charlotte, NC
asjohnclt@aol.com

Charles Lowney
Department of Philosophy
Washington and Lee University
Lexington, VA 24450
lowneyc@wlu.edu

Creighton Rosental
Department of Philosophy
Mercer University
1400 Coleman Avenue
Macon, GA 31207
rosental_c@mercer.edu

Kyle Takaki
Independent Scholar
Honolulu, HI
ktakaki@hawaii.edu

See p. 56 for information on submissions

The Polanyi Society gratefully acknowledges the support of Mercer University, Macon, GA, for the publication and mailing of *Tradition and Discovery*.

Tradition & Discovery is indexed selectively in *The Philosopher's Index* and *Religious and Theological Abstracts* and is included in the EBSCO online database of academic and research journals. *Tradition & Discovery* is listed in the Directory of Open Access Journals and is also available online at www.polanyisociety.org.

PREFACE

This issue of *Tradition and Discovery* falls effectively into three parts, the first of which consists of Society business, admittedly not always the most exciting part of life. Still there is much going on of which members of the Society should remain informed. We thus do our part by including in News and Notes, among other information, the Call for Papers for the 2015 Annual Meeting which will be held in Atlanta. Society business also includes the financial statement and an abbreviated set of minutes from the Polanyi Society Board, which was held on November 19, 2014 in San Diego, CA.*

These minutes suggest changes that are coming soon to *Tradition and Discovery*, upgrades that promise to take us into an exciting new time for the journal, beginning with vol. 42, no. 1 in October 2015. ***I will say more about those changes in the July 2015 issue, but I do want to give ample notice that the Board has decided to quit mailing out domestic issues bulk rate and will instead mail them first class. This will mean, on the one hand, that your copies will arrive sooner and can be forwarded by the Post Office. On the other hand, we will eliminate the print copy for those whose membership dues are not up to date. It is imperative, therefore, that members be more conscientious about keeping up with dues. Information on how to do so can be found in News and Notes and/or the insert contained in this issue.***

The second part of this issue is devoted to a forum on a previously unpublished lecture on economics given by Michael Polanyi in 1936. In “Visual Presentation of Social Matters,” Polanyi explores a way to educate people about how the economy really works, in hopes that they will be freed from mistaken beliefs so that a more cooperative economic system can emerge. Introducing this lecture is Eduardo Beira, who finds hints of Polanyi’s mature thought in this early work. But not all of the ideas that Polanyi engages here can be found in his later work, as Richard W. Moodey demonstrates by identifying several points of this lecture that Polanyi does not pursue. Finally, Phil Mullins argues that whatever changes and developments do occur are all best understood in the context of Polanyi’s attempt to develop a post-critical liberalism. Taken together, these essays not only provide important insight into the development of Polanyi’s thought, but also speak to our time, when popular notions of economics seem out of touch with the reality. Regardless of how satisfactory Polanyi’s plans to educate the public were, the need he addressed then continues to exist today.

In the final part of this issue, Martin Moleski, who wrote his dissertation on the relationship between Polanyi and John Henry Newman, revisits that topic in light of new evidence that Polanyi had indeed read Newman’s *Grammar of Assent*. In the end, Moleski concludes that, despite that exposure, Polanyi really did not draw from Newman. Moleski suggests several reasons why that is likely the case. Inquiring minds will want to read the article to find out what those reasons are.

Paul Lewis

*Full copies of the minutes are available at <https://www.missouriwestern.edu/orgs/polanyi/bdofdirectors.htm>.

NEWS AND NOTES

There is Still Time to Renew Polanyi Society Membership...

And thereby keep these issues of *Tradition and Discovery* coming regularly to your mailbox. Rates for the 2014-2015 academic year are unchanged at:

\$35 regular
\$25 library
\$15 student

Membership renewals and donations are the only source of income for the Society, so it *is very important to keep memberships up to date. These dues and donations fund the journal, annual meeting, and other projects.* For example, we currently mail out almost 250 copies of each issue, but usually have only about 90 memberships that are up to date. Think about what we could do if we were all current!

In order to keep receiving print copies of TAD after July 2015, it is vitally important to make sure memberships are up to date (see the Preface on p. 1 for more details).

Residents of the United States can renew either by completing the membership form that is inserted in this issue, including a check for U.S. funds made payable to the Polanyi Society, and mailing it to:

Charles Lowney
Polanyi Society Treasurer
Baker Hall 124
Washington and Lee University
Lexington, VA 24450.

or by using a credit card through PayPal (<http://polanyisociety.net/register/join-renew.php>).

Those living outside the U.S. must use PayPal.

Many of those who read *Tradition and Discovery* and/or participate in Society-sponsored events have also been generous by giving above and beyond their dues to the Endowment or Travel Funds, as

well as to other special events such as the Loyola conferences. Such donations can be made online. All donations are tax-deductable in the U.S.

Call for Papers: 2015 Annual Meeting

The 2015 Polanyi Society Annual Meeting will be held in Atlanta on November 20-21. The Program Committee solicits paper proposals of 150 to 300 words by April 1, 2015. Send proposals to Walter Gulick at wgulick@msubillings.edu. We would especially welcome submissions on any Polanyi-related topic by graduate students and young scholars. We also hope to organize sessions on one or two of the following topics:

- (1) Exploring a Polyanian base for innovation (possibly related to business management or Peircean abduction),
- (2) Interrogating *Meaning* on meaning in the arts and literature (possibly focusing on symbolism, metaphor, and/or the roles of beauty and imagination),
- (3) Utilizing Polanyi in constructive theology (perhaps attending especially to James Smith or Christian Smith on the person).

NB: See the updated Call for Papers posted on the Polanyi Society web page (polanyisociety.org).

Update on the Conference on British Contributions to Personalism

Richard Allen reports that there are now three confirmed speakers for the conference, to be held March 18-19, 2015 at Oxford. They are: Raymond Tallis, "Persons and Animals/Personal Identity;" Francesca Norman, "Dean Mansel;" Juan Manuel Burgos, "Continental and British Personalism;" and Tihamér Margitay, "Michael Polanyi." For full details, see www.britishpersonalistforum.org.uk.

In Memorium: Blythe Clinchy

Blythe McVicker Clinchy, Professor Emerita of Developmental Psychology at Wellesley College died on April 23, 2014, in Santa Monica, California, at the

age of 84. She and three other women co-authored the influential volume, *Women's Ways of Knowing: The Development of Self, Voice and Mind* (Basic Books, 1986/1997), and its sequel, *Knowledge, Difference and Power: Essays Inspired by Women's Ways of Knowing* (Basic Books, 1996). They discovered among young women a pervasive natural practice of informal, commonsense ways of knowing grounded in personal relationships that they came to call “connected knowing,” in contrast with the “separate knowing” that characterizes the dominant, typically masculine paradigm of academic knowing. A special session of the November 2006 meeting of the Polanyi Society in Washington, DC, was devoted to bringing this body of work into dialogue with that of Michael Polanyi. Drawing upon this symposium, *Tradition and Discovery* 34:1 (2007-2008) explored complementarities and convergences between this research program in developmental psychology and Polanyi's post-critical epistemology. The issue is available online and presents the reader with a rich banquet of insights and intimations of yet largely unexplored understandings emergent from bringing these different thinkers together. In the essay that concludes the issue, “Pursued by Polanyi,” Clinchy discusses how influential Polanyi's ideas had been upon her work and that of her colleagues, although she had not recognized this until she was invited to participate in the symposium. Clinchy's daughter reports that her engagement with Polanyi reinvigorated her in her later years.

—Dale Cannon

Recent Publications and Work of Interest

Richard Allen has published his latest book, *Ethics as Scales of Forms*, with Cambridge Scholars. In it, he adapts Collingwood's scheme of Scales of Forms to show that all the aspects of the moral agent to which moral qualities have been attributed—consequences of single actions, consequences of rules, consequences of bodies of laws, individual situations, laws, intentions, virtues, will, attitudes and emotions, the “order of the heart” and ultimately the person as a unique stream of love—are necessary because in that order each presupposes the next level above it and needs appropriately to enact and express itself

in and through the ones below.

Eduardo Beira, who wrote the introduction to Polanyi's “Visual Presentation of Social Matters” featured in this issue of *TAD*, has translated *Science, Faith and Society* into Portuguese. It is now available on Amazon.

Jon Fennell has published “A Polanyian Perspective on C.S. Lewis's *The Abolition of Man*” in *Journal of Inklings Studies*, Volume 4, Number 1 (April 2014), 93-122.

Phil Mullins spent September of 2014 in Budapest teaching a graduate course in the Department of Philosophy and History of Science (PS/HS) at Budapest University of Technology and Economics (BUTE). This department and BUTE have been the center of the MPLPA and *Polanyiana* since the early nineties when Walt Gulick spent a semester there on a Fulbright. PS/HS has about 15 Ph.D. students (from an array of backgrounds) and requires some work on Polanyi. Mullins taught 8 intensive classes on Polanyi, mostly early material (1937-1947) from the Gelwick microfilm on Polanyi's economic and political liberalism. He also taught a class on Albert Borgmann's philosophy of technology.

Alva Noe wrote a commentary for NPR, “Why Atheists Need Captain Kirk.” While he does not cite Polanyi, readers will find many of his ideas resonate deeply with Polanyi's account of science. The piece can be found at http://www.npr.org/blogs/13.7/2014/09/12/348002248/why-atheists-need-captain-kirk?utm_source=facebook.com&utm_medium=social&utm_campaign=npr&utm_term=npnews&utm_content=20140912.

Keep Us Informed

Remember to send notices of recent publications related to Polanyi or other noteworthy achievements to the editor (lewis_pa@mercer.edu) so that we can publicize them in News and Notes.

Minutes of the Polanyi Society Board Meeting^(abbreviated)

November 21, 2014;

8:00 PM, Hilton Bayfront Hotel, San Diego, CA

Present: David Rutledge (President), Andrew Grosso, Gus Breytspraak, Diane Yeager, Charles Lowney, Paul Lewis, David Nikkel, Esther Meek, Dale Cannon, Phil Mullins, and Walt Gulick.

Minutes from the 2013 meeting were accepted by consensus with no changes.

Charles circulated the Treasurer's report for the fiscal year ending August 31 [See page 5 of this issue for a full report; *Editor*.]

Paul presented a two-part report from the *Tradition and Discovery* Board. The first was a report on costs of printing for the 2014 calendar year: 260 copies per issue, at an average cost of \$1.93 per copy. We mail roughly 200 domestic bulk rate and 35 overseas (all postage is covered by Mercer University). The second part of the report was a recommendation from the TAD board to outsource production, based on a bid from Faithlab for 125 book-like copies, an electronic pdf version for the website, and an e-reader version for \$2055.00 (an additional \$1.45/copy). After discussion of pros and cons, a proposal to try Faithlab for a year was passed unanimously. It was remarked that we can no longer afford to send the journal to people who haven't paid their dues. Another proposal to appoint a membership secretary (with the Board as a committee to support this person's work, and a purging of the current list by August 2015) was also passed unanimously.

Phil presented the Nominating Committee Report, nominating Diane to begin a third term in 2015, and Tihamér Margitay and Jon Fennell to begin first terms in 2015. David Nikkel was nominated to become Board Secretary beginning in 2015. Nominations were accepted unanimously. Dale Cannon, Phil Rolnick, and Wally Mead, whose terms ended with this meeting, were thanked for their service.

In Wally's absence, David presented the Travel Fund report. The accounting of the Travel Fund is now and will be hereafter integrated into the Treasurer's Report. Wally will continue to do the hard work of identifying worthy recipients of travel assistance.

Walt presented the Program Committee Report. David Nikkel will be the new contact person with the AAR.

Dale presented a report on the Poteat Conference held last June at Yale University, with 35 attendees and 21 presentations (all downloadable from the website, www.whpoteat.org). The total costs were covered by registrations, donations, and additional pledges received in November 2014.

David presented a report from the Endowment Committee, acknowledging a substantial donation. Phil presented a proposal to offer annually a scholarship of \$250.00 in honor of Richard Gelwick, for which purpose the Board would be responsible for raising money to cover the cost. This motion passed with one abstention.

Phil Mullins presented a report on the Polanyi Society website, incorporating a proposal to have the website transition in the near future from the Missouri Western University server to an independent website from which space would be rented, and responsibility for which would be transferred from himself to a new website master and a Board committee. This proposal was passed unanimously. Phil also mentioned the several new Polanyi items now available on and through the website and gave a brief report on his good experience teaching 15 graduate students in Hungary. Interest there remains strong.

Andrew Grosso reported on possibilities for another Polanyi Conference, tentatively scheduled for summer 2017. Possible locations included Chicago, Yale, and Nashotah House in Wisconsin (with which Andrew has connections). Andrew will continue to lead an informal group to explore this with the goal of reaching a decision by the Society's Fall 2015 Meeting.

Respectfully submitted,
Dale Cannon

Polanyi Society Treasurer's Report for Fiscal Year 2013-2014

General Fund:

Opening balance 9/1/13 (less donations to Poteat Conf):	\$12,159.44
Revenue (dues, library subscriptions, donations, misc.):	6,995.54
Transfers out (Endowment, Travel, Stock):	-2,795.00
Expenditures (<i>TAD</i> printing and supplies; bank and paypal fees):	-1,970.09
Balance 8/31/13:	\$14,389.89

Travel Fund:

Opening balance 9/1/13:	\$ 1,078.97
Donations:	\$405.00
interest:	\$0.00
Grants paid out:	-200.00
Balance 8/31/13:	\$ 1,283.97

Endowment Funds:

Capital 360 Acct Opening balance 9/1/13:	\$13,368.93
Donations for 13-14 (dep in Nov 2014):	\$1,390.00
Interest (about .04% avg):	53.49
Capital 360 Ending Balance 8/31/14:	\$14,812.42
E*Trade stock opening balance 9/1/13:	2,430.00
5/16/14 E*Trade stock donation:	\$1,000.00
9/30/14 E*Trade activity (+ or -):	1,325.40
Total Endowment Funds:	\$17,242.42

Poteat Conference 2013-2014:

Balance beginning 9/1/14 (from donations prior to 9/1/14)	\$1,380.00
Donations	\$1,790.00
Expenses (Yale Conference, Insurance):	-2,892.00
Remaining balance 9/1/14:	\$278.00

Poteat Sculpture Fund:

Balance beginning 9/1/14	\$ 0,000.00
Donations:	\$14,000.00
Payments to E. Moustakos:	-13,670.00
Bank/wire transfer expenses:	-239.35
Remaining balance 9/4/14:	\$90.65

- Notes:*
1. The Poteat Sculpture for Yale had a total price tag of \$27,000; donations were raised and the sculpture was paid for in full by November 14, 2014.
 2. Donations for the Poteat Conference amounted to more than \$3,483.31, which provided the deposit to Yale, insurance, and covered a small deficit of \$591.31 needed to close the books.

“Visual Presentation Of Social Matters” as a Foundational Text of Michael Polanyi’s Thought

Eduardo Beira¹

Key words: economic fallacies, symbols, economic systems, dynamic systems, graphical visualization, diagram motion pictures Michael Polanyi’s liberalism, visual symbolism and economics education, Polanyi on “the economic film”

ABSTRACT

This essay introduces Michael Polanyi’s 1936 lecture, “Visual Presentation of Social Matters,” which is an important document sketching Polanyi’s analysis of the need for education in economics. It led eventually to the creation of Polanyi’s 1940 film, Unemployment and Money, and Polanyi’s career change from chemistry to economics and philosophy. The lecture outlines Polanyi’s program to develop visual symbols that can be used in film to promote an understanding of modern complex economics for ordinary citizens. It makes clear Polanyi’s early effort to rehabilitate contemporary liberalism which he regarded as inadequate to promote a free society.

[Editor’s Note: all quotations from “Visual Presentation” will be cited parenthetically as “VP,” giving the page numbers from this issue of *Tradition and Discovery*].

Introduction

“Visual Presentation of Social Matters” is a Polanyi lecture delivered to the Association for Education in Citizenship in Manchester, England in June of 1936 (Scott and Moleski 2005, 164). The Polanyi biographers provide a lengthy summary (164-165) centered around the circular symbolic representation of the economy included in part of the lecture. The copy of this lecture in the Regenstein Polanyi Collection (RPC) has at the top of the page a handwritten note, “1937.” But I suspect that this date is not correct: I prefer Scott and Moleski’s date, which is the same as the RPC dating in the Cash Guide (Cash, 1996). The RPC includes the lecture in Box 25, Folder 9, and this is the same folder where the related documents “On Popular Education In Economics” (another later lecture) and “Suggestions For A New Research Section” are filed. All three of these documents are foundational documents for understanding Polanyi’s early social thought, although none have been published until now.² “Notes on a Film,” from October, 1935 (RPC, Box 25, Folder 10), is another important related document, and it apparently was the first one in this interconnected set of material to have been written.³ Below I review and briefly discuss the major ideas in “Visual Presentation of Social Matters.”

Polanyi on the Importance of “Visual Presentation of Social Matters”

The foundational nature of this lecture is recognized by Polanyi himself in another document, the “Statement by Professor M. Polanyi On The Main Facts On The Genesis Of The Economic Film.”⁴ This document was distributed during the first screening of what Polanyi calls his “Economic Film” (*Unemployment and Money: The Principles Involved*) in London in 1940:

Speaking at the time in the Association for Education in Citizenship in Manchester on the “Visual Presentation of Social Matters,” Professor Polanyi argued that the fun-

damental features of economics could be made widely appreciated by the public only by discovering an adequate visual symbolism for their presentation. A “Three Minute Film” of French origin was shown as an example of the technique to be used and an illustrated chart with the Flow of Money and the Counter flow of Goods gave a forecast of the scene and the actors of the Economic Film. The main contents of the film were, however, based on the views exposed by J.M. Keynes, in his great book *The General Theory of Unemployment, Interest and Money* which appeared a little later.

The Lecture’s Basic Message

Close to the end of the lecture, Polanyi sums up the message he wants to convey. In order to provide greater clarity, I have segmented Polanyi’s points but preserved his language (“VP,” 23):

- “the discovery of a symbolism,
- which I believe will consist in moving picture writing
- capable of representing economic life,
- will release us from fallacies and exasperation
- and will create economic consciousness.”

Polanyi anticipates that the consequence of developing a “symbolism” that will “consist in moving picture writing” should be a new economic enlightenment which will produce a new source of social and political power bearing on a community “of work of which we are members.” That is, “[E]nlightenment will create power to control the structure of economic life; a power which at present is nowhere. . . . This power will reside with the community.” Finally, Polanyi notes (*italics mine*), “I contend that it will achieve the *promise of liberalism*—freedom associated with complete co-ordination . . . of all free efforts” (“VP,” 23).

Polanyi says before closing the lecture (*italics mine*) that “*Publicity* will fulfill the promise of liberalism, freedom and co-operation” (“VP,” 23). He is arguing here that using modern media as a tool to spread the enlightened message about the economic system can eradicate the popular economic fallacies accepted by ordinary citizens. Polanyi is not advocating the use of “propaganda,” but he does favor providing information through “publicity” (present in the public media).

Polanyi’s lecture is organized around two main topics: one is a diagnostic that identifies economic fallacies and the “mental derangement arising from a state of continued perplexity, a perplexity which is so fatal to the society because. . . it involves the very basis of moral relations” (“VP,” 14). The second organizational focus concerns the basis for a symbolic representation of economic ideas that can enlighten and empower society, making liberal ideas self-evident by themselves. He contends that “a general economic education based on diagrammatic symbols will be free of all the current fallacies and will only contain self-consistent views” (“VP,” 21).

This lecture provides also an agenda (Polanyi might say “a program”) concerned with the articulation of a new liberal framework, an agenda “to discover a new set of symbols appropriate to the purpose,” which is to invent “new tools of the mind” that express the meaning of economic elements (“VP,” 16).

More on Polanyi’s Social Diagnosis

About his analysis of society, Polanyi says:

- 1) “None can find comfort in a position which he fails to comprehend, and protracted perplexity leads to mental derangement.”

