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THE CALLING OF BEING HUMAN

At the end of his life, Michael Polanyi had produced one of the most comprehensive epistemological programs of this century and of the modern period. Like John Locke, Polanyi's philosophy had strong political and social implications. His philosophical tenets aimed to further and to sustain the processes of free inquiry and a free society, a vision he expressed in his terms "a society of explorers." Like Immanuel Kant, Polanyi's philosophy proposed a revolutionary approach at odds with the dominant conception of knowing. Instead of the bifurcation of knower and known, subject and object, phenomenal and noumenal in Kant, Polanyi established a unitary understanding of epistemology, metaphysics, and ethics. Like Descartes, Polanyi examined the role of the knower methodically in a comprehensive range of studies in *Personal Knowledge: Towards A Post-Critical Philosophy* [1], but Polanyi found essential embodiment in the knower, not detachment. Unlike Hume, Polanyi's philosophy led to belief instead of skepticism. Unlike Berkeley also, Polanyi's philosophy led to a hierarchical stratification of reality rather than monism or dualism. Unlike Ayer and the logical positivist movement, Polanyi's philosophy of knowledge affirmed the objectivity of knowledge not only in science but also in the arts and humanities. Through the scope of these considerations, Polanyi proposed his "post-critical philosophy" challenging the course of the modern outlook since Descartes at least, and reaching back to Augustine.

Such a colossal achievement has bewildered and intrigued later twentieth century scholars. Over a hundred dissertations have studied Polanyi's thought. *The Encyclopedia Britannica Yearbook* noted the publication of *Intellect and Hope, Essays in the Thought of Michael Polanyi*, as one of the significant events of 1968. Bernard Grun's *The Timetables of History* [2] lists Polanyi's publication of *Science, Faith and Society* [3] as one of the major events in religion, philosophy and learning along with the discovery of the Dead Sea Scrolls in 1947. A movement of over 350 scholars in North America and Europe has developed into formal associations studying Polanyi's thought and its implications. [4] Yet *The Encyclopedia of Philosophy* [5] and contemporary philosophy texts ignore and omit Polanyi's thought and significance.

What does this monumental work of Polanyi, its notice among many intellectuals, and yet its disregard among the American and British academic philosophers tell us? First, that Polanyi's philosophy is truly a different paradigm than the one dominant in academic philosophy. Second, that a philosophical voice aimed at culture diagnosis and cure is too broad to fit the operative worlds of philosophical specialization. Third, that persons inclined toward Polanyi's inquiry are themselves attuned to different perspectives. The message then is that to take Polanyi seriously, one has to be willing to take the risk of entering into a frame of thought that goes against many of the most academically established viewpoints of our period.

To take up investigation of Polanyi's thought, however, does not mean that one neglects the mainstream of American and British philosophical thought. It does lead one into critical debate with recent

movements in these traditions, and it involves one in views that are related to recent continental movements such as phenomenology and existentialism. Yet Polanyi, it will be seen, cannot be subsumed under any modern philosophical school. Polanyi addresses philosophical issues of our time from the early positivists and logical empiricists to the existentialism and phenomenology of Sartre, Heidegger, and Merleau Ponty. More broadly, as already suggested, Polanyi challenges the critical outlook of epistemology since Descartes. In all these connections and confrontations, Polanyi is concerned to show and to refute the limitations of any philosophy that does not itself account adequately for the knower who asserts, questions, and does philosophy itself. Such is the failure of modern philosophy that at one pole types of philosophy such as positivist, critical, and analytic could not account for the subject of the predicates that they make. These philosophies speak critically but they cannot account for a person coming into being who could make the critical assertions that they propound. At the other pole, the attempt to emphasize the role of individual choice and of freedom in existentialism failed to provide a ground upon which a human being could begin to make choices since existentialism denied the past and others as barriers to authenticity. Existentialism's desire for radical freedom tended to ignore the necessity of a field of being and history out of which an individual chooses.

