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Submission Guidelines

Submissions: All manuscripts should be submitted as a Microsoft Word file attached to an email message. **Articles** should be no more than 6000 words in length (inclusive of keywords, abstract, notes, and references) and sent to Paul Lewis at lewis_pa@mercer.edu. All submissions will be sent out for blind peer review. **Book reviews** should be no more than 1000 words in length and sent to Andrew Grosso at atgrosso@icloud.com.

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Citations:

- 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 full bibliographical information at the end of the article. One exception is that Polanyi's major works may be cited parenthetically using the following abbreviations (with abbreviations italicized):

CF *Contempt of Freedom*

KB *Knowing and Being*

LL *Logic of Liberty*

M *Meaning*

PK *Personal Knowledge*

SEP *Society, Economics, and Philosophy*

SFS *Science, Faith, and Society*

SM *Study of Man*

STSR *Scientific Thought and Social Reality*

TD *Tacit Dimension*

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.

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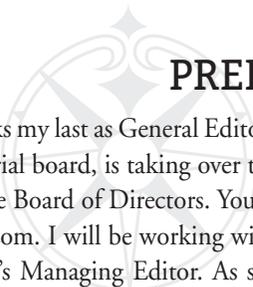
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PREFACE

This issue marks my last as General Editor of *TAD*. David James Stewart, who has long served on the editorial board, is taking over that role, a change approved at the November 2019 meeting of the Board of Directors. You can learn more about David at <https://www.davidjamesstewart.com>. I will be working with him as he takes over these duties and then continuing as *TAD*'s Managing Editor. As such, I will be the liaison between *TAD* and Mercer, as well as Faithlab, who will continue to produce print and electronic versions for us. It has been a privilege to serve the Society as editor of *TAD* since 2012. I have tried to be a good steward of *TAD* and am sure that David will be as well as he guides us in the days ahead.

Now, to this issue. Alert readers will see that the main focus is on another previously unpublished Polanyi essay, "What to Believe." The issue opens with Phil Mullins's essay that describes the background for the piece. That article is followed by Polanyi's essay and then commentaries by Gábor István Bíró and Marty Folsom. Next, we have Nilanjan Ragonath's essay that applies Polanyi's economic insights to the challenges and opportunities that arise with cryptocurrency. We also have Phil Mullin's review of Paul Tyson's book, *De-Fragmenting Modernity*.

As always, check the online version of News and Notes to get the latest information on this summer's conference at Nashotah House, next year's annual meeting, and other items of interest to Society members.

Paul Lewis

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THE CONTEXT OF MICHAEL POLANYI'S “WHAT TO BELIEVE”



Phil Mullins

Keywords: Polanyi's criticism of pervasive modern skepticism; Polanyi's union of understanding, believing and belonging

ABSTRACT

This essay contextualizes Polanyi's 1947 talk, "What to Believe." After reviewing connections that probably led to Polanyi's invitation to make this presentation at the Student Christian Movement conference in Manchester, I comment on Polanyi's effort to compare the connection between understanding, believing and belonging in science, Christianity and "civic morality." The main ideas in this talk should be viewed in relation to other writing from the mid-forties to the early fifties when Polanyi begins to develop his "fiduciary" philosophy as an alternative to what he views as the excessively skeptical disposition of the modern mind.

Polanyi's Text and Topic

"What to Believe" is an address Michael Polanyi gave in either April or May of 1947 at a conference of the Student Christian Movement (SCM) held at the Manchester Grammar School. The archival text of the address¹ has the date 25 April 1947 typed on its first page as the apparent date of delivery at the conference, but an editor's note included with a short two-page excerpt published in the December 1947 issue of *Credere Aude, A Magazine of Christian Thought*, a publication of the Manchester Grammar School Christian Union, identifies this as a SCM conference "lecture" which Polanyi delivered in May, 1947.² The note from the editor also mentions that J. K. Woods "drew up the [published] article in its present form." It advises that "Professor

Polanyi has asked me to state that some of the views expressed in it do not represent his final thoughts on the subject” (Polanyi 1947b, 10).

Polanyi’s tentativeness may have reflected qualms about Woods’ two-page effort to reduce his already brief remarks (a 13-page, double-spaced typescript) to a set of provocative statements to fit into available space. But his tentativeness also likely reflects that Polanyi recognized that even his full address was treating a complex topic and he did not yet have all the elements of his perspective carefully worked out. In his analogically organized discussion, he explores similarities and differences between different domains or kinds of knowledge.³ He identifies his topic in his first sentence as “Christianity and the Modern Mind,” and then notes that he will “probe our own state of mind” and will respond to “the teachings of the Christian religion,” given this state of mind (Polanyi 1947a, 1). This is a talk, like a number of other Polanyi talks and essays, which sharply criticizes the dispositions of the modern mind.⁴ I suggest it is helpful to describe Polanyi’s topic somewhat more broadly than he does as science, Christianity, morality, and the modern mind. There are many things worth scrutiny here and these introductory comments treat, in a cursory way, only a few.

Polanyi, the SCM Conference Invitation, and the Oldham Connection

How Polanyi came to be invited to address the 1947 Manchester SCM conference is unclear. The SCM was an important movement in the UK in the late forties and the fifties and the group apparently periodically held conferences. Michael Polanyi’s second son, John Polanyi, graduated from the Manchester Grammar School the year before the 1947 address.⁵ Thus Polanyi’s invitation perhaps came through his familiarity with the school and its teachers and administration. More likely, the invitation came through some of Polanyi’s intellectual friends linked to the SCM. Allen (1998, 1-2) notes that Polanyi gave an earlier talk, “The Liberal Conception of Freedom,” at a 1940 SCM conference, where he, as a Liberal Party speaker, shared the program with speakers representing the Conservative and Labor Parties.

Some of Polanyi’s friends were involved in SCM affairs, including Walter Moberly, a philosopher and the Manchester University Vice Chancellor involved in hiring Polanyi in 1933. Moberly became a member of J. H. Oldham’s Moot discussion group which began in the late thirties (Clements 2010, 6-12). In 1944, Polanyi became a part of Oldham’s circle, and he participated thereafter in the Moot and similar successor Oldham-led discussion groups. These groups included a variety of important UK religious and literary intellectuals.⁶ After he became involved in Oldham’s groups in the mid-forties, much of Polanyi’s subsequent writing seems to have been discussed in Oldham’s groups.⁷ However, Polanyi’s involvement with Oldham’s circle was also a window for Polanyi into some of the current religious/theological and literary ideas

discussed in the forties and fifties. Polanyi told Richard Gelwick that only his work as a research scientist influenced his thought more than his involvement in Oldham's groups (Gelwick 1965, 11, note 8).

There is a reference in "What to Believe" (1947a, 8) to nineteenth century Christian liberal theology and Karl Barth as redirecting Christian theology. Some of the discussion in Oldham's meetings that Polanyi had earlier attended likely touched on liberal theology and Neo-Orthodox Christian theology.⁸ Also at the December 17-20, 1948 meeting of an Oldham group (probably the ninth or tenth such meeting Polanyi attended), Polanyi presented his short paper "Forms of Atheism" that very loosely comments on Père Lubac's book *Drame de l'Humanisme Athées*. Polanyi outlines the sources and contours of modern social and political ideas in terms of the interaction of four types of "substitute deities" that have emerged in modern society and modified what Polanyi suggested were earlier beliefs about the God of the Bible (see the discussion in Mullins 2013b, Moleski 2013, Yeager 2013, and Gelwick 2013). There are references in this Polanyi paper to the "doctrine of Encounter" (8) which Polanyi implies earlier discussions have touched on (see also Polanyi 1949, 20). In sum, that Polanyi accepted an invitation to speak at a 1947 SCM conference on a topic that touched on Christianity is not so surprising, given his involvement in Oldham's circle. Some who came to Oldham's groups were people with significant influence in groups like the SCM and may have suggested Polanyi as a speaker for the 1947 Manchester conference.¹⁰

"What to Believe" and "Fiduciary" Philosophy

Polanyi's discussion in the last section of *Personal Knowledge (PK)* may have been shaped in part by the charge to the Gifford Lecturer.¹¹ His charge was likely also important for this SCM address. But Polanyi had a peculiar facility for taking whatever particular topic on which he was invited to speak and turning it into an occasion to present his own developing outlook. "What to Believe" may be of interest in part for what Polanyi says about Christianity, but it is important to note the way in which ideas sketched here fit into the general trajectory of Polanyi's developing philosophical perspective from about the mid-forties through the early fifties.¹² In "What to Believe," Polanyi was beginning to work out the views that he very soon began to identify as philosophy in a "fiduciary" mode or what he sometimes called his "post-critical" philosophical perspective.

By 1947, Polanyi was already questioning philosophical notions that doubt can be the solvent of the problems of knowledge in science and society. An essay published in early 1948 but whose first drafts were written in June 1947 summarizes what was clear to him by the time he delivered "What to Believe" a few weeks earlier. He asserts that we must examine the "foundations of modern thought" and "realise at last that

skepticism cannot in itself ever discover anything new.” Skepticism can release “powers of discovery, but these powers must always spring from belief” (1948, 100). Polanyi’s account of science was never focused around falsification or any type of narrow empiricism or positivism.¹³ In fact from about the time he delivers “What to Believe” Polanyi begins ramping up his attack upon empiricism and positivism (see 1947c, 13-14 and 1949, 14-20). Polanyi already is focusing on discovery as central to science by the mid-forties (e.g., *SFS*, 31-38) and has for about a decade sharply criticized Marxist influenced ideas about science and society and particularly the “planned” science movement in the UK (e.g., Polanyi, 1940; 1943; 1944; 1945a).

Polanyi’s March, 1946 Riddell Lectures, published as *Science, Faith and Society* (*SFS*) the same year, was his broadest to date account of science and it is worth comparing some elements of *SFS* and “What to Believe.” *SFS* does in some ways build on Polanyi’s important 1941 review article “The Growth of Thought in Society” (Polanyi, 1941), which he turned into an important theoretical essay that sketched some of his key ideas about science and society. Polanyi here discusses science as an important modern intellectual system of “dynamic order” (1941, 438) and society has many such linked orders which are structurally akin but not identical (Mullins 2013a, 167-169). In “The Growth of Thought in Society” and *SFS*, science is a community in which skilled scientists (working in different but overlapping neighborhoods) interact to fashion a growing and compellingly attractive organism of specialized ideas built upon a general naturalistic outlook; this framework opens a “noble vista of the natural order” and also establishes “more decent and responsible relationships between human beings” (*SFS*, 26).¹⁴ Scientific thought achieves a relatively general coherence but is dynamic since it grows through the ongoing research and interaction of scientists in different neighborhoods (Jacobs and Mullins, 2011, 67-68). Polanyi clearly thinks the world of modernity in the West has in many ways been decisively shaped and improved by science.

Polanyi, nevertheless, argues in section II of the opening *SFS* chapter, “Science and Reality,” that

objective experience cannot compel a decision either between the magical and the naturalistic interpretation of daily life or between the scientific and the theological interpretation of nature; it may favour one or the other but the decision can be found only by a process of arbitration in which alternative forms of mental satisfaction will be weighed in the balance (*SFS*, 28).

Although there are no citations of anthropological literature in *SFS*, Polanyi does briefly discuss—much as he does in “What to Believe”(also without anthropological citations)—common modern notions about the inevitability of death and notions

affirmed by “primitive peoples” who hold “events which are harmful to man are never natural” (*SFS*, 25).¹⁵ Polanyi portrays science, as he began to do as early as 1939, as an “organism of ideas” (Polanyi, 1940, 40) that has slowly developed in modernity and now decisively shapes the minds of most modern Western people.¹⁶ But science is not the only fabric of ideas or framework that Polanyi recognizes as operative in human communities or even in his own contemporary society. Later in the same *SFS* chapter, Polanyi describes the propositions of science as “in the nature of guesses” which fit into the current beliefs held in the community of science composed of those properly socialized and skilled. And these guesses “are founded on the assumptions of science concerning the structure of the universe and on the evidence of observations collected by the methods of science.” Although such guesses retain a conjectural character, they “are subject to a process of verification in the light of further observations according to the rules of science” (*SFS*, 31-32).

In “What to Believe,” Polanyi, as in some sections of *SFS*, is interested in beliefs commonly accepted and in looking at their grounds. In this brief and direct talk, he discusses comparatively the grounds of belief in science, religion, in the form of Christianity, and what he calls “civic morality” (1947a, 9). As I implied above, Polanyi seems especially interested in exposing misguided popular notions that science proves “rigorously by experience that there can be no magic” (1947a, 4). He acknowledges that the success of scientific explanations and developments of technology linked to science has generally convinced modern (British) persons “that all magic is nonsense” (1947a, 4). But he points out that this is not the case in central Africa and that many contemporaries such as Christian Scientists and others with confidence in non-allopathic medicine and those who give any credence to astrological predictions are intelligent modern persons who “emphatically dissent” (1947a, 4) from at least some of the views of modern science. He dismisses the notion that “science is based on the evidence of our senses” and what he says sounds much like views in *SFS*: “What scientists will accept as true does no doubt greatly depend on observed facts: but it depends also on previously accepted assumptions about the nature of things. Science carries no convictions to people who refuse to share these assumptions” (1947a, 5). Science makes assumptions about natural causation and cannot provide “independent confirmation” (1947a, 5) about natural causation.

In “What to Believe,” Polanyi suggests, perhaps even more insistently than in *SFS*, that the “divergence between two mentalities arises entirely from different ways of upbringing” (1947a, 3). That is, if the children of “primitive people” were educated in European schools, they would “readily accept the modern outlook” and if European children were reared in a tribal community, they would “fully believe in magic” (1947a, 3) as other tribe members do.¹⁷ Polanyi rather bluntly declares that he and other modern people must “regard ourselves as favoured by fortune by being born to an enlightened

community which knows the truth of natural causation and which by the education which it has given us in our early childhood has imparted to us these true beliefs and protected us from accepting the errors of foolish superstitions” (1947a, 3-4).

The conclusions sketched above led Polanyi to his formulation of what I regard as the main constructive philosophical idea in “What to Believe” which he applies to science, Christianity and “civic morality”:

To understand—to believe—and to belong—these three seem indissolubly connected. Understanding, believing, and belonging are in fact three aspects of the same state of mind: of the mental process of knowing; they are its theoretical aspect, its confessional aspect and its social aspect. Only when we realise the perfect conjunction of these three aspects in all forms of knowledge, can we hope to judge rightly whether to accept or reject any particular form of knowledge (1947, 6).