- 2) “While growing in mass the system grew in complexity and became increasingly confusing.”
- 3) “Political franchise could not give the people control over an economic system which they could not understand but only increased the repercussions of the rapidly growing confusion by committing the fate of the community to the exasperated minds of the masses.”
- 4) “But the most dangerous consequences of our blindness to our economic position lie in the moral conflicts in which that blindness involves us.”

Polanyi argues that the “invisible hand” discussed by Adam Smith as the organizer of the economic system is not enough. He concludes that the traditional liberal framework needs to be revised, updated and extended: “the system of general laissez faire cannot work if people have no means to distinguish between such self-seeking which the Invisible Hand turns into the service of the community and the other forms of self-seeking which are destructive to the community” (“VP,” 15). The invisible hand alone, in Polanyi’s account, thus is not enough to solve the social and moral concerns of human beings: “as long as we live in a dark turmoil, governed by an invisible hand, the distinction between self-seeking which is, in effect social, and self-seeking which is destructive to society will remain as unreliable” (“VP,” 15). Nevertheless, human beings aim “to realize fully their social responsibilities and to act with a direct view to the social purpose” (“VP,” 15). Polanyi thus argues for the responsible, voluntary, informed (through economic education), empowered, individual action of each person in the economic system.

A liberal economic system and a liberal society depend on these multi-empowered and free mutual interactions. The solution for the crisis is to empower the liberal person with economic awareness and knowledge so that the “free society” (a concept Polanyi later used extensively) will progressively emerge.

Polanyi on Symbols

In his 1936 lecture, Polanyi makes what may seem a surprising claim: “I believe that it has never been fully realized to what extent our mental powers depend on symbols” (“VP,” 16). Symbols became a major concern of Polanyi’s inquiry at the end of his life, forty years later in his last book, written with H. Prosch, especially in Chapter 4 of *Meaning* (1975). But in 1936 Polanyi was looking for a symbolic representation of the economic system and he did not find anything appropriate around. He claims some inspiration from Walt Disney’s comic cartoons, but he concludes “we have to invent” the necessary symbolic representation (“VP,” 18).

Graphic symbols, Polanyi suggested, can provide “a new kind of map” (“VP,” 17). But Polanyi also recognized a key and fundamental feature of the economic system and its troubling consequences for the use of graphic symbols:

A map, however, is a stationary diagram; while the economic system is essentially dynamic. It is a method for finding out what to do so as to satisfy variable needs under changing conditions. It is composed of a multitude of choices which can be understood only if our picture includes the situation before and after the choice takes place (“VP,” 17).

Polanyi thus contended that “graphic symbols presenting economic life must be in motion; the symbolism must be a diagrammatic motion picture” (“VP,” 17).

With such powerful animated symbols and populated diagrams, “we can dispense [with] (audio) commentary” (“VP,” 18). Four years later, when he released his “economic film” in 1940, he found this was not true. Polanyi asserted that “the artistic scope of diagrams is enhanced by motion, and emotional power is added to beauty when the shapes directly indicate their meaning, forming, as it were, a picture

writing of forces which act in our own midst and bear on our own fate.” It is true that motion gave a new dimension to graphic symbols, but Polanyi did not anticipate the problems of creating meaning from the abstract aesthetics needed to represent dynamic changes in a complex system. Perplexity and confusion can (again!) be easily generated by the tricky language of dynamic symbols. Polanyi’s film is thus a testimony to both the potential and limitations of these ideas.⁵

Polanyi’s Working Model for the Economic System

In this lecture, Polanyi anticipates his working model for the economic system (the market) and makes a first attempt to describe it, emphasizing the role of prices as tools for economic choice and the importance of trade in the market. He argues that a market based on free trade between people (“the marketing system,” as he calls it) is a “community of money makers” and money is their “voting card:”

If we can feel that money is really the voting card by which the community directs its work, money gathering might rise at least to the dignity of democratic vote seeking. If we recognize that the marketing principle is the most democratic representative system of self-government we will desist from attempts to substitute it through mere detestation of money-mindedness or other specious reasons by a so-called planning which makes arbitrary decisions about what we ought to do for ourselves (“VP,” 22).

The model that Polanyi describes is based on the “Introductory Picture,” a very primitive circular model (reproduced in figure 2 in his lecture) of the “stage of the economic drama.” It is important to note that this first model does include some concepts that appear later in the much more elaborated “economic film”: a variable circular counter flow of money, with the basic acting elements of the model (homes/families and further stages of transformation and distribution).⁶ The “circular structure” of the stage (graphical model) is important and embeds the dynamics of economics: “A circular stage gives a synthetic view of aspects . . . which otherwise are not easily united in our mind” (“VP,” 19).

Later developments of Polanyi’s model of the economic system were described first in a lecture to the Statistical Society in Manchester when the first part of the film was available and then in a paper published in 1940 (Polanyi, 1940).⁷ But the roots of these later developments are in this lecture.

“Visual Presentation of Social Matters” as a Seminal Polanyi Paper

“Visual Presentation of Social Matters” provides a key to understanding the development of Polanyi’s thought, especially during the transitional decade from the mid-thirties to the mid-forties. Polanyi is looking for meaning in economics as a key to understand human beings and society (especially the tragedies affecting humanity during first half of the twentieth century that so much impacted him and his family). Before he began to articulate his broader new philosophical outlook (i.e., his post-critical perspective), Polanyi tried to articulate a new liberal framework grounded on solid economic foundations.

“Visual Presentation of Social Matters” is also of significance insofar as it does not make any reference to Keynes. This lecture was delivered in June 1936. Scott and Moleski (165) tell us that Polanyi read Keynes’s *The General Theory of Unemployment, Interest and Money* during the Christmas period of 1936, although the book was published the previous February. Polanyi wrote his economist friend Toni Stolper on 3 September 1937, saying

We had a beautiful vacation in the Bretagne. For me it resulted in [the] valuable achievement of understanding Keynes’s book *General Theory of Unemployment!* A grandiose *oeuvre* that will offer nourishment to social powers for many years. I read

it for the first time at Christmas, and it gave me the impetus for the draft of my film (RPC, Box 3, Folder 9).⁸

Later in the same letter, he comments, “Now I can tell that the concept of my film is closely related to that of Keynes’s. It is a somewhat different subject matter that only overlaps with his partially. But the ideas are not different” (RPC, Box 3, Folder 9).

This letter thus makes clear that Polanyi’s idea for the film pre-dates his discovery of Keynes’s ideas in *The General Theory of Unemployment, Interest and Money*. His first ideas about a model for the “economic film, as presented in this lecture, had not yet been influenced by Keynes’s book. But Polanyi’s next lecture, “Popular Education In Economics,” delivered in February, 1937, does include a first tentative reference to Keynes, in order to support his claims: Polanyi says there that Keynes “brought an understanding of the trade cycle which seems also to lead to a proper definition of public responsibility in an industrial system” (RPC, Box 25, Folder 9, p.12). Later he finds a sound theoretical basis in Keynes’s theory to support his own conceptions, and confirms his overlap with Keynes.

“Visual Presentation of Social Matters” in a Temporal Context

Following is a tentative timeline for 1935 to 1940 concerned with the origins of the “economic film” and its theoretical orientation. This is based primarily on information available in Scott and Moleski but partially on archival and other sources such as the 1963 Gelwick microfilm collection of Polanyi papers. This timeline is also helpful for understanding the development of Polanyi political ideas in this period (bold items are unpublished items, available in RPC archive):

- October, 1935: “**Notes On A Film**” note (RPC, Box 25, Folder 10).
- November 2, 1935: “USSR Economics—Fundamental Data, Systems and Spirit,” published in *The Manchester School of Economic and Social Studies*, VI: 67-89.
- June, 1936: “**Visual Presentation Of Social Matters**,” lecture given at Association for Education in Citizenship (RPC, Box 25, Folder 9).
- 1936: reprinting by Manchester University Press of 1935 paper as the booklet *USSR Economics*.
- April 1936: “The Value Of The Inexact,” letter to the editor published in *Philosophy of Science*, vol. 13: 233-234.
- 1936: “The Struggle Between Truth And Propaganda,” published in *The Manchester School of Economic and Social Studies*, VII: 105-118.
- December, 1936: first reading of Keynes’s *The General Theory of Unemployment, Interest and Money*.
- February 22, 1937: “**Popular Education In Economics**,” lecture for the Manchester Political Society (RPC, Box 25, Folder 9).
- March 8, 1937: untitled lecture on anniversary of the Soviet revolution, given at the Manchester Historical Society (Scott and Moleski, 312, note 105, call this the “Historical Society Lecture”).
- 1937: “**Suggestions For A New Research Section**” note (RPC, Box 25, Folder 9).
- 1937: “**Money, Booms And Depressions**” note (RPC, Box 25, Folder 14).
- August 1937: date by which Polanyi claimed full understanding of Keynes’s *The General Theory of Unemployment, Interest and Money* in a 3 September, 1937 letter to Toni Stolper (RPC, Box 3, Folder 9).
- October 1937: Polanyi participates in the international meeting about chemistry, physics and biology held in the Palais de la Découverte, Paris and publishes a note emphasizing the “common fate shared by independent science and political liberty” (*Nature*, 140 (1937): 710).
- March 9, 1938: first screening of his “economic film” at a meeting of the Manchester Statistical Society under the title “An Outline of the Working of Money Shown by a Diagrammatic Film.”

- Spring 1938: course on the “mechanisms of economics” (six Polanyi lectures).
- August, 1938: screening of his “economic film” in Paris at the conference on Lippmann’s *The Good Society*, where several economists saw the film.
- 1938: “The Settling Down of Capital and the Trade Cycle,” published in *The Manchester School of Economic and Social Studies*, IX: 153-169.
- October 1939: “The Rights and Duties of Science,” published in *The Manchester School of Economic and Social Studies*, X: 175-193.
- 1939: “**Memorandum On Economic Films**,” note (RPC, Box 3, Folder 6).
- December 1939: submission of request for a grant to The Rockefeller Foundation in order to complete his “economic film” (together with Manchester colleague J. Jewkes).
- February 10, 1940: “Science in USSR,” published in *The New Statesman and Nation*, XIX: 174.
- April 1940: gala first screening of full version of the “economic film.” “**Statement by Professor M. Polanyi On The Main Facts On The Genesis Of The Economic Film**,” distributed (RPC, Box 4, Folder 9).
- 1940: “**The Liberal Ideal**,” note dated only by year (RPC, Box 26, Folder 3).
- August, 1940: publication of “Economics On The Screen,” in *Documentary News Letter*.
- October, 1940: “Economics by Motion Symbols,” published in *The Review of Economic Studies*, VII: 1-19.
- 1940: publication of *The Contempt of Freedom: The Russian Experiment and After* (London: Watts and Co.), a book that collected material from the late thirties through April, 1940 and also included “Soviet Economics—Fact and Theory,” which is a version of “USSR Economics—Fundamental Data, Systems And Spirit” (1935).
- 1940: “**Handbook For The Film UNEMPLOYMENT AND MONEY**” (available in Gelwick, 1963).

ENDNOTES

¹Thanks to Phil Mullins for his advice and help in the editing of this paper.

²“On Popular Education In Economics” is discussed in Beira (2012), a working paper which includes the full text of the original document. The text of “Suggestions For A New Research Section” is available in Beira (2013), another working paper which includes discussion of the importance of this document. These and other working papers on several related Polanyi texts from the thirties (see the Reference list below), as well as a digitized version of Polanyi’s 1940 “economic film” *Unemployment and Money*, are available at <https://sites.google.com/site/ebeira/pol11b>. These materials are now also accessible through a link in the collection of primary materials on the Polanyi Society web site (<http://www.missouriwestern.edu/orgs/polanyi/essays.htm>).

³The transcript of “Notes On A Film” is also available in Beira (2013).

⁴The text is available in Beira (2012).

⁵For a discussion of the film and its context, see Beira (2013).

⁶For a discussion of the evolution of Polanyi’s graphic concept of “the economic film,” see Beira (2012).

⁷See Polanyi (1938). The full text available is in Beira (2012).

⁸Thanks to Phil Mullins for calling my attention to this Polanyi letter to Stolper and to Monica Tobin for providing an English translation of the German.

REFERENCES

- Beira, E. "Booms And Slumps: The First Storyboard and Script for the Economic Film (M. Polanyi, 1937)," Working Paper WP 122 (2012a), U. Minho.
- _____. "Michael Polanyi (1937): On Popular Education in Economics," Working paper WP 124 (2012b), U. Minho.
- _____. "Michael Polanyi (1938): An Outline of the Working of Money. Shown by a Diagrammatic Film," Working paper WP 127 (2012c), U. Minho.
- _____. "Michael Polanyi: Three Unpublished Texts about the Economic Film," Working paper WP 128 (2013a), U. Minho.
- _____. "Rediscovering the Economic Film By Michael Polanyi (1940)," Working paper WP 129 (2013b), U. Minho.
- Cash, J. "Guide to the Papers of Michael Polanyi." Originally published in *Tradition and Discovery* 33/1 (1996-1997):5-47, but now updated and available at <http://www.lib.uchicago.edu/e/src/find-ingaids/view.php?eadid=ICU.SPCL.POLANYI&q=Polanyi>.
- Gelwick, Richard L. *Collected Articles and Papers of Michael Polanyi*, 1963. This copyrighted microfilm collection, the first collection of Polanyi's non-scientific writings, was compiled by Richard L. Gelwick and originally held by Pacific School of Religion Library, Berkeley, CA. The collection is Microfilm 4008 available today in the Graduate Theological Union Library, Berkeley, CA.
- Keynes, J. *The General Theory of Employment, Interest and Money*. New York: Macmillan, 1936.
- Polanyi, Michael. "An Outline Of The Working Of Money. Shown By A Diagrammatic Film." *Transactions of the Manchester Statistical Society*. 1938, 1-19.
- _____. "Economics By Motion Symbols." *The Review of Economics* 8 (1940): 1-19.
- _____. and Harry Prosch. *Meaning*. Chicago: University of Chicago Press, 1975.
- Scott, William T. and Martin X. Moleski, S.J. *Michael Polanyi: Scientist and Philosopher*. Oxford: Oxford University Press, 2005.

Visual Presentation of Social Matters

Michael Polanyi

[Editor's Note: This June 1936 lecture, delivered to the Association for Education in Citizenship, is published with the permission of John Polanyi, literary executor for Michael Polanyi. The lecture (included in Box 25, Folder 9 of the Papers of Michael Polanyi in the Department of Special Collections, Regenstein Library, University of Chicago) is clear, but is not a well-groomed text that Polanyi planned for publication. We have not tried to polish it, apart from suggesting words in brackets that respond to what seem to be a few obvious typographical errors. This text incorporates the few handwritten redactions in the archival typed lecture. In the context of presenting his lecture, Polanyi showed a four-minute French film titled, "The New Europe." He also used slides of three diagrams. Although the places for these materials are indicated in the lecture, only one of the diagrams survives, Figure 2, which Polanyi attached to the end of his text with a note that is included here. The key words and abstract have been added by the Editor.]

Key words: Michael Polanyi, economics, films, economics education, film as diagrammatic writing

ABSTRACT

"Visual Presentation of Social Matters" is a 1936 Polanyi lecture, delivered to the Association for Education in Citizenship, which lies in the background of Polanyi's 1940 film Unemployment and Money. Polanyi argues that the complex modern market system is misunderstood by ordinary citizens who subscribe to economic fallacies; this misunderstanding has contributed to violence and turmoil in the twentieth century. Polanyi proposes a program to discover a dynamic visual symbolism ("moving picture writing") that he believes can clearly represent modern economic life, releasing ordinary people from economic fallacies and exasperation and creating "economic consciousness." This economic enlightenment is part of Polanyi's effort to rehabilitate liberalism. He envisions an economic order in which there is freedom and "complete co-ordination" which he suggests already exists in the domain of scientific research.

Heroism and Happiness

The dictators of Germany and Italy have repudiated the utilitarian idea and following the lead of some philosophers of the past century have proclaimed that heroism stands above utility. They despise base comfort and aspire to noble tragedy.

There might be truth in this philosophy, yet it is as inappropriate in a statesman as it would be in a doctor. Both have to do their best to improve the condition of those entrusted to their care and not to cause their destruction for the sake of making them fulfill a nobler fate.

But the statesman might well reject the utilitarian doctrine on other grounds; not because it wants to make people happy but because it gravely misjudges the conditions of human contentment. This doctrine assumes that people are content if they are given the means to satisfy their needs. Unfortunately, this is not so. Even more than they need goods, people want for their contentment a full understanding of their condition. None can find comfort in a position which he fails to comprehend, and protracted perplexity leads to mental derangement.

Perplexity of Rats and Dogs

Even rats and dogs cannot live in perplexity. Take three sets of rats: give one set a meal a day; give the other set the same meal only every second day; and restrict the third group to a meal on every third day. All three groups will thrive; the rich, the middle-class and the poor will get on equally well. But take a fourth set of rats and feed them at periods varying irregularly between one and three days and you will see the rats of this set die. They get more than the poor rats, yet while those prosper on their meager diet they perish because their organism is thrown into a state of confusion, all their reflexes of digestion are dislocated, they die of perplexity.

Dogs are more human than rats, and so the experiment by which Pavlov drove his dogs mad shows us even more closely what is wrong with ourselves. He trained a dog to expect food when a luminous circle appeared on a screen, and to recognize that no food would come when a flat ellipse with a ratio of semiaxis 2:1 was produced. The dog learned to differentiate precisely between the circle and the ellipse, showing signs of appetite when the former, not when the latter was shown. The shape of the ellipse was then approximated by stages to that of the circle (ratios of the semiaxis 3:2, 4:3 and so on) and the training of discrimination continued through the successive ellipses. The dog found it increasingly difficult to distinguish between the ellipses and the circle and finally, when the ellipse was given a ratio of 9:8 he became quite uncertain in his discrimination. But Pavlov tried to educate him to the limit and continued with this experiment for three weeks. The result, however, was no improvement in the dog's training but a total breakdown of his discriminating power. At the end he could not see the difference even between the flat 2:1 ellipse and the circle. The dog's behaviour also underwent a complete change. It began to squeal in its stand, kept wriggling about, tore off with his teeth the apparatus and bit through various tubes. In short, as Pavlov says, it fell into the condition of an acute neurosis.

This dog broke down when his powers of understanding were overstrained. They were overstrained when it became too difficult for him to distinguish between the symbols signifying food and hunger. His happiness was destroyed, not by need of supplies but by what Pavlov describes as a conflict between excitation and inhibition which its brain found too difficult to resolve.

The misery of this dog lies beyond the scope of utilitarian principles and so does the misery of our times. I believe that the twenty-two years of wars and revolutions which lie behind us have been mainly caused by a mental derangement arising from a state of continued perplexity—a perplexity which is so fatal to society because it not merely relates to food as that of the dog, but involves the very basis of moral relations from man to man.

Fallacies, Paradoxes and Moral Conflicts

What is the reason for our perplexities?

In the past two centuries an economic system has developed which we fail to comprehend. In the last fifty years this industrial marketing system has come to encompass the major part of western populations. While growing in mass the system grew in complexity and became increasingly confusing. The spreading of literacy and the coming of newspapers conveyed no satisfactory interpretation of the new system but only spread economic fallacies which made confusion more general. Political franchise could not give the people control over an economic system which they could not understand but only increased the repercussions of the rapidly growing confusion by committing the fate of the community to the exasperated minds of the masses.

From the very beginning of the industrial marketing system the popular mind became entangled in economic fallacies. A century ago the French economist, Bastiat, collected three volumes of fallacies. Using verbatim quotations from the protectionist arguments of leading politicians he managed to compose a convincing document demanding that the light of the sun should be shut out from the sky so as to stimulate the candle industry of France and thus to create increased employment to the great benefit of general prosperity.

Future historians might find out [our] actual practice even more absurd than the ironic ideas of Bastiat. Great nations up in arms exacting reparations from another country while staunchly refusing to receive such payment. Wrecking the world by the double exertion of forcing that country to throw its goods on the world market and of defending those markets against the inflow of the same goods.