In a consideration of 'The Tradition of Central European Liberal Philosophy', Michael Polanyi merits consideration then as a champion of social and individual liberty based not so much on a philosophy of rights as on a duty to the calling of being human. Polanyi addresses all persons as having the obligation to pursue the truth responsibly. He said "I believe that in spite of the hazards involved, I am called upon to search for the truth and state my findings." [6] This obligation commands us to explore for truer understanding in spite of the difficulties of our historical, cultural, and social limitations and despite our finitude in time and in wisdom. Unlike Locke or Mill, Polanyi does not assume a uniform rationality within every person but a universal obligation to seek reasonably the truth that we can find. We are all obligated to use our reason but our reason is not identically the same because it is conditioned by the time, place, and history of our person. The assumption of some perfect place from which we could at some point make objective judgments is an illusion of the modern world. This illusion is based on the objectivist belief that reality is exact, mathematical, and measurable. These methods of knowing assume that we study the aspects of reality best by detachment from it. But we have access to the objective aspects of reality only through the hazards of our human being and human heritage.

On the other hand, Polanyi's view that all knowing is conditioned by the knower does not lead to the subjectivism and relativism that comes from a critical philosophic outlook, critical in the sense of Cartesian doubt and Kantian transcendentalism. This critical spirit despairs of knowing that comes from human passion and embodiment, but Polanyi realizes that this very human element is an essential part. Indeed, one of the errors of critical philosophy and its descendants is regarding history and involvement as destructive of knowing. To counter this critical approach, Polanyi labored to show how our very dependence upon our personal perspectives leads to our greatest discoveries.

Polanyi's critique therefore would also disagree with the recent deconstructionist view because it is a variation of the perfectionist illusion. To believe that all thought having a construction, a location means that it is necessarily subjective, leads to the same error which Polanyi is attacking. The force of construction and of location should not lead us to disparage our knowing, according to Polanyi, but it

should instead help us to reevaluate the way we come to knowledge by indwelling these very corruptible and changing standpoints. Knowing seeks a universality, but knowledge is ever growing, correcting and building upon its own experience.

In the current world of continuing grand scale violence and of culture wars, Polanyi's view sees this destruction as an outcome of the illusion of perfectionism so fervently pursued by nations, groups, and individuals. [7] Belief in the objectivist ideal of science solving all problems provided a path for perfectionist aspirations. For the sake of a moral goal, many feel justified in killing others yet they are not restrained by any larger moral framework to listen to an opposing side. The restraint of violence by moral ideals fails because other person's and group's moral beliefs are not regarded as having a valid scientific ground. Moral passions run away with persons in a society where individuals feel they alone can define what is true and right, even if they think it is based on scientific evidence as in the cases of racism, Nazism, and Stalinism. Such a condition is an antithesis of what Polanyi saw as democratic process and as true scientific process.

Fairness and Tolerance

For Polanyi, the democratic process and science were based upon the premises of a society that practiced fairness and tolerance. In his definitions of fairness and tolerance, Polanyi defined these terms in a communal way. Fairness is not centered on justice for oneself only. Fairness referred to the duty to state one's case objectively so that others could discover or see the merit of one's argument. Such a view of fairness as an obligation to make your beliefs clearly intelligible to others is a standard almost forgotten now. Fairness in controversy has tended to become granting of equal time to differing views but lacks a sense of needing to try to be clear to an opponent for the sake of trying to find the truth.

Tolerance also is communal in that its concern is not only for respect for one's own views but respect for hostile ones. Tolerance meant the willingness to hear views that not only were contrary to one's own but also from which one could expect to learn more about the truth of the situation. This notion of tolerance assumes that no one is the full possessor of truth and that we can all learn from different views.

These obligations that bind the individual into discussing and listening with others imply that even our own moral position as well as factual ones is a dynamic and growing one with the capacity for enlargement and at some moments radical change. The fanatic who claims to kill for righteous moral reasons or scientific ones is one who has denied the moral obligations that would bridle his passions by submitting to the process of discussion and of inquiry.

One of the significant features of Polanyi's post-critical thought is its maintaining and renewing one of the assumptions of the Enlightenment. Polanyi's democratic and communal view of free inquiry presupposes that violence is unnecessary when we submit to reason. Unlike the Enlightenment philosophers, Polanyi expects reason to be engaged in a struggle, an exercise of persuasion, an endeavor of conversion. Yet Polanyi saw from looking at the "republic of science" that debate, persistence, and build up of evidence were effective in resolving disputes. Change did not occur all at once or from a

single scientific experiment. Change occurred as persons freely listened and chose their judgments.