Polanyi’s primary interest in “What to Believe” is in the way believing and belonging inform understanding and these three cannot be severed. He illumines this indissoluble connection by sketchily discussing the theoretical, confessional and social aspects in science, Christianity and “civic morality.” This short 1947 talk, as its title suggests, focuses much of its attention on belief which is tied to belonging; these aspects seem to have been particularly on Polanyi’s mind in this period and he regarded them as undervalued by thinkers. Of course, understanding is important and is linked particularly to the theoretical emphasis in pure science and has parallels in religion and “civic morality.” But, comparatively speaking, some of Polanyi’s later philosophical work focuses more directly on and emphasizes understanding. There is, in Polanyi’s philosophical development in the late forties and early fifties, a strong emphasis on belief and belonging, but later he attends more directly to the nature of understanding which, to be sure, is still deeply connected to belief and belonging. In his Gifford Lectures, Polanyi comes up with his subsidiary-focal distinction and in *PK* and later writing he develops this and articulates the theory of tacit knowing. These later writings in many ways illumine understanding as a central concern. In his 1959 *The Study of Man*, Polanyi straightforwardly summarizes and recasts his work in *PK* as an effort to reframe our understanding of understanding. (*SM*, 9, 20-39).

In “What to Believe,” Polanyi argues that science is an endeavor “in which the theoretical aspect looms large, while the process of believing and the condition of belonging is taken unwittingly for granted.” (1947a, 6). It is certainly not a surprise that Polanyi identifies science with an emphasis on the theoretical since his writing stretching back to the late thirties insistently makes a distinction between pure and applied science and emphasizes the importance of pure science (1940, 1-11). His

watershed 1935 discussion with Bukharin focused his attention more intently on the importance of the theoretical in science (*SFS*, 7-9). In this 1947 discussion, Polanyi suggests the scientist, particularly as a student, “unwittingly” becomes a member of the scientific community and absorbs certain scientific beliefs and acquires skills needed to work on solving current problems that drive the theoretical. As in the discussions in *SFS*, the skills of a scientist and the more particular tacit assumptions used in one or another area of science are picked up in the novice’s participation as an apprentice in the scientific community.

A few years after his 1947 talk, Polanyi published “Scientific Beliefs” (1950) in which he had more to say about “belief” and “belonging” in science (Jacobs and Mullins 2017, 266ff). He argues that there are “very substantial flaws” in “the rigorously positive conception of science” which is an account that must be “supplemented by fiducial elements” that he dubs scientific beliefs (1950, 26). Polanyi does here interestingly develop his ideas about the diversity of beliefs held in different communities of interpretation. He highlights diversity in “scientific beliefs” by focusing attention on differences between fundamental assumptions underlying Soviet genetics and biology and the Western scientific mainstream (1950, 26, 35-36). He has, by 1950, long been monitoring the persecution of Soviet biologists associated with the Lysenko affair. In an odd way, Polanyi’s recognition of diversity in science is linked to his earlier claim that science as most know it could “fall entirely into oblivion” (1947a, 5) if a generation fundamentally hostile to naturalistic assumptions succeeded the present generation. In “What to Believe,” as in *SFS* (*SFS*, 26), he cautions that one should remember the “fate suffered by ancient science in the early Middle Ages in Europe” (1947a, 5). And he notes that if the Nazis had won World War II, “large sections of science would have disappeared” (1947a, 5) and he projects the same fate if Marxist control is extended across the world.

In “Scientific Beliefs,” for the first time, Polanyi also introduces references to anthropological literature to help make his case about diversity and the intimate connections between understanding, believing and belonging. In particular, he references Lévy-Bruhl’s discussion of the magical beliefs of “primitive peoples” and Evans-Pritchard’s work on the Azande. Soon after his 1947 talk, Polanyi seems to have turned in earnest to the study of social anthropology. On May 23, 1947, Polanyi was invited to give the Gifford Lectures and he apparently believed to do so he needed to have a stronger background in social sciences, including social anthropology.¹⁸ There are in MPP five different sets of notes on Lévy-Bruhl’s books and these are dated from February, 1948 to 1951 (not all are dated). Some of the quotations that Polanyi copied verbatim clearly show he was interested in the same sort of epistemic questions which he addressed in “What to Believe” and later in “Scientific Beliefs.” In 1949, Max Gluckman, an Oxford colleague of Evans-Pritchard took the first position in social anthropology at

Manchester; he gave an inaugural lecture the same year to the Manchester Literary and Philosophical Society (Gluckman 1972, xi). To use the language of “What to Believe,” the lecture (Gluckman 1949-50, 73-98) focused on certain aspects of the interconnected dynamics of understanding, believing and belonging. Michael Polanyi and some other Manchester faculty who heard Gluckman’s lecture were impressed with his account of Evans-Pritchard and the Azande and formed an academic reading/discussion group in order further to explore the logic of Azande life and Evans-Pritchard’s work on this.

Polanyi, of course, uses the case of the Azande and Evans-Pritchard’s discussion not only in “Scientific Beliefs” (1950) but this is the centerpiece of his 1951 eighth Series I Gifford Lecture, “The Doubting of Implicit Beliefs” (which also references Lévy-Bruhl). This lecture is a carefully positioned one integral to the unfolding argument to which Polanyi’s title for the two series points, “Commitment, in Quest of a Post-Critical Philosophy.” Polanyi articulates sharp criticisms in the two series of the way doubt has been idolized in modern philosophy, science and culture. His alternative constructive philosophical perspective emphasizes the pervasiveness and importance of belief. In his eighth Series I Gifford Lecture, Polanyi focused attention on the incredible stability of belief which operates in a community of interpretation which shares a relatively common framework that is reinforced by common language use, ritual practices and other social interactions among persons. In some ways, “The Doubting of Implicit Belief” with its focus on “implicit beliefs” and their stability as well as their diversity (seen when comparing different cultural communities) can be viewed as a further effort to work out some of the ramifications of his 1947 ideas about the inseparable links between understanding, believing and belonging briefly treated in “What to Believe.”¹⁹

Polanyi’s broader constructive effort in his Gifford Lectures aimed significantly to reform Enlightenment ideas. In his sixth 1951 lecture, he called this constructive reformulation “post-critical philosophy” which adopts “a fiduciary mode” that links every declaratory sentence to a speaker or writer. Polanyi argued that “the rehabilitation of overt belief...may restore the balance between observation and moral judgment in...human affairs,” allowing human beings “to envisage without self-contradiction the social rootedness and social responsibility of our beliefs concerning man and society.”²⁰ Matters concerned with the “fiduciary” and the “post-critical” become central for Polanyi soon after his “What to Believe” talk. “Forms of Atheism” (discussed above) produced for a December, 1948 Oldham group meeting, emphasizes the importance of “a finite person in the making of my fiduciary decision” (Polanyi 1948/2013, 8, see also Polanyi, 1949, 17); Oldham called attention to this Polanyian idea, suggesting it was worth discussing (Mullins 2013b, 4-5). In Polanyi’s 1949 correspondence with Edward Shils about his spring 1950 lectures at the University of Chicago, Polanyi

acknowledged he wished he could lecture on the emerging “post-critical age” but he did not yet believe he had his ideas well worked out (Mullins 2019, 93). The Preface to *The Logic of Liberty* (*LL*, likely written in 1949 when the book went to press) draws attention to the link between Polanyi’s emphasis on “the fiduciary foundations of science and thought in general” (*LL*, vii) and his emphasis on public liberty. In sum, “What to Believe” is a 1947 talk focusing on matters which Polanyi’s constructive philosophical ideas develop more fully in the next few years.²¹

Polanyi on Christianity

What Polanyi actually says about Christianity in “What to Believe” seems particularly speculative and tentative, although he packs in many claims in a few paragraphs. Theology is the theoretical aspect of religion and it tries “to elucidate the many difficult problems” in what is a “difficult and interesting field of inquiry” (1947a, 7), which Polanyi links to mathematics. Clearly, it is the believing or confessional aspect that Polanyi wants to emphasize as central in religion. But he ties this closely to belonging, which he equates to upbringing or participation in Christian families and the variety of Christian churches. He stresses the positive dimension of the confessional aspect of Christianity, which he seems to think important in the contemporary, skeptically-disposed social environment in which he says the “religious believer is looked upon rather as a freak” (1947a, 9). He places the confessional aspect in the context of practice and emphasizes prayer and worship. He seems to suggest something oddly akin to a “will to believe” argument concerning the confessional aspect of religion (1947a, 9) and “civic morality” (1947a, 12). Some of the things Polanyi briefly touches in his discussion of the confessional aspect of Christianity are echoed in later comments about religious practices in later articles, *PK* and the still later Meaning Lectures.

Polanyi acknowledged that his knowledge of “religious history and religious doctrine” (1947a, 7) was limited and that he simply does not know much about the balance of understanding, believing, and belonging in different times and places in the broader Christian world and history. Nevertheless, he notes what he calls “obvious disparities” (1947a, 7): Roman Catholicism focuses on the “social aspect” which concerns “men’s belonging to the Church,” while Protestant churches emphasize “the individual acts of faith” (1947a, 7-8). He also speculates about history, suggesting that Augustine (see also *SFS*, 26) and others at a critical juncture (when “the essential Christian revelation might become submerged in a flood of similarly sounding but essentially different beliefs” [1947a, 8]) developed theology in such a way that it became a “decisive factor for the guidance of faith” (1947a, 8). He seems to think that Barth and the contemporary Neo-Orthodox movement might be a similarly important contemporary theological movement.

Civic Morality

What Polanyi's suggests in "What to Believe" about problems of "civic morality" is an early stage of ideas he soon develops about "moral inversion" (see Yeager [2002] for a definitive discussion). This key Polanyian term first appears in a 1950 essay, which is reprinted as Chapter 7 of *LL* (*LL*, 106). In his 1950 usage, Polanyi's term identifies the way the holding of traditional moral ideas has been destroyed and how "the force of homeless moral passions" flows into a mechanistic and materialistic "framework of purposes" (*LL*, 106) which he argues has brought nihilism and totalitarianism.

In "What to Believe," Polanyi argues that while religious skepticism, aided by the success of science, has disposed the modern mind "to be suspicious about religious beliefs," the modern mind has more recently become disposed to "a moral skepticism which threatens the very foundations of man's communal life" (1947a, 9). This Polanyi dubs "an even more serious crisis" than the older problem of widespread suspicion about religious beliefs. There are several essays after the mid-forties which are thematically akin to "What to Believe" insofar as Polanyi argues that public confidence in social institutions is being eroded by Enlightenment ideas and the way science has come to be understood. He frequently praises the British appreciation for civic and religious traditions embodied in practices and suggests religion has promoted gradual British social reforms. But he contrasts Britain with the political and cultural situation on the Continent where the "logic of the Leviathan" (Polanyi 1945b, 116) has tightly linked scientific materialism and progress and has unleashed violence. In the late forties, Polanyi is working out his account of the history of modern ideas and the ways in which such ideas seem to be crippling society as they bring nihilism, violence and totalitarianism. "What to Believe" is part of Polanyi's effort to sort out his broader account.

Polanyi's brief account of civic skepticism in "What to Believe" criticizes the scientific reductionism in Freud and sociology. Freudians focus on desires and fears as determinative of individual life and this undermines appreciation of human moral motives. "Modern sociological interpretation" is a parallel insofar as "it regards all movements of history as ultimately determined by other than moral factors" (1947a, 10). In a way reminiscent of his 1944 criticisms of Mannheim's views, Polanyi suggests sociology has no place for moral judgement in social and historical life (Jacobs and Mullins 2005, 23-24). Hitler's recent aggression and Britain's defense are understood only as "historic necessities, arising from the prevailing economic and social circumstances" (1947a, 10). Polanyi links this explanatory mode downplaying "right and wrong" to "class war theory" in which history "is merely the life-and-death struggle of classes" (1947a, 10). The class struggle account (see also Polanyi 1937/2016, 21-22 and 1940, 10-11) for Polanyi is a mechanistic account that eliminates "genuine moral motives" and means only "violence" but not "arguments" can bring a "worthwhile result" (1947a, 10-11).

Polanyi suggests this interpretation of “man and the history of man” undermines “the very existence of human society” since it takes away the “measure of mutual confidence” that holds society together (1947a, 11). Polanyi affirms that “a free society can exist only if men firmly believe in each other as essentially moral beings. Free government is guided by discussion” (1947a, 11; see also Polanyi, 1937, 710).

ENDNOTES

¹Polanyi, 1947a, cited hereafter in parenthesis, is in Box 31, Folder 10 of the Michael Polanyi Papers (hereafter MPP).

²Polanyi, 1947b, 10, cited hereafter in parenthesis, is in Box 3, Folder 10, MPP and online in the Gelwick Microfilm Collection, 1963 at <http://www.polanyi.society.org/essays.htm>.

³The same kind of analogical argument is used in “The Growth of Thought in Society” (Polanyi, 1941) to link and distinguish the dynamic orders of science, the law, and the economy. Grene comments that Polanyi’s method in *PK* “consisted essentially in broadening and stabilizing the interpretive circle through a series of analogies, by showing that human activity of many kinds are structures in the same hopeful yet hazardous fashion as those of science” (Grene, 1977, 167). She rightly notes that Polanyi’s “fiduciary programme” has an “analogical foundation” (Grene, 1977, 167). Much more needs to be said about Polanyi’s practice of analogical argument and the meta-physical affirmations about continuity that he presupposes.

⁴Polanyi’s interest in the dispositions of the modern mind is a theme persisting from early to late. See, for example, “On the Modern Mind” published in May, 1965 in *Encounter* (24:12-20); available at <http://www.polanyisociety.org/Intro-On-Mod-Mind.pdf> with my short introduction.

⁵John Polanyi to Phil Mullins, 14 August 2018 e-mail.

⁶See Mullins, 1997 for details summarized briefly here concerning Polanyi’s participation in the Moot and successor Oldham-led discussion groups and Polanyi’s relationship with J. H. Oldham. Clements (2010, 18-24) discusses members of the original Moot.

⁷Clements suggests that after Mannheim’s death in early 1947, Polanyi became the central figure in Oldham’s successor groups and discussion became “more focused on issues of scientific interpretation and belief rather than on society” (2009, 17). This summary may be too simple since Polanyi’s interest (and I suspect Oldham’s) in “scientific interpretation” was clearly very much bound up with broader matters concerned with “society.”