And yet such illusions which bid us to defeat our own aims are not the most demoralising consequences of our blindness, since owing to our blindness we often fail to realise what has happened. It is even more harmful to the balance of the popular mind when people have to abide suffering which seems unreasonable. The Rumanian peasant submits to fate when his crop is destroyed by hail but revolts when he is ruined because for reasons far beyond his scope the price of wheat has fallen on the world market. Men who held out patiently through the war will rise up against an inexplicable state of unemployment, which by comparison with war is a mild inconvenience. They might even let themselves be led into war as a diversion from unemployment.

But the most dangerous consequences of our blindness to our economic position lie in the moral conflicts in which that blindness involves us. This is where the utilitarians made their greatest mistake. The supreme principle in which they gloried, the Invisible Hand praised by Adam Smith which ordains that self-seeking of each leads to the common good of all has turned out to be a curse.

The system of general *laissez faire* cannot work if people have no means to distinguish between such self-seeking which the Invisible Hand turns into the service of the community and the other forms of self-seeking which are destructive to the community. So long as the working of the economic system and the supreme hand directing it remain invisible, even the most useful form of self-seeking will be performed in a callous, narrow-minded spirit, and such a spirit will permeate the whole community, breaking it up into groups of rival interests ready to use all their economic and political powers to fight against the others.

There is a story in my country that the village lads make a notch on their knives about an inch above the point. They have a rule that they must not stab beyond that mark so long as they are only making fun. Only if they are in earnest are they allowed to push their knives in deeper; but it is understood that the distinction is unreliable in practice.

So long as we live in a dark turmoil, governed by an invisible hand, the distinction between self-seeking which is, in effect social, and self-seeking which is destructive to society will remain as unreliable as the mark between fun and earnest on the knives of the village lads.

No wonder that men revolt against the domination of such an indiscriminating acquisitive spirit. In reaction against it they demand to realize fully their social responsibilities and to act with a direct view to the social purpose. The rush of early capitalism benumbed moral needs for a time, but when the pace of expansion slowed down the demand for a consciously social order rapidly became urgent. In the last twenty years it has broken out in a wave of revolutions and counter-revolutions which all profess to satisfy this demand.

On the Use of Symbols

We have found ample sources both in our intellectual and moral position towards our industrial marketing system which give rise to what Pavlov calls a conflict between excitation and inhibition which the brain finds too difficult to resolve. Let us now return once more to the dog which he so successfully maddened by such conflicts.

The dog went mad when the symbols signifying his food became indistinct and finally incomprehensible to him. I suggest that our own trouble is exactly the same. The symbols by which we try to represent our economic surroundings are entirely inadequate and the only chance for us is to discover a new set of symbols which are appropriate to the purpose.

I believe that it has never been fully realized to what extent our mental powers depend on symbols. Words are symbolic carriers of meaning which combined into patterns make us grasp our own feelings and the situations immediately facing us; the use of numerals lends us the powers to organize quantities; drawings are other implements of thought by which we can handle complex objects, utterly baffling to the unaided mind, and with a map before us we command large areas of which we could have no idea without them.

These symbols by which we realize the contents of our own minds and govern our surroundings do not fall to us from the sky but are created by the labours of human genius. In the Middle Ages men could not enjoy the beauties of nature. The poet Petrarca [Petrarch], who was one of the first men in modern times to climb a mountain, stood at its top overwhelmed but dumb, because there were no words to give expression to his feelings. It took centuries to invent those words which now run so fluently from the pen of every schoolboy. It took more centuries, from Van Eyck to Cezanne, to discover the visual symbols which convey air, depth and brightness of the landscape. Beauty was surrounding us through all the centuries before but as we had not been taught to grasp it, we might as well have walked through a desert. Millions go out to-day into the country to enjoy the discoveries of past geniuses. Our inheritance of symbols makes us see, feel and delight in places which before were drab and empty.

All our civilization, its legal system, its business, its crafts, its science are based on the use of ingenious symbols: speech, writing, calculating, drawing, mapping. A modern community robbed of these implements of thought would be more grievously stranded than Robinson [Crusoe] without tools.

Ever since Francis Bacon made his exciting speculations on the possibilities of new mechanical contrivances our imagination has been constantly alive to the scope of mechanical progress. We must now realize that the need of our present social crisis is the invention of new tools of the mind.

I submit that there is no task that is more important to the present generation than the discovery of symbols embodying relevant economic elements, which combined into a pattern would represent economic life and would express its meaning to us. Fallacies would vanish, paradoxes would be unraveled and the moral conflict of self-seeking and social purpose would be resolved in a synthetic view of both. Indeed, as I will try to explain later, the very nature of our economic system would be lifted to a higher plane not only in spirit but in fact.

Diagrammatic Films

Let us now pause for a moment. While I feel convinced that the task I have pointed out is our most vital need, I know that my further suggestions are only tentative. I will try to outline the nature of the

symbols which we have to invent and the examples which I can show you are very crude. They are only meant as an illustration of the idea.

Anyhow, I can proceed a few steps further in my argument without much uncertainty. Of the three main sets of symbols, verbal, mathematical and visual, it seems obvious that the visual symbol will be the most useful one.

Words are powerless to convey a description of complex things which are far out of sight; mathematics are too intricate to become popular. Give a man a full description of England, not illustrated by maps and ask him to plan an itinerary from Manchester to London. The man is a genius if he succeeds in a year. Present him with a list of numbers stating the latitudes and longitudes of all the places in England and if he knows his geometry he will work out the route in a month. But give a child of ten a map of England and he will read to you directly all the alternative routes.

What is true for the land must hold for the economic system spread out over the land. To represent it we have to invent a new kind of map. That is, the symbols must be graphic, the presentation mainly visual.

A map, however, is a stationary diagram; while the economic system is essentially dynamic. It is a method for finding out what to do so as to satisfy variable needs under changing conditions. It is composed of a multitude of choices which can be understood only if our picture includes the situation before and after the choice takes place.

It follows that graphic symbols presenting economic life must be in motion; the symbolism must be a diagrammatic motion picture.

Diagrammatic films have been already used successfully to illustrate scientific ideas such as the spreading of electromagnetic waves, the thermal agitation of molecules and the like. Recently, the presentation of territorial changes has also been attempted by this technique. I will show you as an example of a moving diagram a film representing the frontier changes caused by the war. I do not think that the contents of the film are valuable as a presentation of social life. The peoples of Europe are already far too much inclined to regard the map of their country as a symbol of the nation. Popular imperialism is fired by an imagination fascinated by the map. The integrity of certain patches on the map is valued higher than the lives of the people inhabiting those patches; the inhabitants are readily sacrificed to the integrity of the patches. Our aim must not be to emphasize the map even further but rather to oust it from the place which it now takes in popular emotions by truer symbols of national life so as to destroy the map's dangerous command over our social consciousness.

By the film which I show you I only mean to demonstrate the technique of diagrammatic motion pictures which, I believe, must form the basis of the new symbolism to be created for the representation of economic life.

(“The New Europe”) Film four minutes.

This film shows clearly the esthetic possibilities of moving symbols. We are reminded of the beauty of Arabic and Chinese scripts. The artistic scope of diagrams is enhanced by motion, and emotional power is added to beauty when the shapes directly indicate their meaning, forming, as it were, a picture writing of forces which act in our own midst and bear on our own fate.

In saying this, I am not suggesting that the imagery of our future economic film will be purely diagrammatic. It might rather resemble the primitive maps on which the pictures of towns, scenery and man were sketched out upon a purely geographic background. Using such populated diagrams we can dispense with the commentary such as accompanied the film which I have just shown you. Instead we will see the figures act and hear them talking. We should see our social life symbolically projected, happening before us on the screen on an artistic plane of its own, directly significant, like the symbolic drama of the Middle Ages or the comic cartoons of Walt Disney.

The Stage of Economic Drama

It will take a long time to develop the film of economic life. A series of great efforts will be needed until, from the first outlines which can be suggested to-day, the new literature of social life will emerge. But this is no reason for delaying our attack on the task.

I have tried myself, to sketch out an economic film although I know that none can be more lacking in natural ability for such an attempt than I am. It seemed the only way to explore the idea and to explain it. My film is a very crude effort and besides, it has not been produced, so I cannot show it. But I can give you the outlines of an essential feature of this unborn film. I will try to explain at least part of the stage on which economic life might be symbolically enacted.

To understand the stage of economic drama we must first see clearly the fundamental purpose of the economic system. This picture of a well known electric machine might help to explain it.

(SLIDE [#1 of electric motor]).

Some of you will call this an electric motor and some of you will call it a dynamo, and both parties will be right because it is both one and the other. It serves as an electric motor if you drive it by electricity to produce mechanical power, or it serves alternatively as a dynamo if you drive it by mechanical power to produce electricity.

Now, obviously, such a machine is useless until you know which way to run it. Technically it is considered just as efficient in both opposing directions, but this is meaningless. If, under given conditions, the conversion of mechanical power into electricity is useful then under the same conditions the opposite process must be destructive. We convert A into B only because B is more valuable than A, but then the opposite process by which B is made into A is sheer destruction. When you see this electric machine running at a great speed you might stand back in admiration, believing it to be a source of wealth while it actually might be devastating our resources as efficiently as a bombing plane. No engineer can tell you whether it is doing one or the other.

The purpose of an economic system is to determine which way our machine has to be run. By the use of an economic system it is possible to find out which is more valuable under given conditions, mechanical power or electricity, and which, therefore, should be converted into the other.

An economic system is, in general, a method to make a choice between the various uses of our materials and tools; a way to find out what we should do with things.

In a marketing system the choice is made by watching the prices of things. If, for example, at some time in some place mechanical power is cheaper than electricity then we will convert power into electricity while we will do the converse if electricity is cheaper than power.

However, things are not created by Heaven with their prices attached to them, nor do we know the price of a man-made thing until it has been brought to market and has been bargained for. The purpose of the market is to give prices to things by which we can judge what to do with them.

When a man makes a dearer thing out of a cheaper thing he makes money. He makes money in wages if he is employed or in profits if he is an owner. Hence a marketing system is a community of money makers. With the money they get, people buy the things they want for themselves and also pay for raw materials and for labour.

All this remains hazy so long as you just talk about it, but it becomes clearer when you draw a diagram of the process. This diagram, (Figure 2 [attached at the end of the lecture]) I believe, could be the stage, or at least, part of the stage of the economic drama. You see that this stage is curiously different from the stage of the theatre. It has a circular structure. As on the round surface of the Earth you can get from one place to another either by going to the East or going to the West, so in economic life there are two accesses to every point according to the direction in which you travel. We will see that these two directions represent two complementary aspects of any economic fact. A circular stage gives a synthetic view of these two aspects which otherwise are not easily united in our minds.

The Introductory Picture is designed on the assumption that everyone lives in one small section called "Homes", while all the work and all the business takes place in the rest of the area included in the circle. The various stages of work and business are marked by symbols and inscriptions. The long black arrows indicate the goods flowing from one stage to the next. The fat raw-material arrows become split up after the goods have passed the raw-material market, into a number of thinner arrows signifying the distribution of the raw materials to the various factories, and at the next and again at the stage further on the arrows become increasingly numerous as the differentiation, into finished goods and the distribution to the "Shops" covers the flow of goods to be split up into innumerable paths.

The thin arrows travelling in a reverse direction signify the flow of money which is handed on in exchange for the goods. The thin arrows originate in the "Shops" where the money is paid in by the customers. The counterflow of money becomes weaker and weaker all the way as it progresses since at each stage some is kept back to pay the profits and wages of those who are employed at that stage.

The man is shown setting out to work. With a hammer in the right hand and a brief case in the left he represents jointly the workers and the businessmen. He is that synthetic being which the new Soviet constitution calls a toiler. The masses of toilers proceed to settle down in their various sections. They take the farmer's plough or the miner's pickaxe. Some go as dealers in raw materials to the offices on the Raw Material Market. The largest number enters the factories: some go as wholesale traders or as their employees to do business on the Wholesale Commodity Market, and finally there are the shopkeepers and Shop Assistants travelling far to their shops to wait on customers.

Each toiler goes to work because he wants to provide for his needs. But he does not choose a particular task on account of the particular needs he wishes to satisfy. He might think of setting a mackintosh, a hairbrush and a fountain pen; yet he goes to a factory which produces sulphuric acid. Mackintoshes, hairbrushes and fountain pens are made up of many elements and for all the toiler knows sulphuric acid might be needed, to make all or none of these articles. He does not care. What the businessman and workers actually look for when choosing their tasks is the greatest return in money, i.e. in profits or wages, which the task will yield.

Now the mechanism of a perfect market assures it that when each toiler chooses the job which pays the best the result leads to the best satisfaction of the toilers' joint needs.

This can be properly shown only by a moving picture, but the diagram shows the scene on which it happens. While the toiler sets out Westwards with a hammer and a brief case his wife, carrying in mind the needs of the family and in her bag the money of the family, goes out in the opposite direction. She approaches the "Field of Work" going Eastwards and enters the "Shops." Here she produces the money and tries to get the best value for it. She makes her choice, offering money for what goods she prefers and no money or less money for what goods she needs or likes less. Her selection promptly comes to the notice of the wholesalers who find that some of their piles of goods are being sold out while others remain on their hands. They, accordingly, will put up the price for the articles which are more in demand and reduce the price of the others.

By doing so they transmit the process of selection to the factories, since these now can get better prices for goods which have proved more saleable. Factories producing these goods will become more profitable and will offer to employ more workers, while others will dismiss workers. From the factories the process of selection spreads to the dealers who supply their raw materials and from there to the sources where the raw materials are produced.

At the end there will be a readjustment of prices, wages and profits all over the "Field of Work," leading to an increased production of the articles for which the toilers have expressed a preference through their shopping wives, and to a reduced production of other things.

In a film one would see this happening with all the various participants acting their parts. It would appear that the process amounts to a direction of all work by taking a vote on what is to be done. By the money which they bring to the shops the wives vote for such goods as they prefer. The money is their voting card. On the result of this primary vote the wholesalers in their turn vote for such factories which produce the preferred goods most efficiently. So the vote is carried on stage by stage, each toiler trying to comply with the vote by producing things for which he gets most votes, that is, most money.

In the evening each toiler takes home the voting cards which he has managed to secure and the next morning each is rewarded in proportion to the votes which he gets for his work since he can use the voting cards to buy at the shops a corresponding share of goods.

I am not trying here to make propaganda for Capitalism.

Actually, the marketing system has ceased to be a characteristic of Capitalism, since the Soviets have rediscovered its usefulness and Stalin has put down the Leftist opposition which protested against its revival. It would certainly be safer to-day to praise the Market in Moscow than it would be to praise it in Berlin, where the Nazis still retain a strain of their revolutionary attack on money-mindedness.

However, I am not even advocating, at the moment, the marketing system be it called 'Socialistic' or 'Capitalist.' I merely wish to suggest that important comprehensive features of economic life which cannot be conveyed to the general public by verbal explanation might be easily made clear through a moving picture enacted on such a stage as our diagram presents.

Destruction of Fallacies and the Rise of Economic Consciousness

For the following I wish you to bear clearly in mind that it is only the stage of economic life which I wanted to explain by the sketch which I have shown you. I could only hint at the drama which represents life itself. Even the stage is quite incomplete. You have seen no foreign trade, no labour exchange, no unemployed and no banks. The extension of the stage including all these essential elements I cannot show to-day.

So I feel that I am presuming a good deal when skipping over all these unaccomplished phases of visual presentation. I go on to draw my conclusions as to the events arising from its possible perfection.

It seems certain that when verbal accounts of economic matters are substituted by a visual presentation based on moving diagrams the economic fallacies now ruling the popular mind will be eliminated. Economic fallacies are based on a sectional aspect of economic life. As Bastiat pointed out a long time ago in his essay entitled, "What We See and What We Do Not See" they arise from the fact that the immediate consequences of an economic measure are obvious and impressive at the point where it first takes effect, but its effects on economic life as a whole are not traceable to the ordinary mind. A new tariff immediately helps some home industry by cutting imports; its effects on the price level which damages the exporting capacity of the country and the consequent impairment of the whole national economy are difficult to follow and remain unseen. The reason is that a verbal account of such an event must try to trace the various channels through which the action in one place of the economic system spreads out to its totality; and this is extremely difficult. If you throw a stone into a pond you will never get an idea of the result by trying to trace the drops of water which have been thrust away by its impact. You must be able to see the pond as a whole, and then you cannot miss the fact that its level has risen to the same extent as if you had poured in a quantity of water equal in volume to that of the stone, whatever the several paths of the displaced drops of water might be. It is impossible to draw a diagram of the event which will miss this point.

The diagrammatic picture might be crude or wrong but it cannot be illogical. Discussing in words a complex matter which is out of sight you can contradict yourself endlessly without noticing it. Ask two people who are not experts at playing chess blindfold[ed] and let them have a game together indicating their steps in chess language. After a few moves they will be putting figures into places already occupied, contradicting themselves with the greatest assurance. In a diagram as on a chessboard, these inconsistencies cannot occur, because they cannot be carried out.

If you trace an itinerary on a map you might make mistakes and if the map is crude and faulty the result might be useless, but no one would trace itineraries on a map which lead around in circles, while a man lost in a fog will walk round and round till he drops down from exhaustion.

I contend, therefore, that a general economic education based on diagrammatic symbols will be free of all the current fallacies and will only contain self-consistent views.

Such a set of self-consistent views will firstly incorporate the wide field of concepts on which economists are agreed. It will also represent those important alternative views on which they disagree and make the elements of their conflicting cases accessible to intelligent general discussion. Thus, we will be made free from the vicious arguments which are at present distracting our minds.

The next effect of the economic film will be to make us feel conscious of the community of work of which we are members. This economic consciousness will be based on the balance of two complemen-

tary attitudes: the one conservative and the other progressive. The first will start from a recognition of the power and usefulness of our economic machinery, reducing the importance of its shortcomings to their true proportion.

We do not constantly quarrel with the engine of our car because it fails to convert more than 30% of the fuel energy into driving power. We recognize that there are at present limits to its efficiency, and are prepared to admire its working even within those limits. Such will become our attitude towards our economic system when we understand it.

Next we will recognize the necessity of a good deal of inequality in a marketing system. All inequality must be resented by the poor so long as its necessity cannot be understood. If a community understands that inequality is useful to it it justifies inequality. Futile revolt against necessary inequality will be appeased.

Lastly, with a comprehension of our economic life the actual parallelism of self-interest and common good praised in vain by the utilitarians might grow into a conscious harmony of purpose. If we can feel that money is really the voting card by which the community directs its work, money gathering might rise at least to the dignity of democratic vote-seeking. If we recognize that the marketing principle is the most democratic representative system of self-government we will desist from attempts to substitute it through mere detestation of money-mindedness or other specious reasons by a so-called planning which makes arbitrary decisions about what we ought to do for ourselves.

But this submission to necessity will only appease false issues and not paralyze our minds, and will rather set them free to go forth towards true aims of progress.

Primitive science persisting in the attempt to transform lead into gold and to construct machines of perpetual motion merely wasted its energies. Only when at last man recognized that the laws of nature preclude the attainment of those aims did he gain power to conquer nature by the use of these same laws.

Similarly, the result of a general comprehension of economic life and of an acquiescence to its necessities will be to create real power of the community over its economic life.

Democratic power swayed by fallacies means only power to destroy. The wisdom of such democracy exhausts itself in refraining to do anything. Transferring of legal rights from one quarter to another, even to the extent of investing them completely in the State does not give power to the community so long as the community does not understand that which it is supposed to govern.

On the other hand the power of an enlightened public opinion would be irresistible even if the public were to possess no political rights whatever. The severity with which the Governments of Russia, Germany and Italy restrict the information available to their peoples proves that all weapons of terror do not make a government feel safe against the power of enlightenment. It is certain that a modern community which clearly perceives an evil in its midst and sees a practicable way to abolish it will overcome the opposition of any minority without even having to fight it.