To blame the violence of the twentieth century upon the failure of moral ideals may seem too simple. But this simplicity is only superficial, for it is based upon the very complex erosions of modern sensibility by false notions of scientific objectivity. In the pursuit of a mistaken ideal of scientific objectivity that is exact and verifiable, the informal beliefs and controls of life have been discarded because they have not met the standard of verification deemed necessary by the objectivist ideal. In ethics, a modern person may claim that right or wrong is like religion, a matter of belief. Since beliefs are subjective, not objective, they cannot be regarded as more than individual preferences and lack general authority or obligation. Through this process over several centuries of destroying universal moral ideals by questioning their scientific objectivity, the supposedly enlightened industrial nations with democratic governments repeatedly face crises of social conflict and violence that they find it hard to oppose. As the eminent humanitarian George Soros has pointed out, the strife in Bosnia repeats the moral crisis of Nazism and Stalinism when democracies and the United Nations avoid their duty to demand respect for human rights everywhere. [8] The ethnic state is a closed society, and the courage to intervene comes from a belief in a general obligation to uphold human rights in all places. The western attitude that "Bosnia is a kind of ethnic hell" and "all sides are to blame" represents an abandonment of basic principles of universal human rights. Thus here and in other cases of violence, extremes of individual beliefs are unamenable to discussion and to mediation because there is no accepted objective moral criteria for judgment in moral questions. Fairness and tolerance are not thought to be objective standards or general obligations since they seem to derive from social and political beliefs rather than true principles like scientific laws.

Tradition and Innovation

The origins of Polanyi's insights lie deeply in his life in the country of his origin, Hungary. The intellectual ferment of his early years has been noticed [9] but the emphasis has been upon the nature of his later thought. But this emphasis on his mature work prevents us from seeing the connection of Polanyi's philosophy to his own development. Focusing only on his later work ignores the importance of social antecedents in his outlook.

One way of appreciating Polanyi's philosophy is to see the way in which he took from his life in Budapest elements that become important parts of his grand philosophical program. Polanyi's philosophy of knowing argues that our capacity to discern significant problems and to bring innovative approaches begins in the background of understanding from which we form our perceptions.

When a student entered the medical school at this time in Europe, he, usually men - women were just beginning to be admitted, - came with a strong background in classics and less in the sciences. [10] Polanyi, however, entered the University of Budapest prepared by a more progressive education that maintained not only the classics but also introduced fundamentals of experimental science. His preparation for the University seems to have been in a school that was a combination of the classical and modern studies of literature and of science. For most of the nineteenth century in Europe, and led by the

German university, preparation for the university was dominated by the Gymnasium with its traditional studies of Greek and Latin. Late in the century, the scientific movement led to two other types of schools, the *Realgymnasium* and *Higher Realschule*. [11] The *Realgymnasium* omitted Greek, relegated Latin to an inferior position and stressed in its higher classes modern languages and the sciences. The *Higher Realschule* went even further, dropping ancient languages and studying only modern subjects.

Polanyi's preparation was in a school closer to the moderate reform of the *Realgymnasium*. He prepared for the University at the Minta, a progressive demonstration school, now a part of Eötvös Loránd University of Sciences. [12] In this school, there was a combination of classical and of modern studies, of languages and of science. It was founded in 1872 in order to provide training in pedagogy for would-be teachers, and it provided both a secondary school as well as a training center for teachers. Based on the concept of Mór Kármán, the school aimed to have the same function as clinics in the training of physicians. It provided a place for experiments and aimed to set a pattern for national educational reform. The teachers who came to the school had already finished their university degrees, many of them having attained the doctor of philosophy degree. These student teachers had to take part in the whole life of the school-celebrations and student societies.

The Minta pedagogical philosophy was very liberal for its time. It aimed at respect for the individuality of each student's personality and encouraged its development. During lessons, student were allowed to ask any question, state any opinion, and to discuss their problems with their teacher. "There was great emphasis on the improvement of the pupil's independent way of thinking, their problem-solving abilities and skill in dispute - which helped the talent to develop very much." [13]

The pupils of the school came from the higher middle classes and from the intelligentsia, who recognized the advantages of the student centered methods. Many teachers of the school as well as pupils became famous in their fields. The school fostered a spirit of liberalism, humanism and intellectualism that endured into the present period. What is significant for our purposes is to notice that Michael Polanyi came from a background that already practiced the art of apprenticeship with able students learning from able teachers in an interactive pedagogical way.