⁸Clements provides the detailed minutes of the first twenty Moot meetings. Polanyi began attending only in the last of these meetings, although he was thereafter regularly involved in successor Moot-like Oldham groups. The minutes of the first twenty meetings show that Christian theology and the work of figures like Barth and Brunner came up with some regularity. See Clements index of subjects (Clements 2009, 728-738). Emil Brunner was a guest at a later Oldham discussion group meeting in April 1948 (Mullins 1997, 183).

⁹Included in *Tradition and Discovery* 40:2 and online at <http://www.polanyisociety.org/TAD%20WEB%20ARCHIVE/TAD40-2/TAD40-2-fnl-pg7-11-pdf.pdf>. The page reference below in parenthesis is to the published 2013 *Tradition and Discovery* text of “Forms of Atheism.”

¹⁰This includes Oldham himself, a very prominent, well-connected ecumenical leader, with whom Polanyi quickly became friendly. There are over 100 Polanyi-Oldham letters in MPP. Oldham made reading suggestions for Polanyi. He liked Buber and probably introduced Polanyi to Buber who Polanyi does reference sometimes in connection with Oldham (e.g., Polanyi, 1949, 20 and 1950, 30), Polanyi likely read and was influenced by Oldham's *Life is Commitment* (1953). As the Acknowledgements in *PK* note (*PK*, 1964, xv), Oldham later was one of five readers of the draft of *PK*; he convinced Polanyi to re-write the final chapter. (Mullins 1997, 185-187). *The Study of Man* (1959), Polanyi's 1958 Lindsay Memorial Lectures, which Polanyi describes as an "extension of the enquiry" of *PK* (*SM*, 9), was dedicated to Oldham. See Bliss (1984) and Clements (1999) on Oldham's life and work.

¹¹Haught and Yeager (1997) and Sanders (2003) offer something like dueling interpretations circling around this point. The earlier article offers a metaphysically robust account of what seems to be Polanyi's sketchy naturalistic religious cosmology in *PK*, IV. Sanders makes an equally interesting case suggesting Part IV likely was perhaps a modest attempt to fulfill the charge to the Gifford Lecturer to treat the relation between God and the world; but *PK*, IV and several other Polanyi comments on religion, in Sanders' view, were not rooted in a robust religious metaphysics but in respect for religious practices.

¹²I limit discussion here primarily to 1946 to 1952. I look at "What to Believe" in relation to *SFS* (1946) and "Scientific Beliefs" (1950), with brief references to a few other Polanyi lectures and publications from before and after Polanyi's 1947 talk (e.g., Polanyi's 1951 and 1952 Gifford Lectures and "The Stability of Beliefs" [1952]). Polanyi is clearly interested in this period in rehabilitating trust in belief and in arguing science relies on beliefs held by scientists.

¹³See the extended discussion in Jacobs and Mullins (2011) of the Polanyi-Popper history. Polanyi did invite Popper to Manchester in 1946 for a presentation on *The Open Society and Its Enemies* and this was the beginning of their friendship and cooperation which lasted until the early fifties. Polanyi was likely skeptical of Popper's brand of liberalism as his remark that a free society is not merely an "Open Society" in the Preface to *LL* (*LL*, vii), suggests.

¹⁴Polanyi in *SFS* notes recent changes in scientific perspectives, suggesting that today "science is not so emphatic any more in disregarding how far its generalizations make sense when extended to the world as a whole." He suggests that the late 19th century views of Laplace and Poincare now would not be accepted "without murmur" (*SFS*, 27).

¹⁵See the discussion of *SFS* in Jacobs and Mullins 2017, 264-266. The parallels with "What to Believe" could be drawn out in more detail than I do here.

¹⁶In many publications, after the mid-forties, Polanyi is critical of the way scientists and philosophers have represented science and scientific practice and he thinks particularly pernicious is the way that scientism has pervaded the social sciences and politics in modernity. See the discussion below. "What to Believe" whose subject Polanyi identifies as "Christianity and the Modern Mind" (1947a, 1) includes elements of both what I dub Polanyi's emerging critical philosophizing (i.e., his cultural criticism indicting the critical tradition) and his constructive philosophizing, which fashions an alternative to the critical tradition. As I discuss below, Polanyi's discussion of understanding, believing and belonging is an early sketch of elements of Polanyi's constructive philosophical alternative to the critical tradition. Both Polanyi's critical philosophizing and his constructive philosophizing evolve over about forty years. Clearly, Polanyi's concern about the modern mind carries forward from early to late and can be vividly seen in essays like his 1962 "History and Hope: An Analysis of Our Age"

(included in Allen 1997): “It is for us today to realise the difficulties of the modern mind to the full, and for us to accept these difficulties as our problem” (Allen 1997, 93).

¹⁷See Jacobs and Mullins 2018, 7-11 for a discussion of similar ideas in Polanyi’s unpublished writing from 1937. See also Polanyi 1947c, 12 and Polanyi 1949, 15-16.

¹⁸There are some notes in MPP on Malinowski from the early forties but it is striking that Polanyi seems to have become very interested in social anthropology not long after giving his 1947 address and receiving his Gifford invitation. In March, 1948, he exchanged his Chemistry position for a position in Social Studies to prepare for his Giffords. Polanyi met Edward Shils in the fall of 1946 and they quickly become good friends with common interests. Shils seems to have become something of a social science mentor for Polanyi in the late forties. Letters exchanged with Edward Shils suggest Polanyi’s new position may have included responsibility for improving the Manchester Social Studies program; he asked Shils for recommendations for short term appointments in social anthropology. Polanyi collaborates with Shils when possible and tries to arrange for Shils to come to Manchester to teach. Like his intellectual friendship with Oldham and later with Marjorie Grene, Polanyi’s long-term connection with Shils helps shape Polanyi’s developing ideas. See the discussion in Jacobs and Mullins, 2018, 269 and my essay on Polanyi and Shils (Mullins, 2019).

¹⁹Polanyi recycled his Series I eighth Gifford Lecture as the 1952 paper “The Stability of Beliefs” presented to the London Philosophy of Science group chaired by Popper in June, 1952, and this was published later in the year in *The British Journal for the Philosophy of Science* (Polanyi, 1952). The 1952 paper was the beginning of the dissolution of the Polanyi-Popper friendship. Much of the material in the Series I eighth Gifford Lecture and the article reappears in *PK* Chapter 9 subsections “Implicit Beliefs” and “Three Aspects of Stability” (*PK*, 1964, 286-292) with some elements included in other chapter sections. See the discussion in Jacobs and Mullins (2011, 74-93).

²⁰The online introduction to Polanyi’s Gifford Lectures (http://www.polanyi_society.org/Giffords/Intro-MP-Giffords-9-20-16.pdf) discusses at length (with many Gifford and *PK* citations) Polanyi’s emerging constructive philosophy which he viewed as an alternative to the prevailing critical philosophical tradition. I limit the account here to the quotations in the preceding sentences from the Series 1 Syllabus comment on the sixth lecture (<http://polanyisociety.org/Giffords/Syllabus-S1-c2-reduced.pdf>) which seems to echo “What to Believe.”

²¹In his Gifford Lectures but even more directly in *PK*, Polanyi addresses what he calls “the task of justifying the holding of unproven traditional beliefs” (*PK*, 1964, ix). In 1947, Polanyi does suggest that in both the case of science and religion acquiring “certain beliefs” is “for the sake of achieving certain knowledge” (1947a, 9) and that the modern mind’s uneasiness about holding religious and moral convictions “is due to a false idea of the way to know the truth” (1947a, 13). Polanyi seems to hold tightly to the idea that science, religion and “civic morality” each affirm truths, and that matters of truth and falsity can be addressed in terms of the particular balance of different aspects (i.e., the theoretical, confessional and social) which he discusses as relevant to different kinds of knowledge at particular times (1947a, 12). He says more about the nature of truth claims in science than in religion and “civic morality.” But Polanyi’s treatment of truth in this brief 1947 talk seems to cry out for further development. In *A Philosophical Testament* (Greene 1995), almost fifty years after Polanyi’s 1947 talk, Marjorie Grene provided an illuminating discussion of the postcritical account of knowledge as justified belief. Her account is worth noting since it more directly than Polanyi (in 1947 and even later) discusses the relation of knowledge and belief for the peculiar animal which human beings seem to be. She argues that the assumed categorical difference between knowledge

and belief, running through the Western philosophical tradition since Plato, is problematic: we need first to correct the presumption that knowledge is necessary and universal and belief is contingent and parochial, and that the two have no connection with one another. Such a correction will lead to a revision of notions about truth claims. We must “look at the knowledge claims we make and see how they are structured if we take them, not as separate from, but as part of, our system of beliefs” (Grene 1995, 15). She discusses what is involved in justification as a complex historical-social, rational and commitmental process that is grounded in her biological realism which certainly seem akin to Polanyi’s own realism. Grene holds that realism undercuts the dualistic approaches popular since Descartes and is built on two theses: human beings are real and exist within a real world and are surrounded by it and shaped by it. These fundamental affirmations move philosophical discussion beyond a subject-object dichotomy and a fundamental bifurcation between in-here and out-there which “makes nonsense of a world that is living, complicated, messy as you like, but real. I am myself one instantiation of that world’s character, one expression of it, able also, in an infinitesimal way, to shape and alter it” (Grene 1995, 114). This kind of postcritical turn involves a re-visioning of what a person is and that includes our relation to nature and our fellow creatures; it reframes the matter of making truth claims in the many different areas of inquiry. Grene summarizes matters this way:

...as human reality is one version of animal reality, so human knowledge is one species-specific version of the ways that animals possess to find their way around their environments. Granted, our modes of orientation in our surroundings are peculiarly dependent on the artifacts of culture. Culture mediates between ourselves and nature, and given the multiplicity of cultures, we appear, ...to be able to acquire, a very much greater variety of paths of access to reality than can members of other species. Now culture, and the artifacts of culture, are of course of our own making and in the last analysis we accept their authority only on our own recognizances. But culture, rather than being a mere addendum to nature, a fiction supervenient on the naturally induced fictions of perception—culture, on our reading, while expressing a need inherent in our nature, is itself a part of nature (Grene,1995, 144).

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WHAT TO BELIEVE¹



Michael Polanyi

Keywords: Michael Polanyi; Polanyi on the dangers of modern skepticism; Polanyi on the link between understanding, believing and belonging; Polanyi's parallel account of science, Christianity and modern civic morality

ABSTRACT

“What to Believe” is a brief, hitherto unpublished talk that Michael Polanyi gave at a spring 1947 conference of the Student Christian Movement in Manchester, UK. Polanyi criticizes the way in which modern skepticism undercuts Christianity and what he calls “civic morality” and also promotes a misleading account of modern science. Polanyi outlines and compares the ways in which believing and belonging underlie understanding in science, Christianity and “civic morality.”

[Editor's Note: Neither the Key Words nor the Abstract were part of the typescript of Polanyi's original talk. We have preserved Polanyi's spelling, capitalization and punctuation. There are two typed copies of “What to Believe” and a one-page outline in Box 31, Folder 10 of the Michael Polanyi Papers at the Regenstein Library of the University of Chicago. One of the two typescripts was almost certainly the final redacted version used in Polanyi's oral presentation and the text below follows this typescript. It has some penciled and typed in additions and corrections above lines and words and these are included. He added a few penciled symbols indicating that some sentences should begin a new paragraph; this text follows these symbols. There are also marks, similar to those found in other archival copies of orally-delivered material, intended to note places for

pauses or emphasis and some penciled underlinings, also likely to mark words to emphasize, but these are not noted here, although the few places where Polanyi added typed underlinings are included. The typescript has ellipses between some paragraphs and we have included these since Polanyi seems to have used these to mark off different sections of his discussion. There is one full sentence and one four-sentence paragraph that are crossed out. Perhaps Polanyi saw these elements were redundant or he decided they did not clearly say what he meant; we have, nevertheless, included these crossed out elements but they are footnoted.]

Our subject is Christianity and the Modern Mind. We shall try to probe our own state of mind, as it emerges from modern education, from our reading of books, periodicals and newspapers, from our listening to the talks over the wireless, and from partaking in conversation with people every day.

We shall ask ourselves what response we can give in this state of mind to the teachings of the Christian religion, to which I presume we all attach some degree of faith.

Immediately we are faced with the question: What are we to believe? Can we square it with our intellectual conscience if we believe anything that goes beyond the evidence of our senses? Is there any justification for such apparently reckless conduct of our minds?

...

Let us ponder this question by taking a careful look at some of the beliefs which are most commonly accepted among modern men. Let us see the grounds on which they rest.

It is a common belief that all men must die. We speak of natural death or of violent death; but in any case death is thought to be the result of a bodily injury, be it due to disease or to a bullet penetrating our skull.

Such a belief seems incontestable to us: yet it is not shared by vast numbers of primitive people who are believers in magic. If a fellow tribesman is devoured by a crocodile such people will immediately look for the evil influence behind the crocodile. They will not be satisfied unless they can pin the responsibility on some personal enemy of the victim, some malicious magician, on whose behalf the crocodile may have acted. From time immemorial their minds have been turning towards such explanations of violent death and indeed of all kind [sic] of death. They apply the same interpretation to the event of illness, to the spread of disease among cattle, to the failure of crops, and to the many other vicissitudes which afflict them. Sometimes they may find it difficult to trace the supposed evil influence back to its imaginary source, but on the whole the evidence as they see it has left no doubt in their minds that their

method of interpreting the accidents of life is fundamentally sound. So they believe in magic; and they believe in it with the same implicit assurance with which we modern Europeans deny its existence.

For to us a belief in magic appears utterly foolish. The African natives may produce the most reliable witnesses testifying that they had actually observed a magician hostile to the crocodile's victim in the very act of casting on him the fatal spell—the magician may even confess to this action in open court—yet we would refuse even to consider the evidence. Nothing could induce us to believe in magic. We are impervious to arguments in its support as its believers are to arguments against it.

To the natives of course our own naturalistic explanations may well appear both shallow and arbitrary. To assume that a man's life comes to an end between a crocodile's jaws for no better reasons than the crocodile's appetite may seem to them to make nonsense of human fate. It also fails to explain why dozens of crocodiles will leave a man unharmed and then suddenly one of them will attack and devour him. Nothing can convince primitive man that ours is a satisfactory way of interpreting such events.