Publicity, the Fulfillment of Liberalism

I cannot attempt to analyse here in detail the evils which the enlightened people will abolish. I will only outline in a general way the changes which I expect to occur. The new economic consciousness will, before all, set afoot a spirit of enquiry which will not rest until it has made the whole of our economic

activities open to study and, indirectly, public to the community. In effect, this will mean a revolution; not a specious revolution of legal titles but a true fundamental change in the nature of our economic life. I contend that it will achieve the promise of liberalism—freedom associated with complete co-ordination. I cannot try to prove here this contention, but I can illustrate it by an analogy:

There is one sphere of activities in our present times which possesses freedom with complete co-ordination. This is the activity of scientific research. Spread out over the globe it forms a co-operation so close that a future historian will discover not even a seam where wars and revolutions, national and social dictators have tried to disrupt this complete community.

The principle that makes the co-operation of scientists complete and unassailable is the publicity of their work. Every scientist knows precisely what others have done and knowing this, sets himself his own special task appropriate to his own training and personality, based on his own idea. The result is a perfect co-operation of all free efforts.

But publicity in science, as otherwise, is not achieved by the mere will to disclose. It must have at its command a technique of presentation adequate to its object and a public which understands communications presented to it in these terms. It presupposes a spirit of enquiry pervading the public which it addresses.

Similarly, when we possess adequate means of presentation of economic matters and have a public receptive to such presentation we will remove not the legal privacy of Capitalism which, I believe, is irrelevant, but the actual privacy of all economic units, and the result will be independence of each and co-operation of all.

To sum up: the discovery of a symbolism which I believe will consist in moving picture writing, capable of representing economic life will release us from fallacies and exasperation, and will create economic consciousness. A community conscious of its economic life will acquiesce to necessities of an industrial marketing system against which it now revolts in vain.

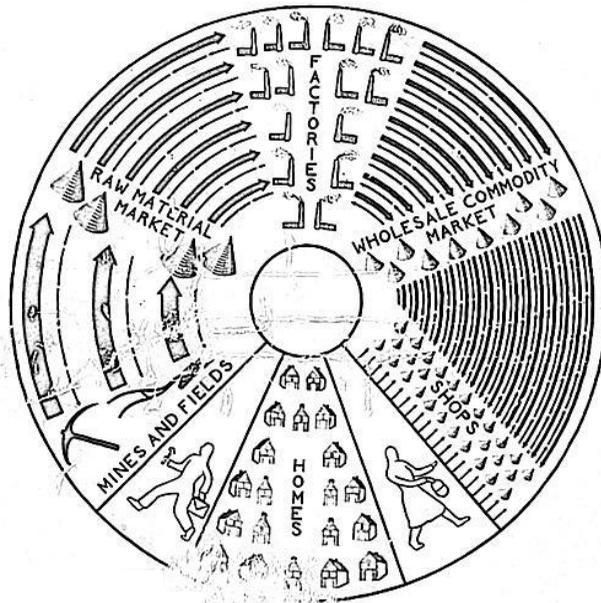
Its energies will turn to an enquiry which will not desist until it has achieved full enlightenment. Enlightenment will create power to control the structure of economic life; a power which at present is nowhere. This power will reside with the community.

The enlightened people will use their power to enforce publicity. Publicity will fulfill the promise of liberalism, freedom and co-operation.

These are the aims for which I am asking you to join in the task of creating the visual presentation of social matters. A huge task which no man can attack single-handed.

[Diagram and Note Attached at the End of Polanyi's Lecture]

The figures showing the electric machine and the primitive map are not attached to the manuscript. The circular diagram is Figure 2 (see page 17 of Polanyi's manuscript) which was shown in the form of a chart at the lecture.



“Visual Presentations of Social Matters” and Later Changes in Polanyi’s Social Theory

Richard W. Moodey

Keywords: Polanyi, Keynes, Hayek, Diagrams, Economics, Sociology, Animated Film, Supply, Demand, Model, Fluid Dynamics

ABSTRACT

In a 1936 lecture, Polanyi claimed too much for the efficacy of visual presentations of relations among economic things. His 1945 book, Full Employment and Free Trade was the last of his major publications in which he used many diagrams to illustrate his points. In that book, he stated his objective of trying to popularize the economic theory of John Maynard Keynes. But after 1945, he seems to have stopped trying to help people understand Keynesian theory, and in Personal Knowledge, his only references to Keynes are criticisms of some of his ideas about probability and statistics. He later moved away from writing about the economy as an isolated system, towards treating it as just one of the four major aspects of society.

Michael Polanyi delivered his lecture, “Visual Presentation of Social Matters,” in June of 1936, three years before the beginning of World War Two, when the world was still in the midst of the Great Depression. He had always been interested in social matters, but this lecture took place early in the stage of his career when he was beginning to devote progressively more of his time and energy to social matters. It was still twelve years before the University of Manchester would change his title from Professor of Chemistry to Professor of Social Studies (Scott and Moleski, 2005, 204; hereafter *MPSP*) and twenty-two years before the publication of *Personal Knowledge*. Between 1936 and 1958, Polanyi’s faith in the redemptive power of the discovery and widespread dissemination of the truth about social matters continued to be a stable foundation for his thinking about social matters. In this essay, however, I focus on several changes in what he said about social things, especially after 1945, the year of publication of *Full Employment and Free Trade* (hereafter, *FEFT*). First, he stopped trying to present social matters visually, and stopped advocating such visual presentations. Second, he stopped emphasizing a “fluid dynamics” model of the economic system. Third, he stopped trying to popularize Keynesian economic theory.

Visual Presentations

In his lecture of 1936, he claimed a great deal for the visual presentation of economic matters:

It seems certain that when verbal accounts of economic matters are substituted by a visual presentation based on moving diagrams the economic fallacies now ruling the popular mind will be eliminated To sum up: the discovery of a symbolism which I believe will consist in moving picture writing, capable of representing economic life will release us from fallacies and exasperation, and will create economic consciousness (“Visual Presentations,” p. 21 in this issue of *TAD*).

In his later writings, he did not make these kinds of claims, and after *FEFT*, he stopped creating visual presentations of social matters. There are no diagrams in *Science, Faith and Society* (1946), *Personal Knowledge* (1958), *The Tacit Dimension* (1966), or *Knowing and Being* (1969). There are several diagrams in *Meaning* (1975, 70-88), but these focus on the relations between subsidiary and focal awareness in the creating various types of meaning..

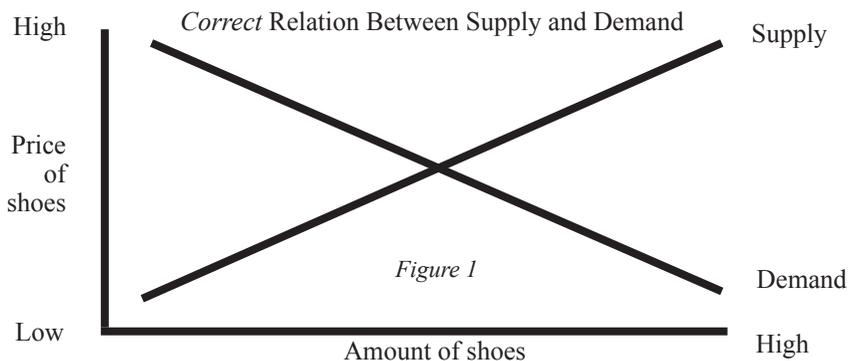
Why did Polanyi stop creating visual presentations of social matters? One reason was probably that his film project did not eliminate economic fallacies from “the popular mind.” Scott and Moleski (*MPSP* 179) say, “The film project may have failed, in part, because it told a peacetime story to countries at war.” Another reason might have been his realization that his film was not effective without a verbal commentary. In 1943, he wrote to his sister Mausi, “Don’t worry too much about the film. It is getting clear that only an expert and enthusiastic teacher can make proper use of it” (*MPSP* 179). In 1936, he had hoped for much more.

In his 1936 lecture, he said that the *substitution* of a visual presentation for a verbal presentation would *by itself* rid the popular mind of economic fallacies. By 1943 he was admitting, even if only privately, that the visual presentation he had created needed a very good accompanying verbal presentation for it to be effective. In 1936, he was thinking about the Disney animated cartoons. No “expert and enthusiastic teacher” had to explain Mickey Mouse films to their audiences. He had hoped to be able to create an animated film of economic matters that, like the Disney cartoons, would not have to be explained verbally. In his letter to Mausi, he, in effect, said that he had been mistaken.

A visual presentation can show incorrect, as well as correct, relations among economic things. I use the graphic representation of relations between price, supply, and demand, a diagram found in almost all textbooks in elementary economics, to illustrate this. The correct diagram (see figure 1 below) is based upon the following propositions about any commodity:

- As the price of a commodity increases, supply tends to increase, but demand tends to decrease.
- As the price of a commodity decreases, supply tends to decrease, but demand tends to increase.

Laypersons as well as economists regard these propositions as true. A higher price for shoes, for example, motivates shoemakers to make more shoes (thereby increasing the supply), but discourages buyers (thereby decreasing demand). A lower price for shoes encourages consumers to buy (increasing demand), but discourages shoemakers from making shoes (decreasing supply).

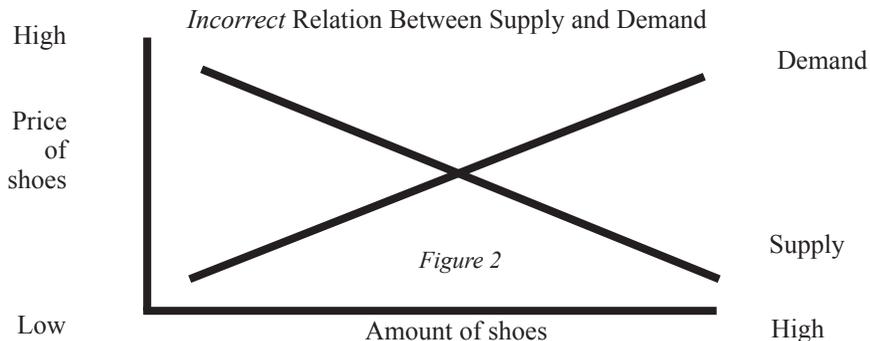


The price for shoes is indicated on the vertical Y axis on the left, and volume of shoes (either volume of demand or volume of supply) is indicated on the horizontal X axis on the bottom. The zero point for both is the intersection of the X and Y axes in the lower left-hand corner. The “demand curve” is said to “fall” from left to right because the highest price and the lowest volume of demand is a point at the upper left and the lowest price and highest demand is a point at the lower right. The line connecting these two points represents a negative association between price and demand. The “supply curve” is said to “rise” because the lowest price and lowest volume of supply is a point at the lower left, and the highest price and highest supply is a point at the upper right. The line connecting these two points represents a positive association between price and supply. The intersection of the two lines is called the “market clearing price,” the price at which the volume of demand equals the volume of supply.

A very similar diagram, however, can show incorrect relations between price, supply, and demand (see Figure 2, below). The following false propositions are just as easy to illustrate visually as are the true propositions:

- As the price of a commodity increases, supply tends to decrease, but demand tends to increase.
- As the price of a commodity decreases, supply tends to increase, but demand tends to decrease.

The “X” diagram for these propositions would show a “falling” supply curve and a “rising” demand curve. But it is not true that shoemakers would be encouraged to make more shoes if the price of shoes were low (increasing supply), but that these same low prices would discourage consumers from buying shoes (decreasing demand).



Even in 1936, Polanyi seemed to recognize that a visual presentation could present fallacies when he drew an analogy to a map:

If you trace an itinerary on a map you might make mistakes and if the map is crude and faulty the result might be useless, but no one would trace itineraries on a map which lead around in circles, while a man lost in a fog will walk round and round till he drops down from exhaustion. (“Visual Presentations,” p. 21 in this issue of *TAD*).

This fails to persuade me that a visual presentation of economic matters will, by itself, release viewers from economic fallacies. Just as a map can misrepresent the territory, so also can a visual presentation misrepresent the workings of an economy. Moreover, Polanyi is mistaken when he says that “no one

would trace itineraries on a map which lead around in circles.” If I want to take a sight-seeing trip, I might very well trace a circular itinerary that will take me to different sights on each step of the journey, and eventually bring me back home. I would not become lost by tracing and following a circular itinerary on a good map. Of course, by tracing and following a circular itinerary on a faulty map, I might become lost and end up far from home.

In the appendix to *Science, Faith and Society* (1946), Polanyi wrote something about science in general that might point to a change in his thinking about visual representations of social matters:

Parallel to the positivist movement there has occurred in our time yet another transformation of the premises of science. Earlier conceptions of reality, capable of visual presentation in space, were replaced by purely mathematical concepts (like multi-dimensional wave functions) signifying certain probabilities and determining certain energies, but having no conceivable pictorial meaning attached to them (*SFS*, 88).

I think that it is quite possible that Polanyi saw a connection between this position on the premises of science and his former enthusiasm for the visual presentation of social matters.

Models of the Economy

In his 1936 lecture, in his films of 1938 and 1940, and in *FEFT*, Polanyi was using a system of fluid dynamics as a model for an economy. Both his static and animated diagrams were based upon the physical model of the economy he had created in his chemistry laboratory, using tubes, flasks, beakers, and flowing water (*MPSP*, 163-4). His diagrams were attempts to overcome the limitations of this physical model. He continued to use fluid as a metaphor for money and for commodities, and the volume of flows of the fluid as a metaphor for the combination of frequencies and monetary values of different kinds of economic exchanges. In the physical model, the flasks and beakers were metaphors for various kinds of economic actors, and the tubes represented the connections between actors, connections through which the different volumes of money and commodities can be imagined to flow.

The projected animated film would be a visual representation of this fluid dynamics model of the workings of an economy. It had at least two advantages over the physical model. One was that the different kinds of economic things could be represented by using pictures and verbal labels. There are pictures of little houses, little factories, a little working man, a little woman shopper, and verbal labels such as “RAW MATERIAL MARKET” and “WHOLESALE COMMODITY MARKET.”¹ A second advantage was that in the films the shafts of the arrows showing the directions of flows of money and commodities can be shown to grow wider or narrower, indicating increases or decreases in the volumes of the flows of money and commodities. The physical tubes in the laboratory could not expand or contract in diameter. This was a serious limitation, because the ways these flows increase and decrease was central to what Polanyi wanted to communicate by means of his model. Following Keynes, he believed that demand could be increased by “squirting” or “pumping” more “fluid” into the “money belt,” thereby expanding that portion of the circular belt through which he imagined the fluid to flow.

Figures 1 and 2 in *FEFT* (4 and 7 respectively) represent this fluid dynamics model, but it is possible that Polanyi was already having second thoughts about this model by 1945. In his 1941 essay, “The Growth of Thought in Society,” Polanyi developed the contrast between two ideal types of social order: corporate and dynamic or spontaneous order (Jacobs 2005; Mullins 2012). As far as I know, Polanyi never explicitly said that he was dropping the fluid dynamics model—he just stopped using it.

The two models can be connected, even though they employ very different imagery. The ideal type of a spontaneous order emphasizes the mutual adjustments of interacting persons. People modify their

actions and interactions, including economic transactions, in the light of their assessments of the situations in which they find themselves acting. These assessments result in widely distributed information about the way the order is working, resulting in very diverse kinds of transactions. The fluid dynamics model and the associated prescription of “squirting” or “pumping” more fluid (money) into the system to prevent malfunctioning of the system requires an outside authority with the intelligence to understand the overall state of the system, and the power to create new money to pump into the money belt, in such a way that consumers have more money. The connection between the two models is that individuals would be likely to define their situations differently if they had more money. They are likely to buy more, thus increasing both demand and levels of employment. Polanyi, however, did not seek to make this connection explicit after 1945.

From some time before 1936 until 1945, Polanyi used the fluid dynamics model as an explicit tool for both thinking about economic matters and for communicating his thinking to others. It is impossible to know whether or not he continued to use it as a tool for his thinking, but he clearly stopped using it as a way to communicate his thinking. I believe that one of the reasons for this was his moving away from thinking of economies as being very similar to the kinds of physical systems studied by natural scientists. In 1930, while still in Germany, he organized “a study group to bring natural scientists and economists together to share their mutual expertise” (*MPSF*, 121). In his 1936 lecture, he still seems to have been using the analogy between an economy and physical systems. He wrote:

Primitive science persisting in the attempt to transform lead into gold and to construct routines of perpetual motion merely wasted its energies. Only when at last man recognized that the laws of nature preclude the attainment of those aims did he gain power to conquer nature by the use of these same laws. Similarly, the result of a general comprehension of economic life and of an acquiescence to its necessities will be to create real power of the community over its economic life (“Visual Presentation,” p. 22 in this issue of *TAD*).

This suggests to me that Polanyi believed that the laws of the market were “laws of nature” that could not be changed by human actions. Only if communities acquiesce to the necessities explained by the laws of the market will they have the kind of power over economic life that they now have over the physical world.

I do not want to overstate this point. Polanyi recognized that governmental laws and regulation affect the working of markets in ways that they could not affect the laws of nature. He was strongly critical of *laissez faire* economics.² My argument is simply that the development of his thinking about social matters had been going on for many years. Walter Gulick (2008, 18) points out that Polanyi had mentioned spontaneous social order as early as 1917, but it did not become systematically integrated into his social theories until later. Unlike the fluid dynamics model, he continued to use the ideal types of corporate and spontaneous order in his writings about social matters after 1945.

In 1946, just one year after the publication of *FEFT*, Polanyi’s *Science, Faith and Society* was published. He says nothing about economics or the economy until where he writes:

Society is of course also an economic organization. But the social achievements of ancient Athens compared with those of, say, Stockport—which is of about the same size as Athens was—cannot be measured by the differences in the standard of living in the two places. The advancement of well-being therefore seems not to be the real purpose of society but rather a secondary task given to it as an opportunity to fulfill its true aims in the spiritual field (*SFS*, 83).

Polanyi was no longer writing about the economic dimension of society as if it were an isolated system that could be explained by natural laws or represented by diagrams based upon a fluid dynamics model of an economic system. Moreover, he was arguing that the material standard of living that resulted from economic activity ought to be subordinated to the spiritual ideals of a society.

Attitudes Toward John Maynard Keynes

Even though in June of 1936 Polanyi had not yet read Keynes's *The General Theory of Employment, Interest and Money* (1936), he was already sympathetic to Keynes's contention that to get out of the Great Depression it would be necessary to increase demand by putting more money into the hands of consumers. He started to read Keynes in December of 1936, struggled with it for half a year, and claimed to have understood it by the summer of 1937 (*MPS*, 165). He was enthusiastic about Keynes's theory because it made some of his previously tacit beliefs explicit, and developed the implications of those beliefs beyond what he had done. In *FEFT*, Polanyi said that his purpose in writing the book was to convert Keynes's theory into "a matter of common sense" (*FEFT*, v). He also said that his animated film, *Unemployment and Money* (1940), was an earlier attempt to popularize Keynes's theory.

But in between 1945 and 1958, when *Personal Knowledge* was finally published, Polanyi seems to have lost his enthusiasm for *The General Theory of Employment, Interest and Money*. There are six references to Keynes in *Personal Knowledge* (*PK*, 24, 27, 29, 30n, 31, 161), but none of them are to Keynes's economic theory. They all refer to Keynes's theory of probability, a theory of which he was very critical. During the years in which he was struggling to work out the philosophy and social theory he presented in *Personal Knowledge*, Polanyi continued to hold fast to his foundational faith in the socially redemptive power of the discovery and widespread dissemination of the truth. But he did not continue to say that Keynes's economic theory was an important dimension of the truth that needed to be publicized.

Paul Roberts and Norman Van Cott (1998-99, 26) say of *FEFT*, "Polanyi synthesized Keynesian economics with the monetary school of economics later associated with Milton Friedman. In this synthesis, Polanyi was at least two decades, and perhaps three, ahead of the best minds in the economics profession." Roberts makes this same point in "Polanyi the Economist" (2005, 130). Roberts was a graduate student in economics when he first met Polanyi in the 1961-62 academic year. After that, he worked directly with Polanyi, both as a graduate student and as a postgraduate through 1968 (2005, 128). He probably would know, much better than I, why Polanyi did not refer to Keynes's economic theory in *Personal Knowledge*. But neither in his joint article with Van Cott nor in his later essay does Roberts comment on this.