William T. Scott in his biography of Michael Polanyi found the Minta to illuminate the independence, creativity, and breadth later seen in Polanyi's thought and work as a scientist and philosopher. [14] The school curriculum emphasized humanities but it included science along with laboratory experiments. [15] Polanyi's studies included Hungarian and German literature, Greek and Latin, religion, ethics, philosophy, geography, natural history, representative geometry, mathematics and physics. [16] Striking is that Minta students were introduced to contemporary currents of science through scientific journals. In this stimulating environment, the young Polanyi wrote literary and scientific papers. One of his papers was an address on the controversial poet Endre Ady. It was given at a celebration of the March 15 uprising of 1848 and showed an interest in national regeneration based on moral principles. [17] Ady's passionate commitment to universal standards of human rights seems to have foreshadowed Polanyi's later concern for transcendent moral obligations.

Poetry, drama, and art meant a great deal to Polanyi during these years, yet he also wrote scientific papers, too. Physics was his strongest interest, it seems, when he graduated from the Minta with the highest rank in his class. This background made him ready for the opportunities of study in his medical education. What Polanyi brought to his medical studies was not a mere desire for training in medicine but a grand desire for learning in science and in humanities. Unlike the later physician training of the twentieth century that had led to medicine as a world of technological expertise and specialization, both Polanyi and his University were engaged in the pursuit of fundamental issues of science and of human values. Looking backward it is easier to see how Polanyi could begin as a medical doctor and then move to basic research in physical chemistry, then to turn to the human condition in economics, social thought, and finally philosophy. Polanyi's background and setting show a general preparation for such an adventure in contrast to the twentieth century narrowing and fragmentation of learning.

The Skill of Medicine

One part of Polanyi's formative intellectual development that led toward his later philosophy is his time as a medical student and physician at the University of Budapest. It has already begun to be noticed that many of the ways of thinking used by Polanyi in the analysis of the nature of knowing are taken from the field of medicine. [18] His basic analysis and reform of epistemology is based upon the way medicine is an art that integrates explicit scientific information into a skill. Medical practice is necessarily a skilful performance that brings together information about physiology, disease, and diagnosis into the process of healing and relief of pain. Medicine has for centuries been a combination of learning and of practice, and at the time of Polanyi's education in medicine the rise of a scientific emphasis had not yet replaced the importance of apprenticeship.

Apprenticeship is a central example in the philosophy of Polanyi for showing that knowing is a personal activity with tacit coefficients. He argued consistently that one of the ways we rediscover these tacit components is by noticing that conviviality, tradition, and authority are essential to passing on many inarticulate yet necessary elements of our knowledge. Polanyi showed this in the "connoisseurship" of medical work. He said:

To become an expert wine-taster, to acquire a knowledge of innumerable blends of tea or to be trained as a medical diagnostician, you must go through a long course of experience under the guidance of a master. Unless a doctor can recognize certain symptoms, e.g. the accentuation of the second sound of the pulmonary artery, there is no use in his reading the description of syndromes of which this symptom forms part. He must personally know that symptom and he can learn this only by repeatedly being given cases for auscultation in which the symptom is authoritatively known to be present, side by side with other cases in which it is authoritatively known to be absent, until he has fully realized the difference between them and demonstrate his knowledge practically to the satisfaction of an expert. [19]

Professional training in a community of experts who teach through their example and demonstrations was one of the clues to how that knowledge of "things we cannot tell" explicitly is passed on. There is an

ocean of tacit coefficients that support the articulate parts of our knowing, and Polanyi had learned this in his medical studies.

At the heart of Polanyi's epistemology is the contention that knowing is a skill combining both intellectual and practical elements into a single performance. [20] For Polanyi there is no absolute separation of theoretical and of practical knowing into different kinds of knowing. All knowing has the same basic structure. This also was the nature of Polanyi's medical education, a combination of both intellectual and practical knowing.