The divergence between the two mentalities arises entirely from different ways of upbringing. The children of natives educated in European schools readily accept the modern outlook and there is little doubt that our own children, if brought up as members of primitive tribes, would fully believe in magic, just as their fellow tribesmen believed in it.

This leaves us in an uneasy position. We are reluctant to accept that our reliance on natural causation is based on a belief which we hold for no better reason than that of having been brought up to it.

Yet there it is. And I can see only one way of dealing with the situation; namely to regard ourselves as favoured by fortune by being born to an enlightened community which knows the truth of natural causation and which by the education which it has given us in our early childhood has imparted to us these true beliefs and protected us from accepting the errors of foolish superstitions.

I for one at any rate am prepared to accept this as true, and I would expect that most modern men would accept it also, if they were called upon to explain their position in this matter. Yet it is clear that such a statement does little more than reaffirm the beliefs to which we were brought up. It is like a person testifying to his own honesty: which leaves us inclined to look round for some more independent testimony.

Is there—we ask again—no knowledge which is based merely on the evidence of our senses and can be held on these grounds alone, without any need to accept any particular beliefs?

...

On such a question all eyes of course turn to science. Surely science has proved rigorously by experience that there can be no magic?

Now has it? Of course it has not. It has assumed that magic does not exist and has achieved great success in explaining the world and in developing the technical powers of man without recourse to magic. By doing so it has certainly convinced us that all magic is nonsense, but it still leaves the natives of central Africa unconvinced. We may also recall that there are large parts of science, fully accepted by most of those who believe in science from which considerable numbers of modern men emphatically dissent. I am thinking of scientific medicine which is altogether rejected by Christian Scientists, as well as by various other schools of healing, such as the homoeopaths, herbalists, osteopaths, etc. We may recall also that there are other modern men—again of considerable intelligence and perfect honesty—who believe in a kind of magic, namely in the predictions of astrology, quite unabashed by the opposition of science to their views.

No, science is not based on the mere evidence of our senses. What scientists will accept as true does no doubt greatly depend on observed facts: but it depends also on previously accepted assumptions about the nature of things. Science carries no conviction to people who refuse to share these assumptions. If we could bring up a whole generation of mankind in a spirit hostile to these assumptions and continue with such an education until all the people died out who were brought up to accept these assumptions, science would cease to have any appeal to men's minds and would fall entirely into oblivion. Remember the fate suffered by ancient science in the early Middle Ages in Europe. Remember that had the Nazis conquered the world, large sections of science would have disappeared. And I think that the establishment of Marxist control over the planet would lead to similar results.

Science cannot give an independent confirmation of our usual assumption of natural causes because it is itself based on the same assumption. In addition to which it presupposes some more elaborate beliefs which are properly understood only by scientists pursuing original research. All those beliefs are acquired by education. They are imparted to young people receiving an education in science by a community which holds these beliefs and transmits them by the process of teaching from one generation to the other.²

Science, therefore, like all other knowledge, presupposes belief, a belief rooted in the fact that the believer belongs to a group of people already holding those beliefs.

...

To understand—to believe—and to belong—these three seem indissolubly connected. Understanding, believing and belonging are in fact three aspects of the same state of mind: of the mental process of knowing: they are its theoretical aspect, its confessional aspect and its social aspect. Only when we realise the perfect conjunction

of these three aspects in all forms of knowledge, can we hope to judge rightly whether to accept or reject any particular form of knowledge.

We can then appreciate that science and our usual interpretation of events by natural causes, are one type of knowledge, in which the theoretical aspect looms large, while the process of believing and the condition of belonging is taken unwittingly for granted: and that there may well be other forms of knowledge in which the balance between the three aspects is different. This will place religion beside science without impairing the standing of either of them.³ That in particular, religious knowledge has the same three aspects as scientific knowledge, only with a different balance between them. Let us examine this idea for a moment.

There is a theoretical aspect of religion which is theology. It tries to elucidate the many difficult problems which arise from the belief that we as finite men have communion with God, the perfect and everlasting Being. It is a difficult and interesting field of enquiry, similar in many ways to mathematics—which also represents a sustained logical pursuit of a set of very abstract premises. Secondly there is the confessional aspect of religion, that is the belief in God. All theology would be meaningless of course if our belief in God were false. And finally there is the social aspect of religion in that Christian religious beliefs are commonly held by groups of people organized in Churches. The Churches transmit their beliefs from generation to generation, and the beliefs of most Christians are formed in early childhood through their upbringing as members of one or other of the Christian churches.

I have unfortunately no sufficient knowledge of religious history and religious doctrine to describe how the parts played by the different aspects of religious knowledge has varied in the course of time and in the different sections of the Christian world. But there are certain obvious disparities. It is clear that Roman Catholicism relies more on the social aspect of religion, that is, on men's belonging to the church; whereas Protestantism give greater prominence to the individual act of faith. In some periods there was a danger that the essential Christian revelation might become submerged in a flood of similarly sounding but essentially different beliefs. At the time—in the fourth century of our era—St. Augustine and others developed theology to a decisive factor for the guidance of faith. Something similar happened—it would seem to me—in this century, when the dilution of the Christian faith by 19th century liberalism was overcome by the theological movement led by Karl Barth. While these variations in the importance of the theoretical and the social aspects of religion are important, they do not affect of course the decisive position of the confessional aspect. An active faith in God has always been and ever remains the fountain of all religious knowledge.

Here lies the difference between science and religion. A young man can become a scientist merely by joining a university and practicing the methods of scientific thought and scientific enquiry; for in doing so he will unwittingly absorb the fundamental

beliefs that are common to all scientists. In religion things are different. In religion we can hold our fundamental beliefs only by positively confessing them in the form of prayer and worship. No amount of theological learning will make your faith secure and the membership of a Church will not do it for you either. We must struggle for our faith incessantly; particularly today, when religious beliefs are no longer generally held to be true, but when on the contrary in many sections of society a religious believer is looked upon rather as a freak. In such an atmosphere religious beliefs soon evaporate, unless they are constantly replenished by a conscious effort of the will.

The intellectual efforts of the young scientist, by which he acquires the scientific knowledge of nature are thus paralleled by the religious efforts of the Christian by which he achieves—or at least approaches—a knowledge of God. Both acquire certain beliefs for the sake of achieving certain knowledge. The fact that the scientist acquires his beliefs unwittingly which the Christian gains his own in open battle, is certainly important—but it yet leaves the two forms of knowledge standing, on equal footing, side by side.

...

From science and religion let us turn to morality and particularly to civic morality. The successes of science in interpreting the universe have made the modern mind suspicious of religious beliefs and this problem has been with us for hundreds of years past. But the modern mind of today is subject to an even more serious crisis. To religious skepticism which degrades man's individual fate, has been added a moral skepticism which threatens the very foundations of man's communal life.

The modern psychological interpretation of man according to Freud, ascribes all his actions to other than moral motives. His impulses are said to be sheer desires, which are curbed merely by fear of punishment. When punishment is applied from early childhood, fear of it becomes second nature and makes us believe that it is wrong to do the things for which we used to be punished. The ultimate control of our actions remains, in this view, with our desires and fears.

The modern sociological interpretation of man is on parallel lines. It regards movements of history as ultimately determined by other than moral factors. It refers instead to historic necessities. In this view it would be considered unscientific to say (for example) that Hitler's action in launching the last war was evil; or to say that it was right and honourable for Britain to resist him. We should try rather to understand both Hitler's action and the defence of Britain as the result of historic necessities, arising from the prevailing economic and social circumstances—the poverty of Germany and the wealth of Britain, or the like. The difference is then not as between right and wrong but only between "having" and "not having."

A variant of this philosophy, and the most important at the present moment, is the class war theory. In its light, history is merely the life-and-death struggle of classes. As the modes of production develop, there occurs—we are told—a shift in the relative position of the classes and finally a new class comes on top by eliminating the previous ruling class. In this struggle there are no genuine moral motives, arguments can achieve nothing and only by violence can any worthwhile result be obtained.

This interpretation of man and of the history of man threatens—as I have said—the very existence of human society. For society cannot exist without a measure of mutual confidence among men, and men who believe each other to be entirely controlled by desire and fear can have no confidence in one another. Today this destruction of human society has reached the stage at which the continued existence of political freedom is directly endangered by it throughout the world.

A free society can exist only if men firmly believe in each other as essentially moral beings. Free government is guided by discussion; that is its very essence. But how can you argue with people who have no moral conscience? What is the use of appealing to their sense of justice or to their social responsibility? They can neither be expected to respond to such argument nor to believe that it means anything on our own lips. And even if the discussion were only to make statements of facts, why should anybody believe that we are telling the truth? Unless people maintain a considerable degree of confidence in each other's respect for moral standards, there is no common ground between them and any attempt to seek remedy for grievances by appealing to public opinion is as senseless as it is impracticable.

Moreover, without moral confidence between men there can be no government by the consent of the governed. For no government would be trusted not to abuse its position and to relinquish power when consent was withdrawn. And actually, in these circumstances it would be suicidal on the part of the governors not to perpetuate their rule by violence. For they could only expect that once turned out they would be liquidated by their successors. Thus inevitably, once we deny that moral motives play a part in politics, we find that the only possible form of government is by force.

I repeat it: if men will believe that they are mere bundles of appetites they cannot expect to form any human society, and only if we firmly believe in the moral nature of man can we form a free society. And I affirm that this is a proper reason for firmly accepting this belief.

For the knowledge of man is, like all knowledge, threefold. It has a theoretical aspect, which is apparent when we explain history and other human affairs by its light, and it has again its confessional and social side. It requires—as does all knowledge—that we believe in certain suppositions and that we belong to a community sharing those suppositions. And—in this case it is this social aspect which principally determines which knowledge is true and which is false. It is our dedication to the free way

of life which must never allow us to doubt the moral nature of man. It matters little how successful we are in the intellectual sense in applying this belief to the analysis of history, for it remains rooted, and must remain rooted, in the face of any evidence that experience may present, in our resolve to live as free men ruled by reason and justice.

...

To sum up: it would seem to be that the uneasiness of the modern mind in holding religious and moral convictions is due to a false idea of the way to know the truth. No knowledge can be based on pure experience. There can be no science and not even an ordinary explanation of outside events without the previous assumption of certain beliefs. And we cannot believe without belonging to a society of fellow believers. Therefore all knowledge has its theoretical, confessional and social aspects and relies for its truth on all three of them. While acceptance of the validity of science is based on its theoretical successes, the acceptance of religion is based primarily on the power of conscious belief. And again, thirdly, the knowledge of man must rely decisively on the will of men to form a good society—our belief in moral man is primarily expressed in our desire to belong to a society formed by men who believe likewise.

The attempt of the modern mind to judge all knowledge exclusively by theoretical criteria has first shaken religion and then has gone on to threaten the moral basis of society. Against this threat of nihilism we must appeal to a more comprehensive conception of knowledge. Power to explain is only one test and it is insufficient alone to validate any knowledge. A comprehensive threefold test of knowledge restores the position of religion and of moral certitude side by side with that of natural science.

ENDNOTES

¹Thanks to John Polanyi, literary executor for Michael Polanyi, for granting permission to make “What to Believe” readily available (for non-commercial use) in *Tradition and Discovery* and as a part of the collection of Polanyi materials on the Polanyi Society web site.

²This paragraph was crossed out in both the typescript that Polanyi used for delivery and what apparently was his backup typescript with fewer redactions.

³This sentence was marked through in both the typescript that Polanyi used for delivery and what apparently was his backup typescript with fewer redactions.



TOWARD A POSTCRITICAL ECONOMICS: COMMENT ON MICHAEL POLANYI'S "WHAT TO BELIEVE"¹



Gábor István Bíró

Keywords: economic liberalism, fiduciary philosophy, Michael Polanyi, postcritical economics

ABSTRACT

“What to Believe” is an important, short Polanyi piece that illuminates fiduciary and postcritical elements permeating various parts of his scholarship. This paper explores how Polanyi’s message about understanding, believing, and belonging developed in “What to Believe” fits into Polanyi’s economic liberalism. It discusses its relevance for his views about agents, markets, and the desirable methods of inquiry into the economy, and ends with reflections on the seeds of this new perspective in his earlier economics film project and its influence on Polanyi’s concept of economics.

Agents

What follows is an attempt to provide a broad overview of Polanyi’s economic liberalism. Of course, such an overview is necessarily sketchy and does not properly address the details of the analyzed ideas. However, to reflect on the importance of a specific piece in the context of Polanyi’s broader economic ideas seems the most fitting. The key message of “What to Believe” (1947) is that the process of knowing consists of three inherently interrelated aspects: understanding, believing and belonging. One knows something when she understands it in a specific way, believes in a specific set of assumptions related to this understanding, and belongs to a community having similar understandings and beliefs. But what does this mean for the Polyanian interpretation

of economic agents? Is there no such thing as an individual economic agent? Or if there is, can she know anything about the economy without cooperating with others?

Polanyi's first economic writings (e.g., *U.S.S.R. Economics: Fundamental Data, System and Spirit* [1935]) offered a glimpse into the 'driving force' (Polanyi 1935, 85-86), 'spirit' (ibid, 86-87), and 'social consciousness' (ibid, 88) of the workers in the Soviet Union. He argued that people had a social need to know how their everyday activity fits into a larger scheme. The Soviet Union abused this craving and instead narrowly cultivated a red spirit, a sentiment of loyalty to the Communist Party. In contrast, Polanyi suggested developing a 'social consciousness' (ibid) for liberalism that would not tie people to party rule but to their own society. Why is this relevant here? In Polanyi's economic thought, agents decide individually, but their decisions are influenced (although not determined) by social factors (e.g., habits, law, religion). In his earliest writings, such as *U.S.S.R. Economics*, Polanyi described these social factors as affecting what is happening through a 'social consciousness.' 'Social consciousness' creates a sense of community which conditions how a person perceives the world and what is considered rational. Agents having this public spirit are inclined towards seeing and acting in a specific way.

In the forties, Polanyi considerably changed the way he addressed the influence of these social factors on the decisions of economic agents. The key message of "What to Believe", (that is, knowing consists of three inherently interrelated aspects of understanding, believing and belonging [Polanyi 1947, 6]), was a novel way to grasp this social influence. Polanyi's new take emphasized that the *theoretical* aspect of knowing cannot be completely separated from *confessional* and *social* aspects (ibid) and this suggests that social factors always already condition how agents comprehend the economy. This *interpretative flexibility* affects the behavior of economic agents. An agent acts according to her *knowing* of the economy. The *knowings* of agents are variously based on their theoretical, confessional and social commitments, therefore their actions and the standards defining the rationality of their actions are various too. Agents are always already embedded in diverse social niches affecting their behavior.