In his essay "Polanyi and the 'Austrian School,'" Vinti also focuses on writings prior to *Personal Knowledge*. He contrasts Polanyi's economic theory with that of the Austrian school in a way that seems to get the temporal sequencing wrong. He says:

While the members of the Austrian school, and particularly Menger, Mises, and Hayek, start from an economic analysis, Polanyi, in this respect much closer to Popper, starts with an analysis, initially more sociological than epistemological, of the dynamics of scientific knowledge, the analysis of the 'Republic of Science', seen as a paradigm of all intellectual communities. He will then move on, almost immediately, to bring economics and political questions to the center of his attention (Vinti 2005, 137).

"The Republic of Science" (*KB* 49-72), however, was published in 1962, after *Personal Knowledge* and long after *FEFT*. Since *FEFT* was published at the end of the period when economic questions were at the center of Polanyi's attention, I disagree with the temporal sequence Vinti suggests. Although there

always had been a strong sociological dimension to Polanyi's thinking, I believe that his turn toward economics in the Great Depression was a temporary turn away from more sociological ways of thinking and writing. In the 1930s, like Menger, Mises, and Hayek, Polanyi started out with economic analysis. Unlike them, he later turned away from "pure economics," back toward what I characterize as a "sociology of economic life."

Polanyi's 1941 essay, "The Growth of Thought in Society," was an important step in his return to, and development of, a sociological perspective. That was not, however, a major factor in his efforts to complete *FEFT*, which does start with a Keynesian economic analysis.

In "Observations on Michael Polanyi's Keynesianism," Manucci (2005) also does not reflect on his treatment of Keynes in *Personal Knowledge*. She focuses entirely upon the similarities and differences between Keynes's *General Theory* and Polanyi's *FEFT*. She does point to a difference between Polanyi and Keynes that was clear in 1945. Polanyi asserts a "principle of neutrality," a "principle of separation between economics and politics." She contrasts Polanyi's "moderate liberalism" with Keynes's socialist tendencies:

In fact, Polanyi underlines the importance of a separation between the theory of full employment, which has merely economic features, from social problems, which have political features, whereas Keynes thinks that there is the possibility of a close connection between such problems.... From what we have just said it is clear that the concepts that contrast with Polanyi's thought are *liberal socialism*, to be substituted by 'moderate liberalism', and *social and economic justice*, which is typical of socialist choices (Manucci 2005, 157).

Nye (2010, 166) also comments on this difference between Polanyi and Keynes: "they fundamentally disagreed on the naturalness of the economic order." She quotes Polanyi: "I wholeheartedly accept the guidance of the 'invisible hand' for the mutual adjustments of productive units" (*FEFT*, 149). Keynes, in contrast, did not regard the working of the "invisible hand" as a law of nature. To use a term that has more recently become popular, Keynes regarded the invisible hand as "socially constructed." Both Manucci and Nye point out that in this respect, Polanyi's position was closer to that of Hayek than to that of Keynes.

Polanyi was dedicated to the discovery of truth and to publicizing the truth. He distinguished between truth and ideology, and between publicity (the spreading of truth) and propaganda (the spreading of ideology). As he became better acquainted with the relations between social science and politics in the U.S., he had to have learned that many economists, business persons, and politicians regarded Keynesian economics as dangerously ideological. In the U.S., supporters of Roosevelt's New Deal programs used Keynesian economics to support their positions, and those who opposed the New Deal regarded Keynesian economic theory as an ideological justification for political actions they hated. In *The Coming of Keynesianism to America*, Colander and Landreth (1996) describe the fierceness of the opposition to Keynes's theory. In his introduction to *General Theory of Employment, Interest and Money*, Krugman (2006) points out that a panel of "conservative" scholars and policy-makers included Keynes's book in tenth place on their list of the ten most dangerous books of the 19th and 20th centuries (*Human Events*, 2005). Their voting resulted in a "danger score" of 23 for Keynes' book, much smaller than the score of 74 they assigned to number one on the list, *The Communist Manifesto*. The other eight books, in order of descending danger, were: *Mein Kampf*, *Quotations from Chairman Mao*, *Sexual Behavior in the Human Male*, *Democracy and Education*, *Das Kapital*, *The Course in Positive Philosophy*, and *Beyond Good and Evil*. Polanyi, of course, died before the creation of this list, but he had to have known about the ideological storms over Keynesian theory.

The battle continues. In 2010, a member of the Austrian School of economics released a lecture on YouTube entitled “Keynes and the ‘New Economics’ of Fascism” (Salerno, 2010). There have been just over 7,500 views of this hour and a half long lecture. There is, however, a much shorter, and much more popular, video that attacks Keynesian economics. By October of 2014, there have been over 4,800,000 viewings of the seven-minute YouTube video “‘Fear the Boom and Bust’ a Hayek vs. Keynes Rap Anthem” (Papola and Roberts 2010) and over 2.5 million viewings of the sequel “Fight of the Century: Keynes vs. Hayek Round Two” (Papola and Roberts 2011).

John Papola (2010) appeared at the Austrian Scholars Conference to explain the making of the first video. Towards the end of his presentation, in response to a question, he said: “I would like to destroy the circular flow, and banish it from thought. It’s an awful, awful place to start. I’m glad I didn’t learn it, because had I, it would have trapped my mind in a fallacy.” In one scene in the video, a circular arrow, similar to the one that appears in Polanyi’s visual presentation of the flow of fluids in the “money belt” appears as a representation of the Keynesian theory that the video presents as dangerous and irresponsible.

Conclusion: A Sociology of Economic Life

In spite of not promoting Keynesian economics in his later writings, Polanyi was ambivalent towards Keynes’s theory. I do not believe that he would have agreed with Salerno that Keynesian theory promotes “economic fascism,” which is a step in the direction of the kind of totalitarian dictatorships exemplified by Mussolini’s Italy and Hitler’s Germany. Nor do I believe that he would have agreed with Papola that the image of the circular flow traps a person’s mind in a fallacy. I do believe, however, that he softened the degree to which he believed that there could be a wall of separation between the economic and political domains.

What little Polanyi says about economics in *Personal Knowledge* is instructive. In his chapter on “Conviviality,” he describes the framework of society by using a mathematical metaphor, “coefficient.” The third of the following list of four “coefficients of societal organization” is associated with an economic system: “the first is the *sharing of convictions*, the second the *sharing of a fellowship*. The third coefficient is *co-operation*, the fourth the exercise of *authority or coercion*” (*PK*, 212; Polanyi’s italics). Then comes the sentence that suggests a weakening of the wall of separation between the political and economic domains: “These four titles refer to four aspects of society which must always be seen in conjunction with each other, for only together can they form stable features in the form of social institutions” (*PK*, 212).

In addition to saying that we must see the economic system in conjunction with the other three kinds of institutions, Polanyi seems to have banished the “invisible hand” in which he had placed so much faith in *Full Employment and Free Trade*. He lists examples of institutions in each category:

- (1) Universities, churches, theatres and picture galleries, serve the sharing of convictions, in the wide sense of the term which I am applying here. They are institutions of *culture*.
- (2) Social intercourse, group rituals, common defense, are predominantly convivial institutions. They foster and demand *group loyalty*.
- (3) Co-operation for a joint material advantage is the predominant feature of society as *an economic system*.
- (4) Authority and coercion supply the *public power* which shelters and controls the cultural, convivial and economic institutions of society (*PK*, 212-213; Polanyi’s italics).

It is public power, not the invisible hand, that “shelters and controls” the “economic institutions of society.” By making co-operation the coefficient of the economic system, Polanyi appears to be rejecting *competition* in favor of co-operation. But competition is one of the constituent elements of the laws of the market, for which the “invisible hand” is a metaphor.

My main point in this conclusion, however, is to affirm Vinti's point about Polanyi having taken a sociological perspective, rather than a purely economic perspective. My disagreement with Vinti is that there was a period in Polanyi's career in which he temporarily suspended his more sociological perspective in favor of one that was more purely economic.

ENDNOTES

¹Although contemporary readers might object to this gender stereotyping of workers and shoppers, it probably offended few of his audiences or readers in the 1930s and 1940s.

²I am grateful to Walter Gulick for this cautionary note.

REFERENCES

- Colander, David, and Harry Landreth, eds. 1996. *The Coming of Keynesianism to America: Conversations with the Founders of Keynesian Economics*. Brookfield: Edward Elgar.
- Gulick, Walter. 2008. "Michael and Karl Polanyi: Conflict and Convergence." *The Political Science Reviewer* 37: 12-43.
- Human Events. 2005. "Ten Most Harmful Books of the 19th and 20th Centuries." *Human Events*. <http://www.humanevents.com/2005/05/31/ten-most-harmful-books-of-the-19th-and-20th-centuries>. Accessed May 31, 2014.
- Jacobs, Struan. 2005. "Polanyi's Analysis of Social Orders." In *Emotion, Reason, and Tradition: Essays on the Social, Political, and Economic Thought of Michael Polanyi*, edited by Struan Jacobs and R.T. Allen, 99-114. Burlington: Ashgate.
- Keynes, John M. 2006 [1936]. *General Theory of Employment, Interest and Money*. Basingstroke, Hampshire, UK: Palgrave Macmillan.
- Krugman, Paul. 2007. "Introduction to the 2006 Edition." *General Theory of Employment, Interest and Money*. Basingstroke, Hampshire, UK: Palgrave Macmillan. <https://notendur.hi.is/~gylfason/KrugmanonKeynes.pdf>. Retrieved October 24, 2014.
- Manucci, Monia. 2005. "Observations on Michael Polanyi's Keynesianism." In *Emotion, Reason, and Tradition: Essays on the Social, Political, and Economic Thought of Michael Polanyi*, edited by Struan Jacobs and R.T. Allen, 149-164. Burlington: Ashgate.
- Mullins, Phil. 2012. "The Growth of Thought in Society as a Major Motif in Polanyi's Philosophy." Paper presented presented at the Polanyi Society Loyola Conference, June 8, 2012.
- Nye, Mary Jo. 2010. *Michael Polanyi and His Generation: Origins of the Social Construction of Science*. Chicago: University of Chicago Press.

- Papola, John. 2010. "The Making of the Keynes-Hayek Rap: Economic Theory Meets Popular Culture." Presentation at the 2010 meeting of the Austrian Scholars Conference. <https://www.youtube.com/watch?v=eBzXpH3Tjo0>. Retrieved October 24, 2014.
- Papola, John and Russ Roberts. 2010. "'Fear the Boom and Bust' a Hayek vs. Keynes Rap Anthem." <http://www.youtube.com/watch?v=d0nERTFo-Sk>. Retrieved October 24, 2014.
- _____. 2011. "Fight of the Century: Keynes vs. Hayek Round Two." <https://www.youtube.com/watch?v=GTQnarzmTOc>. Retrieved October 24, 2014.
- Polanyi, Michael. 1941. "The Growth of Thought in Society." *Economica* 8: 421-436.
- _____. 1945. *Full Employment and Free Trade*. London: Cambridge University Press.
- _____. 1964 [1946]. *Science, Faith and Society*. Chicago: University of Chicago Press.
- _____. 1964 [1958]. *Personal Knowledge: Towards A Post-Critical Philosophy*. New York: Harper & Row/Torchbook.
- _____. 1969. *Knowing and Being: Essays by Michael Polanyi*. Edited by Marjorie Grene. Chicago: University of Chicago Press.
- _____. 2009 [1966]. *The Tacit Dimension*. Chicago: University of Chicago Press.
- _____. 2014 [1936]. "Visual Presentation of Social Matters." *Tradition and Discovery* 41:2, 13-24.
- Polanyi, Michael and Harry Prosch. 1975. *Meaning*. Chicago: University of Chicago Press.
- Roberts, Paul. 2005. "Polanyi the Economist." In *Emotion, Reason, and Tradition: Essays on the Social, Political, and Economic Thought of Michael Polanyi*, edited by Struan Jacobs and R.T. Allen, 127-132. Burlington: Ashgate.
- Roberts, Paul and Norman Van Cott. 1998-99. "Polanyi's Economics." *Tradition and Discovery* 25:3, 26-30.
- Salerno, Joseph. 2010. "Keynes and the 'New Economics' of Fascism." <http://www.youtube.com/watch?v=fpv4W7I4cms>. (Retrieved October 24, 2014)
- Scott, William and Martin Moleski, S.J. 2005. *Michael Polanyi: Scientist and Philosopher*. New York: Oxford University Press.
- Vinti, Carlo. 2005. "Polanyi and the 'Austrian School.'" In *Emotion, Reason, and Tradition: Essays on the Social, Political, and Economic Thought of Michael Polanyi*, edited by Struan Jacobs and R.T. Allen, 133-148. Burlington: Ashgate.

Comments on Polanyi's "Visual Presentation of Social Matters"

Phil Mullins

Key words: Michael Polanyi's early political philosophy, diagrammatic film.

ABSTRACT

In this brief essay, I discuss some interesting elements of Michael Polanyi's provocative 1936 lecture outlining the potential of diagrammatic film to transform social thinking about the economic order. A few years later, Polanyi more carefully and convincingly returns to some themes identified here, as he articulates his criticisms of and reconstruction of liberalism.

Introduction

Thanks are due to Eduardo Beira for discovering in the Papers of Michael Polanyi the unknown 1936 lecture "Visual Presentation of Social Matters," delivered only three years after Polanyi came to Manchester.¹ He has written a superb introduction in this TAD issue which analyzes this lecture and links it to a variety of other early Polanyi materials. Beira, some readers will remember, came to the 2012 Polanyi Society Loyola Conference to show and talk about Polanyi's 1940 film *Unemployment and Money, The Principles Involved*, which he had recently digitized. There was an illuminating conversation about the film involving Beira, Mary Jo Nye, and Marty Moleski, S.J. The film is now accessible on YouTube through a link on the Polanyi Society website. The same link also provides access to an array of other material that is concerned with Polanyi's economics education film and, more generally, Polanyi's thinking about economics, some written by Polanyi and some Beira's commentary.

I suspect that I speak for many who have taken a serious interest in Polanyi's later philosophical thought in saying that Polanyi's ideas about economics and particularly his film have been for me a puzzle. I knew there was a book, *Full Employment and Free Trade* (1945), and the statistical study of the early Soviet economy published first in 1935, again in 1936, and incorporated as a chapter in *The Contempt of Freedom* (1940, hereafter cited as *CF*). I had studied some of this material and was also familiar with Polanyi's other comments on economic matters in *The Contempt of Freedom* and with Polanyi's important 1941 essay "The Growth of Thought in Society" (hereafter cited as "Growth") which discusses the economy as a "dynamic order," an analog of the "dynamic order" of science ("Growth" 1941, 435-445). I knew that ideas about economics and social policy are at the heart of the discussions in Part II of *The Logic of Liberty* (1951, hereafter cited as *LL*). Nevertheless, I acknowledge that I have found it difficult to integrate what I knew about Polanyi's ideas about economics with later matters I considered more straightforwardly philosophical: the "fiduciary program" and Polanyi's "post-critical" perspective, his "theory of tacit knowing," and his analysis of the problems of meaning in late modernity.

Eduardo Beira's work on Polanyi's economics education film has re-opened the study of Polanyi's ideas about economics. Others, of course, have earlier done work on this topic.² But I think Beira's investigation of the background of Polanyi's 1940 film significantly illumines ways in which Polanyi's concern with economics led to the making of his film. His investigation suggests, more generally, how ideas about economics are linked to Polanyi's effort to reconstitute political liberalism. Polanyi's reformed economic liberalism is a central component of his reformed liberal political philosophy. And this liberal political philosophy, hammered out in the thirties and forties, led Polanyi to an even broader philosophical inquiry

in the late forties as Polanyi began to prepare his Gifford lectures.³ He recognized that the Enlightenment support structure of liberal political philosophy had to be extensively recast in the mid-twentieth century. Polanyi's economic ideas are thus not a strange "fifth wheel" produced by a polymath, but are a stage on the way to Polanyi's later mature philosophy of science, his epistemology, and his *Lebensphilosophie*.

"Visual Presentation of Social Matters" is a provocative early Polanyi reflection, one that is tightly organized. Polanyi makes very bold claims, which perhaps were designed to hold an audience's attention and challenge them to think. Many ideas briefly touched upon in this lecture are developed in later writings in more careful and convincing ways. My discussion treats a few points that I find of interest in this regard.

Polanyi's Effort to Reform Economic and Political Liberalism

Polanyi's effort to rehabilitate political liberalism was focused in part on developing a more penetrating, public understanding of economic life. His film *Unemployment and Money* is an effort to educate ordinary citizens. "Visual Presentation of Social Matters" shows clearly that Polanyi early believed economics education was a necessary and a promising project, given the possibilities he saw in film as a medium. Polanyi's own understanding of economics seems also to have become deeper in the period in which he was making and promoting his film. As Beira reports, Polanyi's correspondence reflects his excitement in reading Keynes's 1936 book soon after delivering this lecture and in discovering that some of Keynes's ideas were akin to those he was already beginning to develop. On February 6, 1940, Polanyi wrote Keynes, advising him he had been "during the last three years working at a presentation of monetary circulation and its disturbances by a diagrammatic film" (Box 4, Folder 3, RPC) He sought Keynes's advice on the soon to be completed film and offered to arrange a showing of an earlier version of the film. But Keynes indicated that he was too busy to see Polanyi's film (Keynes to Polanyi, February 8, 1940, Box 4, Folder 3, RPC).

It is difficult but important to distinguish Polanyi's economic liberalism and his political liberalism; he called for reforms in both economic and political liberalism in his early writing. I suggest that "political liberalism" points to the more encompassing social and political philosophy Polanyi is hard at work articulating up until about the time of his Gifford Lectures. But "economic liberalism," his critical and reformist ideas more specifically about economic policies which aim to re-ground older economic liberalism, is a main plank of Polanyi's broader political liberalism. Polanyi's "economic liberalism," for example, offers sharp criticisms of nineteenth and early twentieth-century economic ideas that idealized market mechanisms and refused to entertain any policies that intervened in markets. Polanyi also promoted constructive economic proposals about, for example, how the money supply could be expanded or contracted to moderate unemployment. Polanyi himself suggests the distinction that I am drawing here. In an unpublished 1945 proposal for a new journal of liberal thought called "Civitas," Polanyi contends that for the last hundred years liberal economic policy was not effectively guided by liberal theory.⁴ It was merely "a series of disjointed concessions from a theory of laissez faire to the claims of humanitarianism and the obvious demands of the public interest" ("Civitas" 1945, 6). He saw "the exiguous political theory of liberalism" as a nineteenth century hand-me-down which "requires to be rewritten" ("Civitas" 1945, 6). The maxims of J. S. Mill were "a going concern" in his day, but they "answer none of the searching objections which modern totalitarians and planners have raised. For this we need a new radically sharpened theory of democracy and civic liberties" ("Civitas" 1945, 6).

Polanyi's reformed political liberalism is, in the final analysis, soberly grounded in acceptance of the free market system as the way a complex, highly differentiated modern industrial society must handle production and distribution.⁵ As he makes clear by the late forties, he simply did not believe that socio-economic complexity could be reasonably addressed in any other way than in a system in which there

is heavy reliance on individual desire and initiative, money as a measure of desire which can facilitate exchange, and profits: “While the State must continue to canalize, correct and supplement the forces of the market, it cannot replace them to any considerable extent” (*LL*, 138). By the late forties, Polanyi discussed, in significant detail, complexity in the economy (as well as in other complex orders such as the specialized community of research scientists) in terms of “polycentricity” and the nature of polycentric tasks.⁶ In “Visual Presentation of Social Matter,” Polanyi notes, but has little to say about, economic complexity other than that it made the economic system for the ordinary citizen incomprehensible and aided in the spread of economic fallacies (hereafter, quotations to this work will be cited parenthetically as “VP” using the page numbers from this issue of *Tradition and Discovery*). But in this early lecture Polanyi certainly had great hope for the economic enlightenment of ordinary people through the diagrammatic writing he thought film made possible. Complexity is a matter Polanyi came to consider more carefully in later reflections.

Looking back from twenty-first century digital culture, Polanyi’s optimism about the positive potential of economics education realized through film seems naïve. Polanyi presses his case, claiming “the need of the present social crisis is the invention of new tools of the mind” (“VP,” 16). What he says about the discovery of graphic symbols needed to present economic life in motion, that is, life on the circular stage of the changing economic drama, is indeed imaginative and insightful. He seems to have understood the need for a synthetic overview of economic activity and perhaps anticipated what we today call “simulation,” an important analytical tool in digital culture. Polanyi was confident that if society adopted a graphic approach to understanding the relation of elements of economic life, then “fallacies would vanish, paradoxes would be unraveled and the moral conflict of self-seeking and social purpose would be resolved in a synthetic view of both” (“VP,” 16). Surely he overstates his case here for both the potential of a graphic approach and his estimate of future enlightened human action. But it is worth noting that his interest is not just in the emotional power of symbols but in the ways that diagrams aid reasoning. In this, he reminds me of Charles S. Peirce, who developed a diagrammatic method for understanding logical relations.⁷

Polanyi’s Analogical Thinking

Only a few years after this 1936 lecture, as noted above, Polanyi discussed the economy as a “dynamic order,” a term he adapted from the Gestalt psychology of Wolfgang Kohler (“Growth” 1941, 435). He compared the dynamic economic order to the dynamic orders of science and the system of common law case interpretation, showing both similarities and dissimilarities between different kinds of orders. Liberal society, Polanyi suggested, had an array of dynamic orders, which have a family resemblance but are not identical. All such orders rely on what he calls “supervisory” authority and all operate through processes of mutual adjustment of relatively independent agents exercising their “public” liberty (“Growth” 1941, 438-440).

Polanyi’s 1941 essay represents, I suggest, a more nuanced reflection concerned with the organization and character of social life than his 1936 lecture, which, as Beira notes, is strictly focused on (1) a diagnostic identifying economic fallacies causing serious modern social problems and (2) the potential for symbolic representation of economic ideas using film. At the end of this lecture, Polanyi sketches the anticipated social impact of diagrammatic film as a medium for economics education. He suggests that diagrammatic film can produce economic enlightenment that can fulfill the “promise of liberalism—freedom associated with complete co-ordination” (“VP,” 23). The “new economic consciousness” will launch a “spirit of enquiry” that makes transparent all economic activities and this will bring “a true fundamental change in the nature of our economic life” (“VP,” 22-23). Polanyi here outlines his case analogically for what he calls “the promise of liberalism—freedom associated with complete co-ordination” by pointing to the cooperation among scientists functioning as a community of inquiry (“VP,” 23). Scientists cooperate and

the organism of scientific ideas grows because scientists have an effective communication network—they rely on what Polanyi in this early lecture calls “publicity” (“VP,” 23).

Polanyi’s use of analogy, and this particular analogy in his 1936 lecture, is worth pondering. Much later in his 1962 essay “The Republic of Science” (*KB*, 69), Polanyi points out, as Chris Goodman (Goodman 2001, 18) has emphasized, that his discussion has not assimilated the pursuit of science to the market but “the emphasis should be in the opposite direction. The self-co-ordination of independent scientists embodies a higher principle, a principle which is reduced to the mechanism of the market when applied to the production and distribution of goods” (*KB*, 9). It is Polanyi’s experience as a research scientist, which in this 1936 lecture supplies the background for an analogical link that illumines the economy. As Mary Jo Nye has argued (Nye 2011, 37-85), Polanyi’s research experience for thirteen years in Berlin from 1920 until 1933 in one of the world’s best scientific research centers shaped much Polanyi had to say about science and society as he moved into economics and philosophy.⁸ By 1941, Polanyi describes the economy as a “dynamic” order which is exclusively competitive, while the “dynamic” intellectual order of science is competitive, but operates by relying upon tradition and professional opinion. Tradition and professional opinion are perhaps somewhat akin to what Polanyi in this early lecture broadly designates as “publicity” in science. Polanyi does seem to anticipate in his 1936 lecture that the diagrammatic writing made possible by film will allow “publicity” to function for ordinary citizens in regard to the economy as it does in science; it will produce common understanding and commitment to ongoing inquiry (“VP,” 23). This seems to be in part what the anticipated economic enlightenment is all about.

Polanyi’s 1941 essay, which is a broader theoretical effort to conceive society and science’s place in society, clearly sets forth a series of analogs, some which he discusses in some depth and others which he simply references. Society seems to be a network of overlapping and sometimes coincident dynamic orders.⁹ Although less developed, an analogical approach is also central to Polanyi’s thinking in this 1936 lecture in his discussion of the importance of “publicity” in scientific and economic affairs (“VP,” 23). Marjorie Grene, in “Tacit Knowing: Grounds for a Revolution” (hereafter “TKGR”), published just after Polanyi’s death, notes that *PK* also proceeds analogically:

Polanyi’s method, as it developed in *Personal Knowledge*, consisted essentially in broadening and stabilizing the interpretative circle through a series of analogies, by showing that human activities of many kinds are structures in the same hopeful but hazardous fashion of science. . . . The development of this analogical foundation Polanyi called “the fiduciary program”, a programme supporting, by extending, his view of the role of commitment in science. (“TKGR” 1977, 167)

Grene points out that the analogical approach she saw as central to Polanyi’s thinking in *PK* she later came to understand was grounded in tacit knowing whose structure and pervasiveness Polanyi works out only in his thought after *PK*: “The point is, I now see, that the fiduciary programme is supported, not so much by its expansion through analogical reasoning, as by the foundation common to all its instances, the foundation of tacit knowing” (“TKGR” 1977, 168).

More on Political Liberalism: Polanyi’s Historical Narrative

A few years after his 1936 lecture, Polanyi began to work out some details of an historical narrative (i.e., his cultural criticism) focused around the transformation of liberalism. Polanyi regarded his own liberal political vision of the good society as a revised version of an older liberal approach to social order that had worked reasonably well to produce gradual but important reforms up until World War I and the Russian Revolution, but now needed serious revision. In a 1944 paper published the next year as “Science and the Modern Crisis” (cited hereafter as “SMC”), Polanyi affirms that

History will view, I believe, the events which have taken place on the Continent during the last generation as one coherent process of upheaval. The rise of a totalitarian regime in Russia and the growth of Fascism in other European countries will be seen to arise from joint sources. These movements will then represent the breakdown of a previous system of public life and its replacement by a new one (“SMC” 1945, 107).

In his 1945 “Civitas” proposal, he similarly notes that

For 300 years, until the outbreak of the Russian Revolution, the new system of liberal principles was never seriously challenged. But when it was challenged it transpired that it possessed no sufficient foundations. The liberal order collapsed over wide regions of Europe (“Civitas” 1945, 2).

In the Preface to *The Logic of Liberty*, Polanyi suggests that the “individualistic formula of liberty” which earlier successfully promoted liberal social reforms, he now sees is a “formula [that] could be upheld only in the innocence of eighteenth-century rationalism, with its ingenuous self-evidences and unshakable scientific truth” (LL, vii). In his “Civitas” proposal, Polanyi proclaims, “The liberalism which took its foundations for granted has collapsed over wide ranges of Europe and it has been rendered generally untenable everywhere. We must replace it by a liberalism based on explicit profession” (“Civitas” 1945, 2).

Polanyi identified “a cardinal difficulty of liberalism” as the fact that

No set of principles—no matter how firmly and generally recognized—can govern men in society; simply because rules are generalisations and can be applied in each particular case only by an act of interpretation, and no rule can prescribe its own interpretation. Thus a set of rules always require supplementation by an act which is not itself prescribed; and therefore liberalism, when demanding government by knowable principles, also postulates that decisions be made which are not given by knowable principles (“Civitas” 1945, 3).

He suggested that opponents of liberalism turn this notion into the claim that any

attempt to govern society by fixed principles is meaningless if the interpretation of these principles is left indeterminate. If individuals are called upon to interpret principles, such as truth or justice, in the light of their own conscience, they can turn truth and justice into anything they please (“Civitas” 1945, 3).

This means, according to opponents, that effectively the common good is untended in a society in which liberal principles are said to govern: “A society (it is argued by the Planners who have succeeded Hobbes to-day) in which ultimate decisions affecting the public good are made by a set of independent individuals or centres is a society adrift; a chaotic society, at the mercy of mere chance” (“Civitas” 1945, 3).

“Visual Presentation of Social Matters” is focused on diagnosing and potentially addressing economic problems that Polanyi believed cause serious social instability. But, as these quotations show, soon after presenting this 1936 lecture, Polanyi began to sort out the details of an historical narrative that looked at more than the economy narrowly conceived as the source of the modern crisis. He suggests that political liberalism itself needs to be reconceived.

Some Nuances of Polanyi's Economic Liberalism

Although it is not so visible in "Visual Presentation of Social Matters," Polanyi's early writing offers both praise and criticism of earlier economic liberalism. The praise often focuses on the way early capitalism was a liberating force, as the short 1946 essay "Social Capitalism" (hereafter cited as "SC") makes clear:

For the true motives of the movement which led up to capitalism were generous and liberating. It had fought lawless feudal oppression. It had eradicated parasitical privilege and opened to each man access to economic opportunities. It had replaced a hierarchy of hereditary bonds by a network of voluntary responsible obligations. It had helped to discover and proclaim the Rights of Man ("SC" 1946, 341).

Polanyi often criticizes the economic liberalism of the nineteenth and early twentieth century as ideological, unable to understand unemployment, and unresponsive to human suffering:

Liberalism was misled to extremism mainly by its failure to understand unemployment. It believed that this evil could be avoided by the prevalence of free trade. This view arose as a vague generalization of the theory of maximum benefit which is provided by an economic equilibrium, freely established. It was thus held that all measures reducing the income of the rich and increasing that of the poor must produce unemployment; and most of the other proverbially dismal and inhuman conclusions of economic science arose from this central error (*CF* 1940, 58).

In his 1936 lecture, Polanyi makes a distinction between self-interested actions that serve the common good and those that do not. Economic enlightenment effected through film and "publicity" Polanyi hoped could guide ordinary citizens to make this distinction and to take the former but not the later kind of action ("VP," 23). In some of his later writing, Polanyi seems to reconceive his early criticisms of the Invisible Hand. In his 1946 essay, he argues that it is the scientism of social thinkers that turns pursuing self-interest into an "unfailing principle." Economic ideas became "laws [that] were inexorable, as they formed part of the great arrangements preserving the order of nature" ("SC" 1946, 341):

A great truth was here turned into false prophecy. For the discovery of the invisible hand allocating economic resources to a delicately adjusted, infinitely complex pattern was true. It was—and remains—a great vision of a harmonious human co-operation. But in demanding that the whole life of society be governed by the laws of the market, this vision was turned into its own travesty ("SC" 1946, 341).

This 1936 lecture does very briefly sketch Polanyi's antipathy toward what he later more overtly identifies as a culturally pervasive materialist outlook. Here he notes that "utilitarian doctrine" (i.e., a strict market orientation) seriously misreads "the conditions of human contentment" by assuming that "people are content if they are given the means to satisfy their needs" ("VP," 13).¹⁰ On the contrary, Polanyi suggests human beings need to understand their condition in order to be content; "protracted perplexity" upsets the "basis of moral relations" and lies behind "the twenty-two years of wars and revolutions" stretching back to the beginning of World War I ("VP," 14).¹¹ By the mid-forties, Polanyi's writing had more to say about the negative cultural impacts of materialism which he linked to scientism. In 1946, Polanyi argues that Bentham, Ricardo, and Malthus offered "a new conception of society based on scientific pretensions" ("SC" 1946, 341) and that their largely materialist vision of society is prominent:

Whence this curious self-debasing deception [that sanctions a laissez faire system in terms of the operation of economic laws]? . . . Bentham had jeered at the hollowness of the Rights of Man and promised to build a good society on the sci-

entifically secure grounds of the Desires of Man. Ricardo and Malthus followed with gusto, defining society in terms of greed and mathematically progressive breeding. The scientific travesty of society was complete; mercy banned as unscientific; sympathy indicted as the true enemy of welfare...("SC" 1946, 341).

Polanyi argues that Marx takes his cue for his ideas about class warfare and the eventual domination of one class from the "extreme laissez faire theory of capitalism."

Marx's prophecy was in fundamental harmony with the extreme laissez faire theory of capitalism—both when it insisted that social reform under capitalism was impossible, and also in putting forward its own combination of satanic and inexorable mechanical laws guaranteeing the automatic advent of a Millennium ("SC"1946, 342).

Reformed Liberalism as a Middle Way

For Polanyi, his reformed liberalism was a social strategy that avoided the extremes, which received most of the attention in the thirties and forties: it was a strategy, on one hand, that avoided the rigidity and barbarism of what he calls "extreme liberalism" (*CF* 1940, 59) and, on the other hand, the misguided Marxist and socialist influenced program to centralize economies and "plan" endeavors like scientific inquiry. "Extreme liberalism," Polanyi suggests, has failed to understand and address unemployment and this led to devastating errors in policy in the Great Depression, errors which promoted the rise of the Nazis in Germany. Orthodox liberals, Polanyi contended, are superstitious about the market and believe that unemployment is the inevitable result of any market interference. He compared such superstitious views to the myopic "obsessions of collectivists about the evil powers of the market" (*CF*, 59). He summarized his own middle way of rehabilitated liberalism in another interesting lecture (incorporated as Chapter 2 in *CF*) delivered four years after he delivered "Visual Presentation of Social Matters."

I consider that the alternative to the planning of cultural and economic life is not some inconceivable system of absolute *laissez faire* in which the State is supposed to wither away, but that the alternative is freedom under the law and custom as laid down, and amended when necessary, by the State and public opinion. It is law, custom, and public opinion which ought to govern society in such a way that by the guidance of their principles the energies of individual exertions are sustained and limited (*CF* 1940, 59).

ENDNOTES

¹The Papers of Michael Polanyi are in the Special Collections Research Center at the University of Chicago Library. Citations of archival material hereafter will use the foreshortened citation abbreviation RPC (Regenstein Polanyi Collection) that Eduardo Beira uses in "Visual Presentation of Social Matters As A Foundational Text of Michael Polanyi's Thought" in this issue of TAD, plus the box and folder number for cited material.

²See, for example, Roberts and Van Cott (1999), Mirowski (1998), Mannuci (2005), Roberts (2005), and Vinti (2005).

³See my "An Introduction to Michael Polanyi's Gifford Lectures," included with the copy of the Gifford Lectures posted on the Polanyi Society website (polanysisociety.org). There I discuss Polanyi's path to and preparation for his Gifford Lectures.

⁴Polanyi gave this seven-page, unpublished journal proposal (cited hereafter as “Civitas”) to Richard Gelwick in 1962 (when Gelwick began collecting Polanyi’s unscientific writing). “Civitas’ 1946 (?)” appears in handwriting at the top of the proposal copy in the Gelwick microfilm collection on the Polanyi Society website; however, the date on the document at the end is March, 1945. The original title for the proposal has been crossed out and there are a few other minor editorial changes in the Gelwick copy. The same unedited proposal is included in Box 4, Folder 12 in RPC with its original title “Our Times.” There is also in Box 50, Folder 5 in RPC a copy with the title “Civitas.” So far as I can tell, the proposal was circulated to some friends Polanyi thought might support such a journal, but “Civitas” was never published.

⁵In the 1946 essay that becomes Chapter 9 of *LL*, Polanyi clearly states his position:

I respect the moral resistance against profits as a great historical force, which has much humanized the system of money-making in the course of the past hundred years, and I think there is a great deal more to be done in that direction. But I consider the Socialist desire to eliminate commercial profits as the principal guide to economic activity to be profoundly mistaken. There exists no radical alternative to the capitalist system (*LL*, 138).

⁶*LL*, 140 and 184, but see the larger discussion in “Profits and Polycentricity” (*LL*, 138-153) as well as Polanyi’s earlier effort to illumine such problems in “The Span of Control” (*LL*, 111-137).

⁷See Ketner (1990) for an introduction to Peirce’s system and Roberts (1973) for an extended discussion.

⁸Nye’s discussion of Polanyi’s historical experience is outstanding. However, at times in her discussion in Chapter 5, “Liberalism and the Economic Foundations of the ‘Republic of Science’” (145-181), she seems to suggest that it is the market and his economic ideas that promotes Polanyi’s understanding of science rather than the other way around.

⁹See Mullins (2013) for a discussion of society as a network of dynamic orders.

¹⁰Criticism of materialism is a theme Polanyi later develops in various ways, including clarifying his more general conception of the economy. In this 1936 lecture, he says “an economic system is, in general, a method to make a choice between the various uses of our materials and tools; a way to find out what we should do with things” (“VP,” 18). In “Civitas,” he elaborates, saying “the fundamental aims of society are of the moral and intellectual order; to foster charity, justice and truth among men. The main practical task of society, and its most prominent activity, is to provide a framework for its members to make a living.” The economic order is “the medium of moral achievement” (“Civitas” 1945, 1; see also *SFS* 1946, 83).

¹¹The emphasis upon understanding in this early lecture is also a theme Polanyi later develops. Polanyi’s mature philosophical thought promotes inquiry and the project of understanding the cosmos as the peculiar human vocation. Polanyi seems to envision a responsible society as a society of explorers always mindful that there is a deep connection between understanding and the good life. In “Visual Presentation of Social Matters,” the danger of social instability marked by violent conflict is the result of failure of ordinary citizens to understand unemployment (and, more generally the operation of the complex economy); this danger is at the center of Polanyi’s attention. Although he later broadens his focus upon elements promoting social instability in late modernity (i.e., Polanyi’s cultural criticism attends to more than unemployment and the operation of the economy), his concern with social stability and adjustment to change remains central.

REFERENCES

- Goodman, Chris. 2001. "A Free Society: The Polanyian Defence." *Tradition and Discovery: The Polanyi Society Periodical* 27/2, 8-25.
- Grene, Marjorie. 1977. "Tacit Knowing: Grounds for a Revolution in Philosophy." *Journal of the British Society for Phenomenology* 8/3, 164-171.
- Ketner, Kenneth Laine. 1990. *Elements of Logic: An Introduction to Peirce's Existential Graphs*. Lubbock: Texas Tech University Press.
- Keynes, John Maynard. February 8, 1940. Letter to Polanyi. Box 4, Folder 3. Papers of Michael Polanyi. Special Research Center, University of Chicago Library.
- Manucci, Monia. 2005. "Observations on Michael Polanyi's Keynesianism." In *Emotion, Reason and Tradition: Essays on the Social, Political and Economic Thought of Michael Polanyi*. Struan Jacobs and R. T. Allen (eds.). Burlington, VT: Ashgate Publishing Co., 149-163.
- Mirowski, Philip. 1998. "Economics, Science, and Knowledge: Polanyi vs. Hayek." *Tradition and Discovery: The Polanyi Society Periodical* 25/1, 29-42.
- Mullins, Phil. 2014. "An Introduction to Michael Polanyi's Gifford Lectures." Available online on the Polanyi Society website (polanysisociety.org) with the copy of the Gifford Lectures.
- _____. 2013. "Michael Polanyi's Early Liberal Vision: Society as a Network of Dynamic Orders Reliant on Public Liberty." *Perspectives on Political Science*, 42/3, 162-171.
- Nye, Mary Jo. 2013. *Michael Polanyi and His Generation: Origins of the Social Construction of Science*. Chicago: University of Chicago Press.
- Polanyi, Michael. 1936. "Visual Presentation of Social Matters" Box 25, Folder 9. Papers of Michael Polanyi. Special Research Center, University of Chicago Library.
- _____. 1940. *The Contempt of Freedom, The Russian Experiment and After*. New York [London]: Arno Press [Watts and Co.].
- _____. 1940. Letter to Keynes dated February 6. Box 4, Folder 3. Papers of Michael Polanyi. Special Research Center, University of Chicago Library.
- _____. 1941. "The Growth of Thought in Society." *Economica* 8, 428-456.
- _____. 1945. "Civitas." *Collected Articles and Papers of Michael Polanyi*. 1963. Compiled by Richard L. Gelwick. Berkeley, CA: Pacific School of Religion. Available online on the Polanyi Society website (polanysisociety.org).
- _____. 1945. "Science and the Modern Crisis." *Memoirs and Proceedings of the Manchester Literary and Philosophical Society* 86/6, 106-117.