Polanyi was not only concerned about emphasizing such embeddedness. He was also concerned to show different ways of being embedded. He discussed the dichotomy of *corporate* and *spontaneous orders* to explain how the way of embeddedness affects both the individual and the social outcome of an agent's actions (Polanyi 1951). Polanyi therefore contrasted two kinds of embeddedness: the first has the agent embedded in a social structure having one centre and a top-down way of ordering affairs; the second has the agent embedded in a polycentric social structure with a mutual way of ordering affairs. In the first case, the agent's actions are limited by her superior's commands. In the second, the agent's actions are only limited by commonly established and maintained social constraints applicable to everyone. In the first case, the agent has no power

to define the boundaries of her agency (i.e., to define the degree in which she can decide about economic matters without a direct command from her superiors). In the second, she has such power and she is constantly defining the boundaries of her agency by acting as one of the many centres of the system (i.e., she contributes to the working of the system).

Apparently, Polanyi was not satisfied to emphasize the embeddedness of agents and the main types of their embeddedness. He made inquiries into the various forms of embeddedness in the forties. In *The Growth of Thought in Society* (1941a), *The Logic of Liberty* (1951) and several other published and unpublished materials, Polanyi explored the embeddedness of agents through social *institutions*. He saw some institutions fostering public liberties and others impeding them. Polanyi discussed how certain institutions are used to promote liberty (e.g., the market) and how others (e.g., the law) are abused to become coercive tools of authoritarian régimes. Polanyi discussed various kinds of institutions representing diverse forms of social embeddedness, including habits, social conventions, the market, and the legal environment. But how do these manifold forms of social embeddedness affecting millions of economic agents build a complex whole which is still comprehensible for each agent?

Markets

Institutions are representations of specific social embeddednesses. As representations, they help agents to grasp the essence of what is otherwise beyond their individual grasp. Institutions filter and simplify the personal multiverse of a specific social embeddedness. The comprehension of all economic agents' representations (e.g., how each and every economic agent perceives economic transactions) is impossible, but the comprehension of a single representation of a kind of social embeddedness (i.e., the institution which is commonly called the *market*) is much easier to grasp. Agents make *synopses* about the world (Polanyi 1948a, 2). These synopses are various, personal and only concerned about a small piece but not the big picture. Institutions, like the *market* or the *law*, give a glimpse into the big picture, and by doing so, guide the agents in realms which would be otherwise incomprehensible for them.

For Polanyi, the market is a blend of “three interlocking spontaneous systems” (Polanyi 1948a, 3). People compete with each other as *producers*, *traders*, and *consumers*. Producers compete for sales to traders, traders compete both for suppliers and consumers, consumers compete for products. An economic agent is both a producer and a consumer. Traders act as an equilibrating force helping producers and consumers to reach ‘mutually determinate’ (ibid, 4) equilibria. Traders are supposed to have an equilibrium too, which is, unlike the equilibria of producers and consumers, not natural but derived from the latter two. The market has a system of prices and profit. This system helps agents to overcome their imperfect synopses of actual transactions

by suggesting to them what is going on in the economy in general. The market, as an institution, condenses a vast quantity of information and provides an epistemic anchor for the decision-making of individual agents.

Polanyi considered the market to be the most democratic institution guiding human behavior. The market mechanism, if unhampered, tells the agent how she performs compared to others without stressing any specific opinion. Of course, one who has the money (and power) to purchase more, has more influence on the prices. But Polanyi did not seem to have grasped this insight and neither did he emphasize the possible undemocratic influences of a system of prices and profit. For Polanyi, the market was the symbol of liberty. It was constituted by individual acts, but it was not the result of individual design. Contrary to the state, which Polanyi portrayed as being corrupt and full of errors, the market was an institution of integrity and community wisdom. Polanyi was developing a liberal economics which did not focus on the economic performance of markets, but instead their epistemic performance. Of course, making inquiries into this side of the economy required unconventional methods.

Methods

Mathematics can be used to solve completely formalizable problems. But, according to Polanyi, economic problems do not belong to this group. He called economic problems *theoretically formalizable*, by which he meant that one can set up mathematical models and can speculate about solving the problems by using mathematics, but cannot actually solve them in this way (Polanyi 1951, 181). In the case of theoretically formalizable problems, mathematics can only be used to discover ‘certain logical features of the problem’ (ibid, 178), which makes it ‘significant only in theory, not in practice’ (ibid). What agents do when solving economic problems is make comprehensive judgements. And this cannot be described with the sharpest tools of the best and brightest mathematicians. The ‘balanced assessment’ (ibid, 184) solving a specific economic problem is ‘without any calculation at all’ (ibid). An agent is making a judgement based on what she knows. And what she knows is an amalgamation of the way she understands the situation (understanding), her beliefs about the underlying assumptions (believing), and her attachment to a group sharing these practices (belonging).

While mathematics cannot be used to grasp these pivotal elements of economic life, sociological, historical, and anthropological analysis can. Indeed, Polanyi was making several inquiries using these methods (see Jacobs and Mullins 2017). He excavated the various social factors and historical events leading to the disenchantment of Russian people with capitalism and their support for Soviet planning (Polanyi 1935). Polanyi studied the causes of the declining popularity of laissez faire liberalism which he claimed to find in its insensibility to the problems of laypeople (see Bíró 2019, 17-18). He even used sociological arguments against Oscar Jaszi’s proposal of a supra-national

economic and legal entity: it would not work, because people would not know what to do about it (Polanyi 1941b, 1). The lack of customs and conventions, and the artificial character of the institution suggests it would end up being a dead end. The next section explores how this methodological shift in the forties affected Polanyi's notions about economics.

Economics

Like his brother, Karl, Michael Polanyi socialized economics. But the way he socialized economics was significantly different from Karl's. Karl differentiated between a *formal* and a *substantivist* meaning of economics (Karl Polanyi 1944). The first referred to a discipline explaining how to make rational choices with scarce resources having alternative uses. The second referred to a discipline explaining how individuals and society meet material needs. Michael, however, defined economics as the discipline concerned with the problems of polycentric mutual adjustments, or more broadly, with the problem of organisation (Polanyi 1948b, 1). For him, economics should study the ways in which people solve (or fail to solve) problems of polycentric mutual adjustments.

Michael Polanyi centred his economics on a new insight about knowing, which he most explicitly discussed in "What to Believe." Polanyi addressed how local practices of understanding, believing, and belonging shape knowing. Moreover, he emphasized that from the three aspects of knowing (theoretical, confessional, social), eventually it is the social aspect that 'principally determines, which knowledge is true, and which is false' (Polanyi 1947, 154). The community to which we belong has a defining impact on what we consider to be true and what we consider to be false. While Polanyi was writing in "What to Believe" about knowing in general, this idea seems to be permeating his grasp of economic knowing in particular.

Polanyi was busy reforming the social face of economics from the mid-thirties. He criticized orthodox liberal economists for staying in the ivory tower of academia and building abstract models instead of reengineering their relationship with the general public and delving into the problem of how laypeople get to know the economy. Polanyi developed the first economics film, *Unemployment and Money: The Principles Involved* in order to be able to reach out to the wider masses without advanced background mathematics (see Bíró 2017). But he was not just developing a film. He was very concerned about how his film was being used. His manuscripts about the usage of the new educational film suggest that he based his audiovisual project on the threefold concept of knowing discussed in "What to Believe".

Polanyi did not aim to portray the working of the economy as it was, but to portray the working of the economy as it was understood by a specific economic theory, Keynesian economics. He stressed multiple times that his film portrays economics,

not the economy. This might be seen as the theoretical aspect of his economics project (fostering a specific understanding). He also imagined that those learning from *Unemployment and Money: The Principles Involved* (1940) would have the same assumptions about its content (axioms of the specific economic theory). This might be seen as the confessional aspect of his economics project (fostering specific beliefs). And last, but not least, he imagined that the film would be shown to classes of people forming learning communities, that is, groups of people moving towards a common understanding and shared beliefs. This might be seen as the social aspect of his economics project (fostering specific practices of belonging).

Conclusion

In this reflection on the relevance of Polanyi's "What to Believe" in the context of his general economic thinking, I have shown how the key message of this piece (that knowing is a threefold process of understanding, believing and belonging) affected Polanyi's perspective on economic agents. In Polanyi's view, agents cannot completely be separated from the social contexts in which they are embedded. And, because practices of knowing are various blends of these three elements, so too for economic agents. Decisions of agents are influenced (though not determined) by social factors. The way Polanyi addressed these social factors changed from the thirties (when he focused on social consciousness and the public mind) to the forties and early fifties (when he focused on the social aspect of knowing and social institutions).

I have further suggested how Polanyi's new concept of economic agents affected the concept of markets in Polanyi's economic thought. The market was portrayed as a cluster of three spontaneous orders based on a system of prices and profit which solves the epistemic problem of imperfect information (i.e., diverse synopses of economic agents—a single synopsis providing a big picture). Further, I have shown that Polanyi's unorthodox economics required unconventional methods. Polanyi labelled economic problems theoretically formalizable by which he meant that these problems cannot be solved by using mathematics. In his view, solving economic problems requires the 'comprehensive judgement', the 'balanced assessment' of agents, which can only be discerned by using sociological, historical, and anthropological methods. Finally, I have demonstrated how Polanyi's novel concepts of agents, markets, and desirable methods of inquiry affected his concept of economics and suggested how his economics film project contained the seeds of the key message of his later lecture, "What to Believe."

ENDNOTE

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SCIENCE AND FAITH IN A GAME OF STRATEGY

Marty Folsom

Keywords: Michael Polanyi, Belief, the Modern Mind, Morality, Tradition and Belief, Science and Faith

ABSTRACT

In this article, Michael Polanyi engages a young audience in a confrontation of worldviews. He is resistant to a form of scientific belief that has defaulted to a naturalism that undermines the human experience of social cohesion. He proposes a return to Christian belief to provide a way toward a better future. But has he given us anything to trust in, other than switching parties with whom to affiliate? Does he actually direct us to consider the contents of “what to believe” or contend that we should believe in the Christian community for better moral outcomes? Is Polanyi’s final goal a deeper investigation of “what to believe” or to create a moral outcome he believes is missing? And is morality the final goal of belief?

In “What to Believe,” Polanyi is playing a chess game. He intends to show the tactics of two theoretical opponents who both play with a similar set of rules, namely that humans believe within the context of communities. It is not until the end of the article that we see that the agenda of “winning the game” for Polanyi is to have the listeners believe in a society with a positive moral outcome facilitated by a confident return to Christian faith. We will explore the logic of his game and ask whether this is a goal worthy of science or the Christian faith, as well as ask what Polanyi could make possible in collaborative believing.

To begin, we must clarify the meaning of the title as it sets the stage for the game. “What” one is to believe usually focuses on the content of a specific discipline. In fact,

the form of Polanyi's argument does not investigate the content of any specific form of religious thought. Polanyi appears inclined to affirm the place of Christianity (his hopeful winner), but offers no answer to the question of "what to believe" about the methods or contents of its beliefs. There is no heuristic vision to explore the claims of Christianity.

Polanyi's argument intends to "respond...to the teachings of the Christian religion," but Christianity is not significantly engaged. Polanyi presumed that the mesmerized-by-science audience is somewhat Christian, but tainted by a particular form of modern science. He acknowledges disparities in various forms of Christianity. However, he moves forward an argument that there is an essential theology for the creation of faith. It is this active faith that he sees as the perennial source of religious knowledge. Here we might ask whether Polanyi is employing a tainted form of Christianity whose goal is social morality. Polanyi certainly is not following Barth's scientific, revelational model where knowledge is grounded in God's self-giving. Barth's work was to overcome a Christianity developed through human discovery, the creation of religious knowledge, or any form of humanly-generated faith or morality.

In following Polanyi's chess moves, we might reframe the title as focusing on "what we may believe to become moral together." He proposes that both science and faith base their confessions on discovered traditions, but with different moral outcomes. Thus, his opening strategic move will act to equalize the rules of play; however, he does not yet reveal his preferred outcome.

Polanyi desired a renewal of social cohesion. This is boldly set up over against the grandmaster called modern science whose agenda of skepticism is the threat to be countered. For Polanyi, the individual seeking moral emancipation follows a strategy of self-seeking that develops into a free society that might approximate anarchy. If modern science wins the game, moral society as we know it will unravel. Polanyi argues that we must not naively believe what this form of science has proposed about freedom without seeing the consequences—an amoral society driven by animal appetites. But is this chess game really playing with the best form of either Christianity or science?

The school children¹ or students² who are being addressed matter; they will be influenced by the winner of the game. Polanyi believes they have received a narrowed form of science—the physical sciences taught by atheistic teachers. Polanyi suggests that the teachers have been reckless, with a form of naive neglect. Following the teacher's victory would ultimately result in losing contact with reality—the collapse of human communal life in a stable form. The stakes are high.

Polanyi knows he plays as the underdog. The modern, suspicious mind has permeated virtually every aspect of life, even in children. The modern person wants to be scientific, but Polanyi challenges this "scientific" attitude. His chess move is to undermine the opponent who promises unfettered freedom and to replace it with a freedom

grounded in social solidity and moral stability. But this move seems to approach a stalemate at the conclusion. The onlookers are likely to reject both science and faith in order to pursue power and a place in the world of economic and materialistic advancement. But that is another story.

Beginning with the opening phrase, this lecture presents Polanyi's interpretation of a tension between Christianity and the Modern Mind. But what if the tension as it exists is between the study of objects and the world of persons—the impersonal vs. the personal? If there were no line in scientific discovery between the natural world and personal, is it possible to develop a common community of explorers who learn a relational way of thinking that attunes us to the world we indwell? The absence of this possibility here leaves us in a competitive game. The free society will need to have science and faith integrated in engaging this world that is physical, biological, personal, and social.

Polanyi's first move examines what we believe about death. He proposes to examine the generally accepted belief *that* all humans must die. But the argument shifts us from the fact of death to look at beliefs concerning *why* people die, moving from a simple observation of datum to taking sides in interpretive stances. We are left feeling we must choose a reasonable theory. But that is not Polanyi's objective. His logical move will sacrifice authority so that no one has a privileged position, neither science nor any of the many faith positions. Everyone believes as they do because of the context in which they are educated. But not all outcomes of belief are the same.