- _____. 1946. "Social Capitalism." *Time and Tide* 27 (April 13): 341-342.
- _____. 1951. *The Logic of Liberty, Reflections and Rejoinders*. London: Routledge and Kegan Paul, Ltd.
- _____. 1964 [1946]. *Science, Faith and Society*. Chicago [London]: University of Chicago Press [Oxford University Press].
- _____. 1969. "The Republic of Science." In *Knowing and Being: Essays by Michael Polanyi*. Marjorie Grene (ed.). Chicago: University of Chicago Press. 49-72.
- Roberts, Don D. 1973. *The Existential Graphs of Charles S. Peirce*. The Hague: Mouton.
- Roberts, Paul Craig. 2005. "Polanyi the Economist." In *Emotion, Reason and Tradition: Essays on the Social, Political and Economic Thought of Michael Polanyi*. Struan Jacobs and R. T. Allen (eds.). Burlington, VT: Ashgate Publishing Co., 127-131.
- Roberts, Paul Craig and Norman Van Cott. 1999. "Polanyi's Economics." *Tradition and Discovery: The Polanyi Society Periodical* 25/3, 26-30.
- Vinti, Carlo. 2005. "Polanyi and the 'Austrian School.'" In *Emotion, Reason and Tradition: Essays on the Social, Political and Economic Thought of Michael Polanyi*. Struan Jacobs and R. T. Allen (eds.). Burlington, VT: Ashgate Publishing Co., 133-148.

Polanyi and Newman: A Reconsideration

Martin X. Moleski, SJ

Key words: Polanyi, Newman, Moleski, personal knowledge, tacit knowledge, tacit knowing, illative sense, *Grammar of Assent*, informal reasoning, dogmatic theology, *Personal Catholicism*

ABSTRACT

The author's doctoral dissertation on the theological implications of the epistemologies of John Henry Newman (1801-1890) and Michael Polanyi (1891-1976) operated on the assumption that Polanyi's work was independent of Newman's. That assumption was wrong. Polanyi read Newman's Grammar of Assent twice and took at least five pages of notes on it; he also had a copy of the book in his personal library when he died. He mentioned his reading to a friend, but indicated that he could not quote Newman because to do so would distort Newman's meaning. The purpose of this essay is to defend the thesis that the similarities between the epistemologies are real and to speculate why diagramming the relationship between the two systems of thought was not a worthwhile project for Polanyi.

When I wrote my Ph.D. dissertation, "Illative Sense and Tacit Knowledge: A Comparison of the Theological Implications of the Epistemologies of John Henry Newman and Michael Polanyi,"¹ I believed that Michael Polanyi's work was completely independent of John Henry Newman's *Grammar of Assent*: "I cannot find any evidence that Newman's epistemology in any way influenced Polanyi's" (*Personal Catholicism*, xxii). Since that time, I have found evidence that Polanyi had twice read Newman's *Grammar of Assent* (hereafter cited as *GA*), which raises the question of what kind of influence Newman may have had on Polanyi.

Some of the evidence of Polanyi's reading of the *Grammar* was available when I wrote my dissertation; it is my fault that I did not find it then. The most interesting note did not turn up until 2010, when I did a final survey of the material Bill Scott had collected for *Michael Polanyi: Scientist and Philosopher*.² On January 27, 1959, Hugh O'Neill, one of Polanyi's earliest and best friends from Manchester, invited Polanyi to give a talk on "Scientific and Non-scientific Ways of Thought" to a Newman association. Polanyi regretfully declined the invitation, then, in a postscript, told O'Neill that he had read the *Grammar* twice:

The Athenaeum
Pall Mall S.W.I

31 Jan 1959

P.S. I have read Newman's work on the illative sense (at Dorothy Emmet's recommendation) before publishing Science Faith and Society (1946) and have studied it again before sending off the MS of Personal Knowledge but I found that I could not quote him without attributing to him a meaning he would not accept nor in fact intended.

Insofar as my thesis was that Newman and Polanyi are in substantial agreement about epistemology, I must disagree with Polanyi's view that he "could not quote him [Newman] without attributing to him a meaning he would not accept nor in fact intended."

There are, of course, any number of difficulties in mapping one person's thought over another's, but I have several advantages that Polanyi lacked.³ He was largely self-taught in philosophy; I have had years of discipleship in the Catholic philosophical tradition under the tutelage of many masters. When Polanyi read the *Grammar* prior to publishing the first edition of *Science, Faith, and Society*, he was not yet in full possession of his own philosophical thought, which he worked out over the next seventeen years and then viewed retrospectively in the introduction to the 1963 version of *Science, Faith, and Society*; I read the two authors from the standpoint of their completed careers. Polanyi seems only to have read the *Grammar*; I drew on Newman's *University Sermons* in which he first explored the topic of informal reasoning and placed his reflections on the illative sense in that larger context.⁴ Polanyi's great strength and weakness as he moved from medicine to physical chemistry and then to economics, sociology, philosophy, theology, and aesthetics was that he saw things with fresh eyes. He had interesting and valuable things to say in the humanities, but the fact that he was largely self-taught limited his ability to communicate his insights persuasively with established members of the discipline.

Polanyi's lack of familiarity with the philosophical tradition turns up in his correspondence with Marjorie Grene. Polanyi was very excited about what he saw in Kant: "To have lived as a scholar and missed Kant would be like visiting Egypt and missing the Pyramids."⁵ Grene seems to have argued with Polanyi over his reading (or misreading) of Kant for years. In 1967, she threatened to picket one of his lectures carrying a sign, "UNFAIR TO IMMANUEL KANT!"⁶ In order to defend my thesis, I must suppose that in a similar fashion, Polanyi failed to see the similarities between his work and Newman's because he had not sufficiently indwelt the philosophical framework to which Newman's work was oriented.

In asserting that there are substantial and demonstrable similarities between the thought of Newman and Polanyi, I am not charging Polanyi with dependence on Newman, nor am I faulting him for not mentioning Newman in his publications. The seeds of Polanyi's epistemology of tacit knowing and personal knowledge are evident in "The Value of the Inexact," a brief note sent to *Philosophy of Science* in 1936.⁷ Over the next twelve years, Polanyi worked diligently to develop his personal understanding of the paradoxes of freedom in society, in economics, and in the life of the intellect, culminating in *Full Employment and Free Trade* (1945), *Science, Faith, and Society* (1946), and *The Logic of Liberty* (1951). It seems likely to me that the reason Dorothy Emmet recommended that Polanyi read Newman's *Grammar of Assent* was that she saw parallels between the work Polanyi had already done independently of Newman and the *Grammar*. Long afterward, she reported that she saw parallels between Polanyi and "others" who worked in the same vein, without supposing that the similarities diminished Polanyi's unique contributions to the dialogue:

Polanyi was concerned, rightly, to attack the notion that thinking, and indeed its testing, can be reduced to something purely objective, formal or specifiable. There is always the personal involvement of the thinker, judging, probing, following clues in the penumbra of unspecified "tacit" awareness which surrounds everything we are concentrating on in "focal" awareness. *Others have said this kind of thing*, but what is distinctive about the way that Polanyi says it, besides his marvelous spread of examples, is the central place he gives to personal commitment. If we cannot rely on impersonal criteria as sufficient guides, there is no way of evading the thinker's own personal judgment.⁸

There is no direct evidence of how much Emmet may have contributed to the development of *Science, Faith and Society*, but the 1946 edition was dedicated to her, which suggests that she must have earned Polanyi's gratitude by reading his drafts attentively and acting as a sounding-board for the work.

When O'Neill invited Polanyi to address the Newman Association, he mentioned in passing that Dorothy Emmet read the Association's journal. In her philosophical memoir, Emmet discussed "a problem over objectivity" in Polanyi's thought: "Polanyi wants to be on the side of the realists, but his fiduciary mode seems to produce an internal view of truth."⁹ She used Newman to clarify her criticism of Polanyi:

There is the difference between what Cardinal Newman in *The Grammar of Assent* called 'notional' and 'real assent.' For Polanyi, all assent should be real assent, 'accredited' by a personal act of commitment. I think, however, there is an ambiguity in his concept of 'commitment.' Commitment to what? One can be committed to seeking truth, and in doing so admitting that one's beliefs are corrigible, so that commitment to the truth of a particular belief does not have the same irreversible quality that attaches to the commitment to truth itself (*PAF*, 83).

Emmet warned that giving too much weight to the act of faith involved in personal knowledge tended to cut Polanyians off from dialogue with critics:

In combining truth, assertion, and commitment Polanyi was in fact drawing attention to the tension between faith and criticism about which I spoke earlier in this chapter. I do not think he resolved this—if it is resolvable—but this was because he was firmly on the side of faith. This could lead to a manner of preaching rather than arguing, and also to a stereotyped and simplified version of his views which he was attacking. I mention this as it is an attitude which can be found in some of his followers, more strongly indeed than in Polanyi himself who used to say to me 'Keep on with your criticism.' It hinders their effective engagement with other philosophers (*PAF*, 84).

Emmet ended her remarks on her friendship with Polanyi by expressing her admiration for his exploration of tacit knowledge and his testimony about the "actual processes of discovery, where the personal factor is clearly present" (*PAF*, 84).

On balance, I take comfort in the fact that a philosopher with Emmet's credentials saw parallels between Newman and Polanyi. At the same time, she shows little inclination to follow in either man's footsteps; where Newman and Polanyi express conviction that we can know some truths with certitude, both in the immanent and in the transcendent order, Emmet remains non-committal:

A metaphysical thinker may try to see life steadily; he cannot see it as a whole. He can only express what he grasps in the perspective of his experience. But the right word, giving articulation to the living relations out of which this perspective is constituted, can enlarge and not straiten further possibilities of responsive awareness. The word gives form to experience; it does not copy the structure of the real. But experience so informed itself arises out of interrelationships. To indicate the possibilities of such relationships and to bring them into conscious articulation is a distinctive task of metaphysical thinking.¹⁰

So, from Emmet's standpoint, there were resemblances between the insights of Polanyi and Newman, but neither provided a metaphysical standpoint that she found satisfactory.

Phil Mullins spotted another interesting note in the Regenstein Polanyi archive. It is on the third page of notes that Polanyi took on *Ideas and Men* by Crane Brinton,¹¹ dated "15 November 1951": "re-read Newman, *Grammar of Assent*. 'illative sense' (?)" (23:3). The index of *Ideas and Men* cites seven

pages that have a reference to Newman; on six of them, Brinton discusses “illative sense” as well. It is not surprising that reading Brinton’s reflections on the *Grammar* led Polanyi to consider re-reading it, paying special attention to what Newman says about the illative sense.

Brinton introduces the illative sense in the context of Newman’s theory of the development of doctrine: “In a higher world it is otherwise, but here below to live is to change, and to be perfect is to have changed often.”¹² Knowing what changes are good and what are destructive cannot be decided by “any simple scientific test”:

For that we must rest on what Newman called our illative sense ... It would be unfair to say that Newman’s illative sense is basically William James’s famous pragmatic “will to believe”; certainly Newman does not say that we should believe what we want to believe. But he does insist that full human life on this earth has to be guided by something more than notions of truth that guide the experimental scientist in his laboratory; that something is a mixture of what we Americans call “hunch” and “know-how,” of aesthetic sensitivity, of moral sensitivity, of concrete experience of actual problems. Knowledge we arrive at through the illative sense is to knowledge arrived at by pure logic as a cable of many strands is to a single bar of steel; each is strong, but only one is of a simple, single piece (*IM*, 462).

Brinton saw that the illative sense provided an apologetic opening to secure not just religious faith but all of the values espoused in the humanities: “Only if we expect Christian truths as we find them at work among men to be perfect, unchanging, absolute, only, in fact if we are dogmatic where dogmas do not fit, shall we feel that our judgments of value are inferior in validity to the judgments of fact of the scientist” (463).

Brinton portrayed Newman as being critical of the same features in the culture of the Enlightenment that Polanyi later criticized in *Personal Knowledge*:

Newman’s own exercise of the illative sense led him in the direction of conservative politics, toward sustaining the existing system of social and economic relations. But the theoretical scaffolding he drew up is one of the very best for what is sometimes called liberal Catholicism, the conscious adapting of Christian attitudes to a greater degree of democracy, toward a greater acceptance of some of the goals of the Enlightenment. We have chosen Maistre, Burke, and Newman as examples of thinkers who attack from the point of view of traditional Christian cosmology and psychology the optimistic and rationalistic beliefs of the Enlightenment (*IM*, 463).

Looking at Newman from Brinton’s point of view seems to confirm my thesis that there is a great deal of congruence in their thought.

Polanyi’s cryptic comment to himself at the end of his notes on Brinton suggests that perhaps in his first reading of the *Grammar*, he had not understood how Newman’s ninth chapter (out of ten) on the illative sense is the keystone that completes his epistemology. The last words of the eighth chapter point in this direction: “Judgment then in all concrete matter is the architectonic faculty; and what may be called the Illative Sense, or right judgment in ratiocination, is one branch of it” (*GA*, 269).

There are five pages of notes on the *Grammar* in the Polanyi Archives at the Regenstein (24:10). The beginning of the notes reads: “Extract from An Essay in aid of A GRAMMAR OF ASSENT by John Henry Cardinal Newman. New Edition 1892. (163, N16, 292681).” Judith Shiel, a librarian at Merton College in Oxford, replied to my query about the call numbers: “The book is still on the shelves and I have found

that it was in the possession of Professor Samuel Alexander (it has an autograph inscription in it) and was part of the Alexander bequest, so it presumably came to the library after Alexander's death in 1938. It is not possible to determine when any particular person borrowed a book because the loan records for that period were on paper loan slips and were not kept" (email correspondence, March 27, 2002).

The eighteen quotations in the notes are from the first three chapters of Part II of the *Grammar*. To understand what aspect of Newman's thought they represent, we need a short sketch of the *Grammar*. In "Note II," appended to the work in 1880, Newman summarized the structure of the book: "The Essay begins with refuting the fallacies of those who say we cannot believe what we do not understand."¹³ This is the purpose of Part I, "Assent and Apprehension." Part II, "Assent and Inference," has five chapters, but the fifth is an application of Newman's epistemology to theology, so the heart of his philosophical investigation is in chapters VI to IX. Newman said that in this section, "I proceed to justify certitude as exercised upon a cumulation of proofs, short of demonstration separately" (*GA*, 379). In the final analysis, it is the illative (reasoning) sense, operating largely in the tacit dimension, that takes such incomplete indications and crosses the logical gap between proof and assent. In Newman's words,

And to this conclusion he comes, as is plain, not by any possible verbal enumeration of all the considerations, minute but abundant, delicate but effective, which unite him to it; but by a mental comprehension of the whole case, and a discernment of its upshot, sometimes after much deliberation, but, it may be, by a clear and rapid act of the intellect, always, however, by an unwritten summing-up, something like the summation of the terms, plus and minus of an algebraical series (*GA*, 232).¹⁴

Here is an outline of the material considered in each of the five chapters of Part II:

- VI. Assent Considered as Unconditional
 - 1. Simple Assent
 - 2. Complex Assent
- VII. Certitude
 - 1. Assent and Certitude contrasted
 - 2. Indefectibility of Certitude
- VIII. Inference
 - 1. Formal Inference
 - 2. Informal Inference
 - 3. Natural Inference
- IX. The Illative Sense
 - 1. The Sanction of the Illative Sense
 - 2. The Nature of the Illative Sense
 - 3. The Range of the Illative Sense
- X. Inference and Assent in the Matter of Religion
 - 1. Natural Religion
 - 2. Revealed Religion

Eight of Polanyi's quotations are taken from Chapter VI, Section 1, "Simple Assent." One is taken from the next section, "Complex Assent." Eight quotations are taken from the second section of Chapter VII, "Indefectibility of Certitude." The final quotation is from the second section of Chapter VIII, "Informal Inference." It seems very likely, then, that these eighteen quotations are from Polanyi's first reading of the *Grammar*. If he took notes on his second reading, while thinking about the meaning of "illative sense" in the ninth chapter under Brinton's tutelage, they have not yet turned up.

A few of the quotations in this collection seem to foreshadow themes in Polanyi's later work. "If our nature has any constitution, any laws, one of them is this absolute reception of propositions as true, which lie outside the narrow range of conclusions to which logic, formal or virtual, is tethered; nor has any philosophical theory the power to force on us a rule which will not work for a day."¹⁵ I believe this is precisely the mindset of Polanyi in formulating his fiduciary program:

Yet so be it. Only this manner of adopting the fiduciary mode is consonant with itself: the decision to do so must be admitted to be itself in the nature of a fiduciary act. . . . Nothing that I shall say should claim the kind of objectivity to which in my belief no reasoning should ever aspire; namely that it proceeds by a strict process, the acceptance of which by the expositor, and his recommendation of which for acceptance by others, include no passionate impulse of his own (*PK*, 256).

Both Newman and Polanyi were reacting to positivism in the philosophy of science that reduced knowledge to what was strictly proven. To use Polanyi's language, Newman should be ranked as a post-critical philosopher.

For Newman, simple assent is an acceptance of truths without conscious deliberation or critical self-appraisal. By contrast, "those [complex] assents which we give with a direct knowledge of what we are doing ... are few compared with the multitude of like acts which pass through our minds in long succession without our observing them" (*GA*, 189/157). Polanyi calls such simple assents "a-critical choices":

Objectivism has totally falsified our conception of truth, by exalting what we can know and prove, while covering up with ambiguous utterances all that we know and *cannot* prove, even though the latter knowledge underlies, and must ultimately set its seal to, all that we *can* prove. In trying to restrict our minds to the few things that are demonstrable, and therefore explicitly dubitable, it has overlooked the a-critical choices which determine the whole being of our minds and has rendered us incapable of acknowledging these vital choices (*PK*, 286).

The last quotation Polanyi took from the *Grammar* is from an example Newman gives of being forced to rely on a-critical choices in order to know his own mortality with certitude. "But what logic cannot do, my own living personal reasoning, my good sense, which is the healthy condition of such personal reasoning, but which cannot adequately express itself in words, does for me, and I am possessed with the most precise, absolute, masterful certitude of my dying some day or other" (*GA*, 300-301/239). Of course, it is the illative sense that is "my own living personal reasoning, my good sense" and "the healthy condition of such personal reasoning." Polanyi chose a much more helpful and intelligible name for this aspect of our mental life: tacit knowledge.

When the Polanyi Archive was opened at the University of Chicago, his books were donated to the Regenstein. All of the title pages were photocopied, along with any pages bearing personal inscriptions. The collection of title pages shows that Polanyi had an edition of the *Grammar* on his bookshelves when he died. It was edited and introduced by Charles Frederick Harrold (1947); the book was disposed of by the Regenstein long ago. Whether this was the edition Polanyi used in his second reading of the *Grammar* is unclear. I have many books on my shelves that I have not read, so it seems unfair to me to suppose that Polanyi necessarily read Harrold's prefatory material. Be that as it may, there is material in the introduction that seems to me to support a reading of Newman that brings him very close to Polanyi's understanding of tacit knowing.

Harrold portrays the *Grammar* as the culmination of 37 years of reflection by Neman on how “assent or belief is arrived at not primarily by logic or demonstration, but by “the whole man”— his feelings, memories, associations, etc.,” beginning in his book on *The Arians of the Fourth Century* (1833; xi).

It is in the *Oxford University Sermons* (1843) that we see Newman deliberately engaged on “an exploring expedition” to determine the nature of faith and reason, to show the grounds on which the (logically) untrained believer justifiably holds his belief, namely through “implicit” or unconscious reasoning, against a background of a “right state of heart.” In these sermons Newman is convinced that conscience gives us a glimpse of reality behind the physical world so piercing and compelling that we place it on a level with our knowledge of the external world as delivered through reason and the five senses. He is sure that logic is inadequate to a complete statement of our mental process, since so much of our reasoning is done subconsciously, mingling memories, emotions, associations with its strictly ratiocinative elements. Yet it is all this complex of conscious and subconscious activity that propels a man toward an assent. Again, “the whole man reasons,” not just the “mind” (xii).

Just as Polanyi strove to show the role of tacit knowledge and acts of faith in the realm of science, so Newman aimed “to show that the modern mind is not violating itself in certain acts of assent that transcend logic, but is following certain laws or patterns which bring certitude in any field, not merely in that of religion. Daily life...is a constant act of faith. Put differently, it rests largely on implicit or unconscious reasoning” (xiii).

The importance of using Harrold as a witness to this theme in Newman is that he wrote his introduction to the *Grammar* before Polanyi shared his first reflections on the tacit dimension in the Gifford Lectures (1951-1952) and *Personal Knowledge* (1958). Unlike my reading of Newman, which I did a decade after I had grown fond of Polanyi, Harrold’s reading cannot have been influenced by familiarity with Polanyi’s theory of tacit, personal knowledge. By the time I read the *Grammar*, it was second nature to me to look for associations with those themes in everything I read.

I am convinced that Polanyi did feel a resonance between his own insights, won by diligent reflection on his experience as a research scientist, and those of Newman, derived from a profound indwelling in the framework of the humanities. Having done my best to map one man’s vocabulary and convictions over that of the other, I understand why Polanyi shied away from figuring out how to correlate his worldview with Newman’s so that the intersections of their thought could be made apparent to his readers. Newman is a towering figure in some branches of Catholic thought, but he was not and is not one of the classic sources for philosophy in the last century. Like Polanyi, Newman was something of an outsider to professional philosophers and theologians. Newman had something to say that emerged from his immersion in the intellectual life of his day, and he said what he saw in a way that made it difficult to categorize him and correlate his view with classic philosophical systems. He was not an academic philosopher or theologian, but a visionary, a preacher, and an apologist. It is small wonder, then, that Polanyi did not consider it worthwhile to figure out how to quote Newman “without attributing to him a meaning he would not accept nor in fact intended.” Taking time to map his ideas over those of Newman would not cause his views to be more intelligible or persuasive to the leading figures in twentieth-century philosophy.

As the correspondence about the links between Polanyi’s thought and that of Thomas Kuhn shows, Polanyi was disturbed when he did not receive sufficient attention and respect for having explored the social structure of science before Kuhn.¹⁶ At first glance, it may appear that Polanyi owed Newman some kind of tribute for anticipating many of the themes of *Science, Faith and Society*, *Personal Knowledge*, and

The Tacit Dimension. I suspect that Polanyi felt that his key insights into the structure of tacit knowing, the nature of the fiduciary program, and the sociology of scientific authority were not anticipated by Newman and that he therefore did not have to acknowledge priority on those grounds. Polanyi may also have wanted to avoid the appearance of supporting Newman's use of the epistemology of informal reasoning to advocate Catholic teaching. Newman discusses monotheism, the Holy Trinity, and Dogmatic Theology in Chapter V of the *Grammar*, then takes up Natural Religion and Revealed Religion in Chapter X. Newman defended the authority of the Church to define what Catholics must believe:

To her is committed the care and the interpretation of the revelation. The word of the Church is the word of revelation. That the Church is the infallible oracle of truth is the fundamental dogma of the Catholic religion; and 'I believe what the Church proposes to be believed' is an act of real assent, including all particular assents, notional and real; and, while it is possible for unlearned as well as learned, it is imperative on learned as well as unlearned (131).

Polanyi saw this as an "intolerable" (*SFS*, 59) burden on the conscience of theologians:

A Specific Authority on the other hand makes all important reinterpretations and innovations by pronouncements from the center. This center alone is thought to have authentic contacts with the fundamental sources from which the existing tradition springs and can be renewed. Specific Authority demands therefore not only devotion to the tenets of a tradition but subordination of everyone's ultimate judgment to discretionary decision by an official center (*SFS*, 57).

Polanyi hoped that his post-critical philosophy would free religious believers from "an absurd vision of the universe" and thus "open up instead a meaningful world which could resound to religion" (*TD*, 92), but the religion he had in mind was some variety of Protestantism, not the kind of Catholicism he may have thought Newman advocated. Newman's understanding of the proper role of authority in identifying and preserving revelation does not correspond to Polanyi's portrait of a "Specific Authority" that controls all "reinterpretations and innovations from the center," but this distinction is not well developed in the *Grammar*. It may well be that Polanyi kept silence about his reading of the *Grammar* in order to avoid raising theological questions far removed from his central concerns for the healing and renewal of European civilization.

As an assenting Catholic—one who accepts all that the Church authoritatively proposes to be true—I do not find the Church's authority to declare what has been definitively revealed a burden on my freedom of thought, but the unsurpassable beginning of thinking theologically.

Devotion is excited doubtless by the plain, categorical truths of revelation, such as the articles of the Creed; on these it depends; with these it is satisfied. It accepts them one by one; it is careless about intellectual consistency; it draws from each of them the spiritual nourishment which it was intended to supply. Far different, certainly, is the nature and duty of the intellect. It is ever active, inquisitive, penetrating; it examines doctrine and doctrine; it compares, contrasts, and forms them into a science; that science is theology. Now theological science, being thus the exercise of the intellect upon the *credenda* of revelation, is, though not directly devotional, at once natural, excellent, and necessary (*GA*, 127).

If my train of thought leads to the dissolution of the data of the faith, then I presume that my argument is defective, not the teaching of the Church that contradicts my argument. To paraphrase a commonplace,

as a Catholic theologian, I am entitled to my own theological opinions but not to my own theological facts. If I begin from or arrive at a creed that is demonstrably different from the Church's creed, then I have ceased to be a Catholic theologian and have become something else.

I very much enjoyed mapping Polanyi's epistemology onto Newman's in my doctoral work because I value Polanyi's authority as a successful scientist. His first-hand experience of how scientists define problems and discover ways to solve them adds weight to Newman's view that all certitudes are ultimately moral certitudes—all knowledge is quintessentially personal: "This certitude and this evidence are often called moral; a word which I avoid, as having a very vague meaning; but using it here for once, I observe that moral evidence and moral certitude are all that we can attain, not only in the case of ethical and spiritual subjects, such as religion, but of terrestrial and cosmical questions also" (*GA*, 252). Because "all knowledge is tacit or rooted in tacit knowing" (*Meaning*, 61; *KB*, 195; *SFS*, 10), scientists, like religious believers, must rely on their illative sense, the inchoate but real conscience of the intellect that commands us to assent or to refrain from assent.

Although I believe that finding intersections between their views strengthens Newman's argument, I am not confident that Newman's contributions aid Polanyi or Polanyians very much. Newman's key epistemic term, "illative sense," has been a failure in the marketplace of ideas. My thesis that Polanyi's theory of tacit knowledge bears a striking resemblance to Newman's understanding of the illative sense is of no interest or use to the vast majority of today's philosophers of science. Their interest lies elsewhere, and the correspondence between Newman and Polanyi does not solve any of their problems. My delight in the common features comes from theological interests, not purely philosophical. I find that Polanyi's understanding of personal knowledge sheds a great deal of light on what Newman called, in passing, "personal Christianity" (91).

In the last analysis, it is difficult to assess how much Polanyi's reading of the *Grammar* may have contributed to his own expression of his epistemology. I have never found a passage in Polanyi that feels to me as though it were lifted from Newman. Even if I had found Polanyi's notes on the *Grammar* and the title page to the edition on his bookshelves—as I ought to have done—I believe that it would have made very little difference in the outcome of my dissertation. Newman's motto as a Cardinal was "*Cor ad cor loquitur*"—"heart speaks to heart." I hear the heart of the nineteenth-century Cardinal speaking to the heart of the twentieth-century scientist and I am glad to have done what I could to bring that conversation to light.⁴

ENDNOTES

¹The Catholic University of America, 1991. Revised and published as *Personal Catholicism: The Theological Epistemologies of John Henry Newman and Michael Polanyi*, with foreword by Avery Dulles. Washington, D.C.: The Catholic University of America Press, 2000.

²William T. Scott and Martin X. Moleski (Oxford University Press, 2005).

³*Personal Catholicism*, xxi-xxii.

⁴See especially "Implicit and Explicit Reason," preached in 1840: "The mind ranges to and fro, and spreads out, and advances forward with a quickness which has become a proverb, and a subtlety and versatility which baffle investigation. It passes on from point to point, gaining one by some indication; another on a probability; then availing itself of an association; then falling back on some received law;

next seizing on testimony; then committing itself to some popular impression, or some inward instinct, or some obscure memory; and thus it makes progress not unlike a clamberer on a steep cliff, who, by quick eye, prompt hand, and firm foot, ascends how he knows not himself, by personal endowments and by practice, rather than by rule, leaving no track behind him, and unable to teach another. It is not too much to say that the stepping by which great geniuses scale the mountains of truth is as unsafe and precarious to men in general, as the ascent of a skillful mountaineer up a literal crag. It is a way which they alone can take; and its justification lies in their success. And such mainly is the way in which all men, gifted or not gifted, commonly reason, not by rule, but by an inward faculty” (*Fifteen Sermons Preached before the University of Oxford between A.D. 1826 and 1843 in the Definitive Third Edition of 1872* [Notre Dame, Indiana: University of Notre Dame Press, 1997], 257).

⁵Polanyi to Arthur Koestler, August 14, 1947 (Regenstein, 5:4).

⁶November 1, 1967 (Regenstein 16:1).

⁷Reprinted with introduction and comments as “The Value of the Inexact,” *Tradition and Discovery* 18:3 (1992): 35-36.

⁸“Truth and the Fiduciary Mode in Michael Polanyi’s *Personal Knowledge*,” *Tradition and Discovery* 14:1 (1986-87) 32; emphasis added.

⁹*Philosophers and Friends: Reminiscences of Seventy Years in Philosophy* (London: Macmillan, 1996), 82. Hereafter, *PAF*.

¹⁰See her *The Nature of Metaphysical Thinking* (London: Macmillan, 1953 [1946]), 227.

¹¹*Ideas and Men: The Story of Western Thought* (Englewood Cliffs, N.J.: Prentice-Hall, 1950). Hereafter, *IM*.

¹²*Essay on the Development of Christian Doctrine* (New York: Sheed and Ward, 1960 [1845]), 30.

¹³*An Essay in Aid of a Grammar of Assent*, new edition, edited with preface and introduction by Charles Frederick Harrold (London: Longmans, Green and Co., 1947), 378. This is the edition of the *Grammar* that Polanyi had on his bookshelves when he died.

¹⁴I discuss how Newman’s notion of “cumulation of probabilities” resembles Polanyi’s view of the “tacit integration of subsidiaries” at some length in *Personal Catholicism* (104-107, 125-130).

¹⁵VI, 1, “Simple Assent.” The page number in Polanyi’s notes is 179; in the Lash edition, it is 150. I will give both page numbers in subsequent references—so, 179/150.

¹⁶Struan Jacobs, “Michael Polanyi and Thomas Kuhn: Priority and Credit,” *Tradition and Discovery* 33:2 (2006-07), 25-36; Martin X. Moleski, “Polanyi vs. Kuhn: Worldviews Apart,” *Tradition and Discovery* 33:2 (2006-07), 8-24.

REFERENCES

- Brinton, Crane. *Ideas and Men: The Story of Western Thought*. Englewood Cliffs, N.J.: Prentice-Hall, 1950.
- Emmet, Dorothy. *The Nature of Metaphysical Thinking*. London: Macmillan, 1953 (1946).
- _____. *Philosophers and Friends: Reminiscences of Seventy Years in Philosophy*. London: Macmillan, 1996.
- _____. "Truth and the Fiduciary Mode in Michael Polanyi's Personal Knowledge," *Tradition and Discovery* 14:1 (1986-87) 32-36.
- Jacobs, Struan. "Michael Polanyi and Thomas Kuhn: Priority and Credit," *Tradition and Discovery* 33:2 (2006-07), 25-36.
- Moleski, Martin X. *Personal Catholicism: The Theological Epistemologies of John Henry Newman and Michael Polanyi*, with foreword by Avery Dulles. Washington, D.C.: The Catholic University of America Press, 2000.
- _____. "Polanyi vs. Kuhn: Worldviews Apart," *Tradition and Discovery* 33:2 (2006-07), 8-24.
- Newman, John Henry. *An Essay in Aid of a Grammar of Assent*. 1) London: Longmans, Green, and Co., new edition, 1892. 2) Edited with preface and introduction by Charles Frederick Harrold. London: Longmans, Green and Co., 1947. 3) With an introduction by Nicholas Lash. Notre Dame: University of Notre Dame Press, 1979.
- _____. *Essay on the Development of Christian Doctrine*. New York: Sheed and Ward, 1960 (1845).
- Polanyi, Michael. "The Value of the Inexact," *Tradition and Discovery* 18:3 (1992): 35-36.
- Scott, William T. and Martin X. Moleski. *Michael Polanyi: Scientist and Philosopher*. New York: Oxford University Press, 2005.

SUBMISSIONS FOR PUBLICATION

Articles, meeting notices, and notes likely to be of interest to persons interested in the thought of Michael Polanyi are welcomed. Manuscripts normally will be sent out for blind review.

Articles should be sent to Paul Lewis at lewis_pa@mercuer.edu

Book reviews should be sent to Walter Gulick at wgulick@msubillings.edu.

All manuscripts should be submitted as a Microsoft Word file attached to an email message (.doc or .docx) and formatted as follows:

- double-spaced
- with 1" margins
- in a reasonable typeface (Times New Roman 12 is preferred)
- with paragraphs indented 0.25"

As to other matters of style:

1. *Spelling*: We recognize that the journal serves English-speaking writers around the world and so do not require anyone's "standard" English spelling. We do, however, require all writers to be consistent in whatever convention they follow.

2. *Citations*: We recognize that Polanyi's work connects with scholars who work in diverse disciplines and typically use different style guides such that we are "fluent" in different conventions for citations, capitalization of titles, and so forth.

- Our preference is for Chicago's parenthetical/reference style in which citations are given in the text as (last name of author year, page number), combined with bibliographical information at the end of the article.

- Endnotes should be used sparingly and be placed before the reference section.

- To the extent that our software allows, we will, however, accept other styles (e.g., APA or MLA) so long as the author is consistent and careful in following it. The main point, of course, is to give the reader enough information to locate and engage your sources.

- We do encourage one exception to this practice. Polanyi's major works may be cited parenthetically. For example: Polanyi argues that ... (*TD*, 56). Full bibliographical information should still be supplied in the references section since many of us may work with different editions of his works. If you take this option, please use the following abbreviations (note that abbreviations are italicized):

<i>CF</i>	<i>Contempt of Freedom</i>
<i>KB</i>	<i>Knowing and Being</i>
<i>LL</i>	<i>Logic of Liberty</i>
<i>M</i>	<i>Meaning</i>
<i>PK</i>	<i>Personal Knowledge</i>
<i>SEP</i>	<i>Society, Economics, and Philosophy</i>
<i>SFS</i>	<i>Science, Faith, and Society</i>
<i>SM</i>	<i>Study of Man</i>
<i>STSR</i>	<i>Scientific Thought and Social Reality</i>
<i>TD</i>	<i>Tacit Dimension</i>

Deadlines:

- For Number One of a Volume (October): 1 July
- For Number Two (February): 1 November
- For Number Three (July): 1 April

NOTES ON CONTRIBUTORS

EDUARDO BEIRA (ebeira@gmail.com) is currently a Senior Research Fellow at the IN+ Center for Innovation, Technology and Public Policy at Técnico (U. Lisbon) and a faculty member in the MIT Portugal Program. He taught at the University of Porto before spending more than twenty years as a corporate manager. He returned to academic life in 2000 as professor at the University of Minho in Portugal. Since 2008, he has translated into Portuguese *The Tacit Dimension*, *The Study of Man*, and *Personal Knowledge*, and *Science, Faith and Society*, along with selected essays on science and technology.

MARTIN X. MOLESKI, S.J., (moleski@canisius.edu) is a Jesuit priest and Professor at Canisius College in Buffalo, New York. He has degrees from Boston College (BA, English, 1973), Fordham University (MA Humanities, 1977), and The Catholic University, of America (PhD, 1991). His most recent publication is *Judging Religion Justly: A Catholic Introduction to Religious Studies*, Cognella University Readers, 2011.

RICHARD W. MOODEY (MOODEY001@gannon.edu) received his Ph.D. in Sociology from the University of Chicago and has taught at Loyola University of Chicago, Allegheny College (Meadville, PA) and Gannon University (Erie, PA). He is currently a professor emeritus from Allegheny and a visiting professor at Gannon, where he is serving as the interim chair of the Department of Criminal Justice and Social Work.

PHIL MULLINS (mullins@missouriwestern.edu) is Professor Emeritus at Missouri Western State University and is also Editor Emeritus of *TAD*. He has written essays connecting Polanyi or Polanyian ideas with other thinkers, including H. Richard Niebuhr, Marjorie Grene, Harry Prosch, and Charles Sanders Pierce. He is particularly interested in the historical development of Polanyi's philosophical perspective and has most recently focused on Polanyi's efforts to reform liberalism.

WWW Polanyi Resources

The Polanyi Society web site (polanyisociety.org/ or polanyisociety.com/) provides information about Polanyi Society membership and meetings. The site also contains the following: (1) digital archives containing all issues of *Tradition and Discovery* and its predecessor publications going back to 1972; (2) indices listing *Tradition and Discovery* authors, reviews and reviewers; (3) the history of Polanyi Society publications; (4) information on *Appraisal* and *Polanyiana*, two sister journals with special interest in Michael Polanyi's thought; (5) a link to the "Guide to the Papers of Michael Polanyi," which provides an orientation to archival material housed in the Special Collections Research Center of the University of Chicago Library, Chicago, IL 60637; (6) photographs of Polanyi; (7) links to a large selection of primary material, including (a) Collected Articles and Papers of Michael Polanyi (the 1963 Gelwick microfilm collection of more than 100 items); (b) Polanyi's 1940 film, "Unemployment and Money;" (c) unpublished texts of Polanyi's Gifford Lectures (1951-1952), Duke Lectures (1964) and Wesleyan Lectures (1965), (d) audio files for Polanyi's McEnerney Lectures (1962), Ray Wilken's 1966 interview of Polanyi (audio and text), and Polanyi's 1966 conversation with Carl Rogers (audio and text).

Electronic Discussion List

The Polanyi Society supports an electronic discussion group that explores implications of the thought of Michael Polanyi. Anyone interested can join. To join yourself, go to the following address: http://groups.yahoo.com/group/polanyi_list/join. If you have difficulty, send an e-mail to James van Pelt (james.van-pelt@yale.edu) and someone will see that you are added to the list.

In Support of the Polanyi Society

Support the work of the Polanyi Society by (1) regularly paying *annual dues* (\$35 for individuals, \$25 for libraries, and \$15 students), and (2) contributing to the *Travel Assistance Fund*, and/or *the Endowment Fund*. Those living in the United States can either do so via the PayPal option on the Polanyi Society membership web page (<http://polanyisociety.net/register/join-renew.php>) or by sending a check with the fund designated in the memo line to Charles Lowney, Dept. of Philosophy, Baker Hall 124, Washington and Lee University, Lexington, VA 24450. Those living outside of the U.S. should use PayPal.

The Polanyi Society Board of Directors

David Rutledge, **Board President**
David.Rutledge@furman.edu

Gus Breytspreek
gus.breytspreek@ottawa.edu

Tihamér Margitay
margitay@filozofia.bme.hu

Diane Yeager, **Board Vice President**
yeagerd@georgetown.edu

John Fennell
jfennell@hillsdale.edu

Phil Mullins
mullins@missouriwestern.edu

David Nikkel, **Board Secretary**
david.nikkel@uncp.edu

Andrew Grosso
atgrosso@icloud.com

Zhenhua Yu
ecnuy@hotmail.com

Charles Lowney, **Board Treasurer**
lowneyc@wlu.edu