With this move, Polanyi has primarily taken away the power position of modern science, which usually enters the game of interpretation assuming superiority. Everyone is now a pawn in the game. Different traditions simply produce diverse beliefs. "What to believe" is what we were handed as children and no one is privileged with a set of correct beliefs to trump others beliefs.

In this exchange, Polanyi gains a way for all persons to hold beliefs beyond the senses—beliefs are simply an inheritance from one's community, not from experience. But Polanyi has maybe gone one step too far. It is not clear that he has left room for a Christian voice to invite people into a moral society, much less a scientific one. He has not built a framework for confident trust in either science or Christianity.

So far, Polanyi has equalized the game board by investing in the indebtedness of all persons to the beliefs of their community. But there is no one to move his agenda forward on the board to champion a society of explorers who could commit to creating a moral society. Polanyi acknowledges the place of the young scientist and the young Christian standing on equal footing, but they appear on opposite sides of the game. As competitors, there appears no reason for the scientist to collaborate with the Christian, nor for the Christian to work with the scientist. The board is equal, but polarized.

The game with competing belief systems appears to have lost contact with reality. We simply have persons nestled into their community with internally shared theories. Each community envisions a different and self-interested outcome of this game. If a moral community is what is desired, I am not convinced we can ever realize that intended end in this environment of competition. Polanyi has asserted the value of moral society, but has conceded that science will not get us there and I am not convinced we are justified in hoping for more from a Christian believer or community.

In the game Polanyi is playing, we do not end up with any heroes of science put forward, nor any vital Christian leadership. The question we need to ask to achieve Polanyi's goal may not be "what to believe?" but rather "in whom might we believe?" Who is capable of creating an appropriate theory, practice, and community to create a different future? There are good reasons not to trust some scientists; they are only human, and morality is not their focus. But there are some scientists, like Einstein, who appear to be visionary in a transformative exploration in science, including the valuing of a good society. We need to have confidence, not only in what we believe, but in whom we might follow in shaping our beliefs for an appropriate goal as humans.

As described, modern scientific believing gives us no chess moves for working together, only tools for separately achieving the fulfillment of individualistic desires. This was evidenced in the mindset that led to tragic wars and political turmoil where science was used to conquer for immoral ends. That was a game where everyone lost. Science alone cannot provide a moral world in which to live.

Polanyi's game proposes to bridge between science and Christianity, yet it still reveals that there are two teams with different belief systems. In a nutshell, both science and Christianity begin with a game plan (theoretical aspects), but the two communities do not acknowledge commonality in their distinct theories. Based on their theories, each team develops a set of rules to play the game together as a team (confessional aspect), but not with others; their rules are intramural, not extramural. The result is that there are certain players who can enter their game, but they are then excluded from others' games ("believers" belong, nonbelievers are barred).

The situation is such that both science and religion exist as particular cultures with traditions for shaping young intellects *separately*, not to play together. For Polanyi, this means that the free society will require developing a positive relation between science and religion that is based on a common belief that appears to be missing.

Due to the influence of Freud, the developing psychological view has reduced the motive life of humans to animal desires. Consequently, as each person pursues their own interests, the culture fragments and the possibility of being a free society is forfeited. Though not mentioned, Polanyi's hope is sabotaged by a Christianity that traded in morality for influence, as well as those forms of science that became so focused on the objective world that they lost touch with humanity.

The modern world cannot in actuality go back to a unified reality based on a common theory in the modern context. Even belief in reason and justice have been exchanged for indulgence in individual appetites. Confessions that once bound humans together are traded for doubt and self-rule. The community of humanity is unraveling. The good society is fading. The foundation for a moral community appears threatened with diminishing Christian belief, and even this institution has imploded in polarized belief systems we cannot take time to dissect here.

In his lecture, Polanyi placed a lot of hope in Christian theology without specifically addressing its methods or content. If Polanyi had followed Barth, he would have affirmed that proper theology is based on evidence that God exists—especially in the person of Jesus. Instead, Polanyi proposed working with a Christianity based on a belief system as a set of confessions, energized by human faith. But later generations desired another kind of freedom that was not merely theoretical and did not require belonging to a team with constraining practices. They resisted being told what to believe or what they were allowed to discover. Something new was needed.

Renewing community requires appropriate leaders. This has been true in both science and Christianity. We need grandmasters to apprentice younger generations into authentic community, not just religious morality. And if we are going to have authentic Christianity, we need to engage a living God and not merely a shared, theoretical belief system. Polanyi appears to have skipped God and the Bible and focused belief on the church and its traditions. This moral ideal ends up losing contact with reality. Polanyi builds his moral possibility on the will and faith of humans. In confessing and gathering, members of a group merely struggle together by a conscious effort of the will.

Polanyi made a fatal move in pursuing a civic morality in his strategy. This modern ideal lacked players to actualize that goal. Church history demonstrates largely unsuccessful attempts in creating a moral society. At its worst, Christianity has created inquisitions, crusades, and the Dark Ages. At its best, it has created universities, hospitals, art, and great literature. These were valuable, practical outcomes that contributed to society, but did not control the end game. Controlled morality is always problematic as a form of idealism that looks for servants to fulfill its mission.

The idealism of three big players created the modern mindset that Polanyi is facing. They separated science and Christianity, abolishing religion as the means to the ideal. Freud attacked religion as the human projection of an illusion, thereby creating God. His “scientific” alternative created the psychology of individualism. The moral consequence was a default to human desire that lost the cohesion of community. He rejected a false Christianity, but replaced it with a form of “science” that neglected the personal as a way of being together.

Marx critiqued the false economic structures that were supported by Christian suppositions, but were ultimately revealed as an abuse of power. In equalizing the

economic structures, a communism developed that threatened the particularity of persons, resulting in a morality that had tragic consequences. A “science” of economics created an impersonal system held together by power and neglecting human dignity.

Nietzsche unmasked the moral prejudices hidden under Christian presentations of society. Those pursuing goodness were revealed as a threat to society, at play in their “will to power.” His “science” was a sociological critique of false Christianity, but also standing against all who would propose the virtues of morality. This paved the way to skepticism of all reason and shared morality. This left humans exercising a self-serving “will to power” in a meaningless world. This did not serve the field of the personal, nor science, in serving humanity in the complexity of personal existence.

The practiced forms of individualism, communism, and nihilism became destructive of personal knowledge and fulfillment in community. These ideologies created the Modern Mind, and did not fulfill what Polanyi envisioned. They brought damage to fragile forms of Christianity. Polanyi wanted to change the game here, but he did not quite make it.

Instead of setting religion and natural science against one another, or working independently, he needed to see collaboration as the new game. In chess images, that might mean that both “sides” commit to work together in such a way that *all the pawns* become queens. If each person committed to move so as to transform as many of each other’s pawns as possible, a shared win could become the goal. In the end, the game would portray success when the combined set of queens was maximized. Mutual consideration would become the new morality.

Played out in the “science and faith” game, Christian leaders would need to affirm the place of science in studying and caring for persons in the field of the personal *and* the physical. Scientists could affirm Christian thinkers in the science of the personal regarding how we love the world created by God, care for neighbors, and for ourselves. With each empowering the other, all pawns (participants) become queens (maximally empowered for contribution), able to become that community of explorers discovering together what is possible. Working cooperatively, without ideals of morality, contact with changing reality becomes possible. This strategy could develop into a different game plan, with an indeterminate future, within the purposes of a loving God.

For Barth, and later T. F. Torrance building on Polanyi, the reality of God precedes all human confession and theological thinking. Revelation creates the place of focal concreteness within the subsidiary of the world; consequently, we indwell God’s self-giving. This indwelling produces forms of relatedness not natural to the human.³ Within this context, science and faith could form a wise society.

Both scientists and Christians exercise “faith seeking understanding” within their field of knowing. Both are reasonable insofar as their findings actually reflect on the one reality witnessed to within their community. They are equally investigations made

by persons, within traditions, requiring commitment, and developing skills to continue as active discoverers.

Polanyi's insights urge us to belief that makes a difference in the world. For that task, we need the communities of science and faith on the same team. In these rich communities of belief that serve humanity, we need faith as attunement to reality and our beliefs about all its dimensions. Both science and faith can help uncover vast fields of what is to be known. Ignorance of the other, for either discipline, is disastrous.

Polanyi points the way to a conversation between science and Christianity yet to be realized in creating a collaborative future. He is right in assessing the erosion at the base of human belief systems. He opens doors that have yet to be explored in knowing what (and whom) to believe.

ENDOTES

¹Scott and Moleski, (2005, 203, n. 151) suggest that this was given at the Manchester Grammar School, referencing a letter dated May 6, 1947, to Wedgewood that "The school children...have the advantage of not being surprised by anything, so one can seriously discuss with them the more heretical views without any false note of paradoxity." The letter would be subsidiary evidence that children formed the audience.

²The S.C.M. at the top of the lecture notes suggests an older group of students in the Student Christian Movement.

³Torrance (1969, 29-30) affirms Polanyi's position of our relation to reality so "that we are ready to *let it speak for itself..*" (Italics in original).

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FULL EMPLOYMENT AND THE CRYPTOCURRENCY ECONOMY: LESSONS LEARNT FROM MICHAEL POLANYI



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Keywords: Bitcoins, circulation, digital economy, full employment, Michael Polanyi

ABSTRACT

Cryptocurrencies present a disruption to financial institutions, investments, and markets. Should governments therefore allow cryptocurrencies or ban them? How will they affect the flow of money? What form of economic justice should the cryptocurrency market adopt? Who should be involved in the determining of the economic justice? I claim that Michael Polanyi's theories about employment, money, trade, and his overarching sociotechnical vision of society and the economy can help us understand the current labour market challenges and solutions in view of the digital economy.

Michael Polanyi, a polymath and a chemist-turned-social scientist, was well ahead of his time. He wrote *Full Employment and Free Trade*, published by Cambridge University Press in 1945, an American edition of which came out in 1947, where he achieved the integration of Keynesian and Monetary Economics long before its achievement in the 1970's (Roberts and van Cott 1998). His theory was written with the traditional economy in mind. However, the 21st century has seen the rise of cryptocurrencies. Cryptocurrencies have caused a huge disruption to financial institutions, investments and markets. This has prompted many governments to consider whether there is a need to ban or regulate cryptocurrencies (*Business Today* 2019; Chan 2019). I argue that Polanyi's economic synthesis is useful to understand the regulation of cryptocurrencies such as Bitcoins, because he defends both arguments, that the state should

intervene to boost employment, and yet at the same time uphold the liberal concept of a free market economy and self-regulation, combining Keynes, (1932, 1936) and Hayek's (1941) approaches. Polanyi's understanding of the mixed concepts of economics is useful for understanding why cryptocurrencies should be allowed to flourish without the state banning its evolution, since they will create new jobs. The role of the state however is to take on a proactive role to ensure that free market enterprise is possible while limiting criminality.¹

Michael Polanyi's Economic Theory

In the preface of his book, Polanyi (1945, v) writes: "Keynesian economics must be made simpler and cleaner," and argues that the state can be proactive about creating a healthy economy to foster jobs, without needing to put in place centralized planning and controls that stifle free-market enterprise. However, Polanyi does not fully adopt a Keynesian perspective on economics (Festré 2018). His theory is a synthesis of Keynesian and monetarist economics, which is associated with Milton Friedman (Mirowski 1998). Unlike Keynes, Polanyi thinks that long-term monetary policies are able to resolve problems of unemployment (Festré 2018).

Polanyi (1945, 1-66) outlines his theory of full employment in the first chapter of the book, starting with the Money Circle, which refers to the cyclical process of the movement of money from the spender back to the spender, with portions going to various stakeholders involved in the same process such as retailers, manufacturers, and primary producers. However, this representation works on the assumption of immediacy in spending, wage-paying, and other production costs involved. It does not take into account many other factors where money might seep out of the circle, such as in private savings and business investments, nor external parties not privy to this circle such as the state, which demands taxes and public expenditure (this is considered and discussed later in the book). In order to include employment in this scheme, the impact of increased and decreased expenditure on businesses has to be considered. This is where Polanyi's Money Belt representation becomes relevant.

He describes a variable Money Belt regulating levels of employment, visualised as a revolving belt passing through both homes and businesses and with a width that expands and contracts. The width of the Belt at any time represents the level of employment – during full employment, the Money Belt is equal in width with homes and businesses. Depression, represented by a narrow width, is the zone in which the Belt does not traverse all homes and businesses, and employment is available only to those engaged in production. Conversely, a Belt that is wider than both homes and businesses points to a critical point in the availability of jobs, which are not being taken up. In this case, full employment is still achieved but the level of production does not expand

further, and this results in inflation (Biró 2018; Festré 2018; Polanyi 1945; Roberts and van Cott 1998).

This model is concerned with the amount of money that is either injected or withdrawn by private individuals and state-led authorities. Polanyi argues that controlling the money stream would affect employment, and any money that is withdrawn or spent should be balanced with new investments, so that the Money Belt stays wide, which he believes supports full employment. However, the new investments should not cause the Money Belt to widen beyond the critical point where it exceeds homes and businesses. The budget deficit, the expenditure by state authorities that is not covered by taxation, is shown to have a similar effect as expenditure on new investment. Hence, he supports filling the gap caused by the budget deficit through both public and private investments (Roberts and van Cott 1998). Polanyi emphasizes that a steady level of employment can be achieved by balancing savings and investments, but he warns that the circulation should not be too high to cause inflation.² That said, Polanyi notes a self-regulating mechanism that is akin to the human body's process of homeostasis: an excess in savings or investment will set in motion countermoves in an attempt to right the system (Polanyi 1945). This is a self-sealing gap, a set of counter-forces, which limit the reduction and rise of the monetary circulation (Biró 2018; Festré 2018; Gilbert 1946; Roberts and van Cott 1998). Full employment is achieved by filling the gap, which appears when savings exceed new investments when full circulation is maintained. Polanyi suggests that the state should have a role to play in filling the gap, by using expenditure from a budget deficit that is as substantial as the difference between savings and investment at full circulation. In line with Keynesian economics, he also argues that the state has a part to play in maintaining effective demand, by providing necessary conditions for private enterprises (Festré 2018; Mullins 2013; Polanyi 1945). This is to help bring about a full employment policy (see Beira 2018 for details on Polanyi's diagrams; Gilbert 1946).

Relevance to Cryptocurrencies

The recent popularity of Bitcoins has caused frenzied buying and has many governments and financial institutions seriously worried about taxation, money laundering, and disruption of the financial system. The Bitcoin, said to have been invented by Satoshi Nakamoto in 2008, is a worldwide, decentralized, anonymous virtual cryptocurrency that uses peer-to-peer technology to manage transactions, without traditional middlemen of banks or central authority (Bitcoin n.d.; Patron 2014; Yermack 2013). The first transaction in Bitcoins took place in 2010 (Gray 2017). In the place of the traditional middleman is a blockchain or a public ledger. The process of using the computing power of specialized hardware in exchange for rewards is called "mining" (Bitcoin n.d.). While the Bitcoin is by no means the only public ledger platform, it was

the first as well as the best known, and as of 2014 also the largest (Evans 2014). Bitcoin circulation has been experiencing a linear increase, and as of June 9, 2018, 17,084,788 Bitcoins were in circulation (Blockchain Luxembourg S.A. n.d.).

Although cryptocurrencies are designed to be digital money, it is not immediately evident that they can serve as money in the same I would consider fiat currencies. For cryptocurrencies to be relevant to Polanyi's theory, the functions of cryptocurrencies as money need to be considered. The three traditional functions of money are: medium of exchange, a store of value, and unit of account. It is hotly debated whether cryptocurrencies fulfil these functions of money. Saifedean Ammous (2018) argues that although cryptocurrencies are often used as medium of exchange, due to their general inability to effectively function as store of value and unit of account, it is difficult for cryptocurrencies to be regarded as money. Ammous identified the Bitcoin as an exception to this, which could possibly become regarded as important as fiat currency in the future. The perspective that Bitcoins could become regarded the same as fiat currency is shared by Lawrence White (2015). White argues that the Bitcoin fulfils all the tradition functions of money. As long as there remains trust and some demand for Bitcoins, it would be able to function similarly to money. This trust and demand can be seen from its acceptance as a mode of payment in many MNCs, including Baskin-Robbins, Whole Foods Markets, and (unofficially) Starbucks (Castillo 2019). Moreover, in October 2015, the Court of Justice of the European Union ruled that the exchange between the Bitcoin and fiat currencies is exempted from value-added tax, while value-added tax still apply to transactions made with Bitcoins (Court of Justice of the European Union 2015). This ruling effectively regards the Bitcoin as a currency similar to fiat currencies. Therefore, even though cryptocurrencies are not universally recognised as equivalent to money at the moment, they can fulfil the same functions as money with increased trust in them, thus, we need to consider their impacts on employment.

Where does the Bitcoin fit into the discussion on employment? One observation suggests a possible causal relationship between both: an increase in cryptocurrency-related jobs following the entry of the Bitcoin and other cryptocurrencies. Employment marketplace Freelancer, which connects employers and freelancers globally, saw a spike of 82 percent in cryptocurrency-related work in the third quarter of 2017. Such work includes designing new cryptocurrencies and developing plans for technologies that use blockchain, such as the Bitcoin (Lin 2017). The introduction of these new forms of currencies have provided employment. In January 2019, post-crash of the cryptocurrency market known as the "crypto winter", the Crypto Valley in Switzerland still contributes to more than 3300 blockchain-related jobs (CVVC 2019). The correlation between the increasing supply of cryptocurrencies and job opportunities suggests that Polanyi's theory is highly applicable.

Feasibility of Cryptocurrencies

The ease of cryptocurrency transactions with the accompanying promise of freedom from worries about security has the potential to have a significant synergy with the increasing ease of quantification of data that increasingly cheap and fast technology is likely to produce in the foreseeable future. This bodes well for the uptake of cryptocurrencies and is likely to lead to positive externalities that will aid in the adoption of cryptocurrencies as societies everywhere move further in the direction of the frictionlessness of what Zygmunt Bauman described as “liquid modernity” (Bauman 2000). What potentially complicates this picture, however, is that there is an apparent difference between the rhizome-like network structures of interactions, free from centralized authority, as envisioned by Deleuze and Guattari (1987) as underwriting the smoothness of social interactions and transactions in their conception of society, and the top-down, centralized structure of monetary currency, which typically tends to operate by fiat (at the instruction of a central government and a central bank)—and are, in fact, therefore called fiat currency.

The problem here is twofold. Firstly, there is the practical problem that, in spite of its ease of use, cryptocurrencies will not see adaptation unless there is an incentive for people to use them. And since what gets accepted as legal tender tends to be decided by fiat by national governments, one can therefore safely suggest that cryptocurrencies will not see much uptake unless there is a significant incentive for national governments to encourage their use. However, there does not appear to be such an incentive, given that national governments are unlikely to want to lose the near-total control over monetary policy that they currently enjoy with fiat currencies in use (Milutinovi 2018). Secondly, even leaving aside this practical problem concerning the adaptation of cryptocurrency, and even assuming that national governments do not actively discourage the use of cryptocurrency, there is the question of why, affectively, individual citizens would want to start using cryptocurrency; while the macro-scale, society-level advantages to cryptocurrency use may be apparent, an individual citizen does not alter his or her behaviour altruistically simply for the sake of some perceived social good unless there is a payoff, whether economic or affective, for him or her to make that behavioural change (Adamus 2017).

With regard to the first question, the best I can do is to note that the economic benefits of the adoption of cryptocurrency are likely to outweigh the loss of power that the State will undergo as a result of relinquishing the kind of control that it tends to have over fiat-based currency. Since economic benefits accruing to all citizens do enhance the prestige and legitimacy of the state, one can cautiously wager, perhaps, that the State, faced with such a choice, would make decisions on the basis of enlightened self-interest. One possible route towards adaptation could, perhaps, even pass through the following scenario: various communities first start to use cryptocurrency locally

and at the community level, and the State then eventually steps in and regularizes a *de facto* use of cryptocurrencies into a *de jure* use. One may note, in this context, that certain communities have already started to adopt blockchain-based solutions as early adopters, such as the Inuit in Rigolet, Labrador (Scott 2018). It is clear that there are benefits to adopting cryptocurrencies as a community.

The second question, however, is much more intriguing: namely, what could be the affective reasons as to why *individual* citizens would prefer cryptocurrencies, and switch? After all, for an entire community to make the switch to cryptocurrency, each individual in the community has to individually make the switch. Frédéric Lordon's recent suggestion as to people's motivation for work in the contemporary world may be of relevance here. Lordon has suggested that post-Fordist capitalism operates beyond the logic of alienated labor. Lordon believes that capitalism has, instead, succeeded, to varying degrees, in enlisting the human capacity for creativity and unalienated, entrepreneurial activity and in turning human subjects into joyous "automobiles" that are "collinearized", that is, in alignment with the logic and goals of capital (Lordon 2014). Lordon's argument is that, to the extent that the tendency towards general frictionlessness in capitalism is internalized and becomes a predisposition, it becomes more likely, arguably, that the payoff for an individual in adopting a solution that promotes such frictionlessness is collinear, that is, consistent with the payoff for society as a whole. In her recent work, Shoshana Zuboff also makes a similar critique, pointing out that capital is subjecting human experience to the extraction of value (Zuboff 2019).

While it may seem counterintuitive to argue using Lordon's or Zuboff's conceptual apparatus for the social benefits of cryptocurrencies and blockchains, given that Lordon and Zuboff themselves use that apparatus in the service of what is really a critique of contemporary capital, it is not as surprising as it may initially seem. As I noted earlier, it is entirely possible that a communitarian use of blockchains and cryptocurrencies could develop organically, and that such a community-based trajectory, proceeding in a bottom-up fashion, could well enable communities, rather than corporate capital, to shape decisions regarding its use. The possibility of such scenarios deflects the sharpness of the criticism that Lordon and Zuboff mount with the help of their conceptual tools. Thus, to make use of conceptual apparatuses like those of Lordon and of Zuboff against the grain, so to speak, in connection with cryptocurrency and blockchain is not, perhaps, unjustified. Just as affective capacities can be captured with the purpose of enlisting human drives and desires in the service of capitalism, these capacities can also be captured in a context that is conducive to communitarian cooperation. The success of blockchains and cryptocurrencies in alleviating unemployment rather than exacerbating it will depend on the extent to which the uptake of cryptocurrency follows a collaborative effort by communities and the state. Collaborative consensus is needed to build and enable the necessary economic and human resource infrastructure that

empowers citizens and institutions to adapt to the use of cryptocurrencies should they choose to. This idea of collaborative consensus is linked to the idea of ‘public power’ (Festré 2018). I argue that collaborative consensus adds to ‘public power’ and makes it ‘public empower.’ Let us discuss the role of authorities in this process of empowerment.

The Role of Authorities: Creating a Regulatory Framework and Understanding the Economic Implications of a Market You No Longer Control

Polanyi (1951) believes that people should be given the freedom to seek their own aims to maximize efficiency in completing tasks. However, this level of freedom depends on the task at hand. In the case of the economy, Polanyi’s idea is that the economy is best performed by having multiple economic centres, which independently carry out economic operations, an idea known as polycentrism. The producers of goods in a market economy will adjust their efforts in response to the actions of other producers and consumers. Through aiming to maximise their own individual profit, they would also create a more efficient economy through the spontaneous ordering of individuals (Jacobs 1999). However, Polanyi did not believe in unrestricted freedom of the individual in an economy. There needs to be some form of cooperation between the various members in society to maintain the system. This is achieved through ‘public power’ which controls the economic institutions (Festré 2018).

How extensive should this control be? Polanyi (1945) argues that the control should be minimal to allow maximal circulations of goods, but ensure that the financial stability of the economy is not endangered. This includes the control of speculative areas of the economy (Festré 2018), which includes cryptocurrencies. Industry insiders such as JPMorgan Chase CEO Jamie Dimon and Ray Dalio from Bridgewater Associates are openly critical about bitcoins and digital currencies in general, with the former calling it a “fraud” and believing that it will eventually be closed down, and the latter suggesting that it is just a “bubble” because of its volatility and it being a speculative market (Imbert 2017; Kim 2017). The speculative nature of cryptocurrencies thus warrants some form of regulation through “public power.” In fact, regulations of cryptocurrencies already exist in most countries, even those who take a liberal standpoint towards cryptocurrencies. These regulations in liberal countries are generally against the illegal use of cryptocurrencies (Jia and Zhang 2018). In contrast, countries such as Russia implement a direct ban of cryptocurrencies due to the fear of the financial instability it would cause (Jia and Zhang 2018). However, the outright ban of cryptocurrencies would be damaging to the employment that cryptocurrencies can provide. Although there is no definitive cause, worries about regulatory crackdowns have often been cited as a key reason for the crypto market crash in January 2018 (Williams-Grut 2018). China’s release of information on severe regulation and ban of cryptocurrencies have

similarly invoked a crash in the market (Chan 2019). Therefore, I propose a moderate approach in line with Polanyi's thoughts (1945) to maximise the beneficial impacts of cryptocurrencies. The authorities should provide the necessary infrastructures to allow individuals to utilise cryptocurrencies to establish new economic centres, while regulating the criminality and speculative nature within the system.

Polanyi concludes his book with a few observations. Firstly, the 'principle of neutrality' states that the government's expenditure of money does not burden the national economy (Biró 2018; Festré 2018; Gilbert 1946; Roberts and van Cott 1998). Investing in digital currencies should follow the same underlying principles that rule the creation of a larger monetary base. In the end, cryptocurrencies alter the amount of money in the economy, the same way a central bank alters the amount of money in circulation by issuing more legal tender currency. Gilbert (1946) expands on Polanyi's point: when there is a gap created by savings exceeding new business investments, full employment is not achievable. On a purely speculative note, mining bitcoins and hoarding them for pure speculation will not contribute to alleviating unemployment. The bitcoins should be put in circulation for them to have an effect in the real economy. Regulations should point in this direction.

Polanyi's full employment policy thus entails a budget deficit, created by reducing taxes while maintaining public expenditure at an appropriate level in view of the national income at full employment. However, to maintain full employment, Polanyi believes that the stimulation of private investment as well as the reduction of savings should not take place; the full employment policy should be carried out neutrally in what is known as the 'principle of neutrality.' According to this principle, monetary and budgetary policies that manipulate the quantity of money circulating in the economy will prevent full employment (Festré 2018; Gilbert 1946; Mullins 2013; Roberts and van Cott 1998). But now with cryptocurrencies the authorities cannot control the amount of money that is released to the economy. Thus, the economy is at a greater level of instability. The only thing that can be done from the institutional perspective is to set up an adequate regulatory framework that becomes an invitation for non-speculative investors. In other words, any regulation has to enable, rather than disable, free market enterprise in line with Polanyi's economic synthesis.

In addition, in line with Keynesian economics, Polanyi argues that the state has a part to play in maintaining effective demand, by providing necessary conditions for private enterprises (Mullins 2013). This is to help bring about a full employment policy. The Keynesian notion of chronic depression is one where the rate of investment falls as capital approaches saturation, while saving rates increase with increasing national income. A gap is created when business investments decrease, and savings accumulate—but this gap is self-sealed by the downward pressure on national income.

Polanyi believes that this situation of chronic depression had plagued Great Britain and the USA for some time in the past.

In looking at full employment in Soviet Russia, economic expansion for war and internal problems of full employment, Polanyi (1945) points out that the government, in trying to establish full employment, faces the difficulty of determining the level of monetary circulation that will involve a large enough size of the national income to create the fullest possible utilisation of the country's resources, yet a level of circulation that does not threaten financial stability (Festré 2018; Gilbert 1946). The problem now is that we cannot control the amount of money in circulation, since the creation and circulation of the bitcoin and all the other cryptocurrencies might be undetected by regulators. In this case, authorities need to follow very closely the evolution of the cryptocurrency supply and its latest developments with a view to converse with user communities and be a catalyst for new forms of employment and uses that cryptocurrencies might generate.

Economic Justice: Complications to the Role of Authorities

Polanyi's economic views are based upon his sociotechnical vision. He believes that there is a need to empower the public on economic issues in order to facilitate an appropriate economic system and economic justice (Biró 2017). According to him, Keynesian economics is compatible with multiple "standards of economic justice" (Polanyi 1945, 146). Thus, the structure of the economy and the form of economic justice within a society is predicated upon public opinions (Biró 2017). The state should be present only to provide the required infrastructure. The empowerment of the public is such that public opinion should sway the social and legal framework established around the economy (ibid). Polanyi thinks that public opinion should be shaped by democratic processes involving those who understand economic matters (Polanyi 1937). He believed that the crux to resolving the dilemmas of the economy and the social consciousness against liberalism involves the need to promote a popular understanding of economics (Biró 2017). Viewing this in relation to his perspectives on polycentrism suggests that members of each democratic state should be allowed to determine their own forms of economies and economy justice.

However, this story becomes more complicated in the case of cryptocurrencies. Cryptocurrencies are global and are not bound by national boundaries. Thus, the community that can be affected by cryptocurrencies is essentially the entire world. In this case, it becomes difficult to consider the one form of economic justice that should persist in relation to cryptocurrencies. Thus, we need to consider two fundamental questions about economic justice in cryptocurrencies. Firstly, is it reasonable to speak about a universal economic justice for cryptocurrencies, and if so, what form of

economic justice should cryptocurrencies adopt? Secondly, who should be involved in the determining of economic justice for cryptocurrencies?

Let us consider the Bitcoin to address the first question. Since its inception in 2008, Bitcoin has been the most popular cryptocurrency (Bitcoin n.d.; Patron 2014; Evans 2014). This has created millionaires who had fortunately made some sums of investments early on in Bitcoin (Mahdawi 2018). More generally, cryptocurrencies have also been related to the rise in employment (Lin 2017). The economic impact of Bitcoin on society is undeniable. Yet, who truly benefits from the Bitcoin? Across the world today, we see various forms of economic justice being adopted with a variety of capitalist economies (Coates, 2005). The conflicting perspectives towards economic justice will prevail even in the case of cryptocurrencies. The choice of the right economic justice that fits all can be challenging. Instead, I will consider the current form of economic justice that cryptocurrencies appear to hold. The occurrences of some people earning a fortune from Bitcoin investments (Mahdawai 2018) suggest that perhaps cryptocurrencies can be rather fair, allowing individuals across different economic classes to gain possible access to fortunes. However, these cases are rare. On the contrary, cryptocurrencies tend to make the rich richer. In the case of Bitcoin, one prominent characteristic is that Bitcoins can be mined (Bitcoin n.d.). By investing computational power, people are able to earn Bitcoins as rewards. However, this process is costly and biased towards those who are educated and rich. In order for people to earn Bitcoins through mining, one has to be the first to provide the correct answer to a numeric problem (Hayes 2019). Unfortunately, the process gets easier with the use of equipment of higher computational powers (*ibid*). In such a way, advantaged individuals are allowed to gain much more from Bitcoins than the poor. This goes against Polanyi's vision of a liberal economy. Polanyi (1937) perceives economic inequality as a flaw in economic liberalism. His vision for a liberal economy includes the government financing public goods and services, and the intervention of the government to alleviate social issues such as poverty (Festré 2018). Thus, authorities might have to consider redistributive policies. For example, states can consider imposing taxes on earnings made from investments in cryptocurrencies, in contrast to the ruling from the Court of Justice of the European Union (2015). However, it can be difficult to track the earnings from cryptocurrencies. Unlike traditional investment media, cryptocurrencies are based on the blockchain technology that make the tracking of the currencies difficult. Furthermore, some forms of cryptocurrencies like the Bitcoin are decentralised and there are no overarching laws or corporations that oversee its flow (Bitcoin n.d.; Patron 2014; Yermack 2013). These challenges make the role of the authorities even more difficult.

With such far-reaching economic impact across the world, Polanyi's (1937) view suggests that everyone in the world has a stake in determining the economic justice of cryptocurrencies. To tackle this, we can consider international organizations as a

possible authority to oversee cryptocurrencies. In line with Polanyi's vision, international organizations might have to provide education on economics in order to create an informed public and utilize democratic procedures such as referendums to decide on the prevailing economic policies surrounding cryptocurrencies (ibid). Nevertheless, the reality is that cryptocurrencies are being tackled differently by different states, despite the global nature of cryptocurrencies (Business Today 2019; Chan 2019). This could become problematic if states start to adopt regulations in order to utilize cryptocurrencies to further their own interests at the expense of others. For example, the majority of the cryptocurrencies in existence are using the US dollar for the exchange rate (Bitcoin n.d.). This will increase demand for USD. States might become tempted to use regulations on cryptocurrencies to enforce a market exchange with their own state currencies in order to increase demand for the currency. Polanyi (1945) warns against the possible problems that may arise when states start to adopt strict regulations in order to manipulate the economy to benefit their own interest, as he posits that no one should be overly benefitted or harmed in the regulation of currency in the economy. Only by separating the economy and politics can a liberal economy be effectively implemented (Gulick 2017).

The algorithm economy has become both the driver of innovation and is also being driven by innovation. It is taking over many aspects of how we work, play, and even live. It is, however, more difficult to imagine the impact of subversive uses of computer coding in the remaking of money and currency exchange. Speculation about Bitcoin and other cryptocurrencies has escalated globally. Cryptocurrencies work on trust of its creators and referral systems. It may either fall through or fizzle out, or it will become the biggest disrupter of the flow of money the world has ever seen. Some companies and countries ban it, and others embrace it, because they know that if they do not embrace it, their business might be eventually disrupted. As of now, currency exchange markets regulated by central banks and governments still largely control us. While cryptocurrencies are too hard to supervise or to be banned, governments need to ensure that full employment and free trade is possible despite technological disruptions. Despite the possible worries about the unknown future and the difficulties of supervision and regulation, the relevance of Polanyi's economic theory provides us with relief. By providing the freedom to actors, the economy will be able to experience readjustments as producers and consumers interact (Polanyi 1945). Nevertheless, we cannot deny the importance of the authorities in maintaining the system. In the era of the fourth industrial revolution, authorities face greater levels of challenges in assuming their redistributive and regulatory roles. Moreover, in the search of Polanyi's (1937) vision, authorities may have to adopt a new informative role to enlighten the people. Public policy needs to catch up with technological advancements for the continued smooth functioning of the algorithm economy.³

ENDNOTES

¹Festré (2018) provides a detailed analysis of Polanyi's synthesis of Hayek and Keynes. He also states, "it is beyond the scope of this paper to analyse the proximity between Hayek's and Polanyi's visions of tacit knowledge. As well documented by the secondary literature, Gestalt psychology provided a common philosophic background. See Mullins (2010) for Polanyi's use of Gestalt psychology and De Vecchi (2003) for the place of Gestalt psychology in the making of Hayek's thought" (Festré 2018, 3).

²Gilbert (1946) provides a detailed analysis of Polanyi's economic policy.

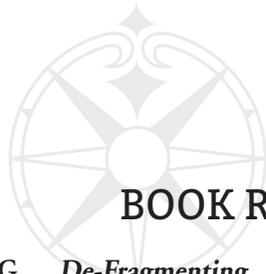
³I would like to sincerely thank Professor Marta Rota Felis, Dr Sayan Bhattacharya, and Mr Tony Tan for their comments on earlier drafts. This project was funded by SRG MOET1, Grant/Award Number: T1SRHA17125

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BOOK REVIEW

Tyson, Paul G. *De-Fragmenting Modernity: Reintegrating Knowledge with Wisdom, Belief with Truth, and Reality with Being*. Eugene, OR: Cascade Books, 2017. Pp. 119. ISBN 978-1-5326-1466-8. \$35.

The title, subtitle and a blurb on the back lured this Polanyian to take a closer look at this concise, clearly written six-chapter book by Paul Tyson, the director of an interdisciplinary center focusing on science, religion, and society at an Australian university. Tyson here sharply criticizes the patterns of thought predominant in modernity and proposes a recovery of an ontological perspective. Some themes here are akin to those also found in Polanyi's writing in the middle decades of the last century, but others are strikingly at odds with Polanyi's philosophical perspective.

The brief opening meditation considers the "technological grid" (2) through which modernity's problems and solutions are conceived; this view often mis-identifies fundamental matters. Tyson's discussion is somewhat reminiscent of Polanyi's account of the problematic dispositions of the modern mind. He straightforwardly claims that ideas are important in modernity: we need "to change our way of life at the level of its primary assumptions, rather than

just trying harder to solve existing problems" (8). Like Polanyi, Tyson zeros in on the "modern crisis." Polanyi focused on the ways in which Enlightenment ideas evolved in modernity, fusing objectivism, scientism, violence, nihilism, and totalitarianism. Tyson focuses on the ways in which ontology was undermined in the late medieval period, preparing the way for today's fragmented late modernity in which "being" now "has very little meaning to us *because* of how we understand knowing and believing" (7). His book proposes "being, knowing and believing always have their meanings in relation to each other" (7) but to recover this sense of things requires a recovery of ontological thinking.

The dense second chapter turns to the history of ideas, arguing that "the very strange and even impossible ideas about what knowledge and belief are" (10) are the fallout from the way "being" became culturally lost to those living in modernity. Tyson aims to untangle the "terminological knot in Western ontology" (11) and thereby allow a recovery of presently disdained classical and medieval traditions of ontological thought. Discussion leads the reader from ancient Greek wonder about "being" through Parmenides, Plato, Aristotle, and several post-classical thinkers to Scotus, who effectively dismantles the Thomistic way of linking being and

intelligibility. Scotus develops the notion of God's "infinite being" and "flattens out being in such a way that removes different ontological degrees of reality" with his account of the "univocity of being" (28-29). In this account, "'being' has only one meaning: one either has being or one does not," and "there are no degrees of being" (28-29). All this is compounded by Ockham's nominalism. Since the time of the scientific revolution, "the very idea of 'being' has made very little sense to the modern world" (30) as naturalistic and mechanistic materialism with "no conception of any intellectual and non-material foundation of being" (32) became increasingly dominant. In modernity, the "idea categories appropriate to our actual existence have been lost" (33). The "tripartite understanding of ontological hierarchy" (25), being by participation, being proper, and being by analogy—all of which were obliterated by Scotus—must be recovered.

Tyson next begins to set forth a constructive case to counter "modernity's ontological poverty" (38) but he also, with great vigor, further attacks ideas and practices that he contends undergird modernity. After briefly reviewing the majesty of Aquinas's account, Tyson notes in comparison the modern life-world which "presupposes an empty ontology where knowing is a passive recording of mere facts, and where believing is a function of the constructed worlds of values and meaning that populate the private sphere of negative freedom for each individual" (43). Tyson here (and in other

sections) provides thoughtful but very general claims about the problems of modernity. He seems always intent upon reflecting his mettle as a radical Christian critic and is particularly harsh in judgments about the moral and sociopolitical framework of modernity. His constructive philosophical case emphasizes that being, knowing and believing were—and must again be—understood in terms of action, as they were in earlier Christian Platonist and Thomistic thought. He has an interesting discussion of an action-centered reframing of each of these elements. The final turn in the third chapter claims that human beings have "three existentially grounding realities that we know are true," and these concern "the meaning of language, the reality of love, and the uncontainable in-breaking of the noumenal" (53). These grounding existential realities are radically at odds with the increasingly fragile life-world we inhabit in modernity; these realities reveal to us the falsehoods of modernity. Tyson characterizes the corrupt, misguided order of modernity in an abbreviated and staggeringly broad moral, political, and economic snapshot of global change since the depression of the thirties. This shows "how the life-world we now inhabit is radically disconnected from the moral and physical realities of our existence" which, Tyson contends, "were more locally and religiously integral with our mode of life before the astonishing political, employment, financial, and urbanized transformations of Western life effected in the twentieth century" (67).

Tyson's next chapter acknowledges the continuity between his account and ideas developed by John Milbank and others sympathetic with Radical Orthodoxy who contend a defective "tacitly theological substructure" (a departure from a more penetrating Christian medieval framework) underlies "modern Western secularism" and orients the "political, economic, cultural and intellectual topography of our way of life" (69). He argues that his book is not a "nostalgic narrative of decline" but a "nuanced narrative of a particular loss" which is a "forward-looking reconstructive advocacy" (70).

The fourth chapter addresses two objections put forth against the "forgetfulness of being" account. Some argue that cultural development in modernity cannot be qualitatively assessed for development, and is neither better or worse but simply happens. Tyson counters that this view is itself symptomatic of Western modernity's ontological skepticism. Some argue that the decline of ontology and the rise of modern ideas about knowledge, power and belief are genuinely progressive developments. Tyson argues that in some respects modernity has been progressive, but in most respects it has been regressive. He suggests that modernity lacks a genuine qualitative conception of teleology (such as pre-modern Western culture had) and substitutes "efficiency gains in instrumental technologies as measures of 'progress'" (81). He concludes "the driving ideology of progress within modernity is ... a constructed propaganda with no basis in any sort of properly qualitative

conception of genuinely meaningful ends worthy of progressing toward" (82). He is convinced that all forms of liberalism and democratic politics in modernity have "no qualitative or meaningful aim embedded in them that could be aspired toward in order to advance human flourishing" (82). Tyson's combative posture and penchant for sweeping and damning conclusions about the modern social order seems a sharp contrast to Polanyi's critical but nuanced and more appreciative and balanced effort—one oriented around epistemological reform—to reshape the Western culture of the mid-20th century which Polanyi suggests evolved by stages after the scientific revolution.

The penultimate chapter is an effort to "re-think knowledge and belief in such a manner that it could be integral with a meaningful ontology of reality" (93). Tyson argues it is necessary to ground knowing in (prior) meaning (resident in the cosmos), rather than vice-versa, and that such a move will recover truth and make clear that faith and belief are not merely subjective whims. Tyson's constructive proposal is thus a reformed conceptual framework in which knowing, ontology, and believing are deeply linked to each other.

The short final chapter sums up both Tyson's critical and constructive cases. Modernity is "dangerously out of touch with the human and meaningful realities of our actual existence" (112), and "our politics has become sub-human and is no longer responsive to actual human realities" (113). Tyson aims to heal the

modern mind by developing an appreciation for “the metaxological texture of existential actuality” (114). His proposal is for an “ontopia” which is a new place in which “we have recovered a viable vision of being, knowing, and believing” (114).

In sum, *De-Fragmenting Modernity* is a challenging book worth pondering since it argues for a program of ontological recovery rather than epistemological reform. It raises interesting questions and provides a sweeping moral and socio-political critique of modernity that contrasts with Polanyi’s more modest diagnosis of the modern crisis. Although Polanyi’s work is twice mentioned in passing, Tyson does not seem to have seriously engaged science as Polanyi constructively construes it in terms of persons with tacit powers, communities, a hierarchical ontology, and emergence. But it would be interesting to hear his response to a deep reading of Polanyi.

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