In 1908, when Michael Polanyi entered medical studies at the University of Budapest, he entered an educational center that could be characterized as having gone through two major phases. The first eighty years were the development of practical bed-side education, identified with the new scientific schools of thought. [21] The second phase began after the "Compromise of 1867", when progressive professors took over the chairs of medicine and brought extensive international scientific insight. [22] Despite some opposition, several modern and well equipped institutes and clinics were founded. These additions formed a basis for the Budapest school of medical thought which was to be led by Ignac Semmelweis, who discovered the cause of puerperal fever, realized the importance of surgical cleanliness, and become one of the heralds of scientific preventive medicine. But Semmelweis was ahead of his time, and the Vienna School and other medical centers ignored at first his pioneering work. In its second phase, the life of the Budapest medical school maintained a sense of balance between science and humanism and a keen sense of realism and common sense, a time that included the leadership of Semmelweis.

This example of scientific growth of thought must have become deep in the consciousness of the young student doctor, Michael Polanyi, who later would argue for the importance of confidence in our beliefs in the truth even when they are resisted by established authority. Polanyi paralleled Semmelweis' example of persistence when Polanyi's potential theory of adsorption was dismissed by Einstein only to be confirmed later by others. [23] He also showed in his over thirty year effort to change our general epistemological outlook, despite the virtual disregard of his Oxford colleagues, that he had a courage similar to that of Semmelweis who had to wait for others such as Pasteur to discover the same principles and acknowledge Semmelweis' greatness.

From the fall of 1908 to April 7, 1913, Polanyi was a student of medicine. Later he told others that his choice of medicine was for practical reasons. One of these seems to have been that he had doubts that he could have earned a living if he tried to pursue the things he really wanted to do, research in science and in philosophy. Another is that he wanted to go into physical chemistry but reading a treatise on physical chemistry by Walter Hermann Nernst, a founder of physical chemistry, caused him to wonder if he could do the difficult mathematics that was involved. [24] Despite these doubts, Polanyi attained both his medical degree and a greater interest in physics and chemistry. Because the organization of the medical studies included both clinical and basic science, he became competent in both. This combination is exemplary of the nature of knowing that Polanyi later formalized in his philosophy. It is the communal background of apprenticeship, conviviality, and tradition preparing a talented person to explore at the frontiers of his world.

One element in this fertile development of Polanyi's outlook was his becoming an assistant in the laboratory of the Institute of Pathology and Physiological Chemistry. There his potential was noticed by the professor Ferenc Tangl, who got Polanyi a three year scholarship which furthered a turn toward research itself. Tangl's insistence that physiology be based on sound knowledge of physical chemistry furthered Polanyi's interest in that area. [25] While Polanyi was a medical student, a number of able students were his friends sharing in his intellectual quest. Among them were Gyula Holló, who lived at the Polanyis' apartment, George Pólya, with whom Polanyi discussed the physics lectures of Loránd Eötvös, and Franz Alexander, who was also a laboratory assistant.

In 1910, Polanyi published his first medical and scientific paper on 'Chemistry of the Hydrocephalic Liquid'. Scott reports that the paper was on the physical measurements made on the chemistry of the brain measuring the fluid, density, surface tension, conductivity, and related matter. [26] Before his graduation in 1913, Polanyi developed from his experimental research in the laboratory five other papers dealing with changes in the blood serum of a starving dog, electrical conductivity and adsorption in colloidal suspensions, conductivity in casein suspensions, the second law of thermodynamics and animal processes, and osmotic pressure of colloids.

At the same time as his laboratory research, Polanyi was learning the fundamentals of medicine so that after his graduation, he was certified as a physician on August 8, 1914. His medical degree was awarded in 1913, but in the interim he pursued the basic science interest that had bloomed in Tangl's laboratory. For over a year before he became a physician in the Austro-Hungarian army, he studied physical chemistry in Karlsruhe at the Technische Hochschule.

The model of a community of inquirers at the University of Budapest was a model of formal curricular and laboratory studies that nurtured both foundations of learning yet provided freedom to develop new ideas. Another dimension of the same experience were the student societies at the University. These associations also helped Polanyi experience the process of fairness and tolerance that he later advocated in his philosophy. One of these was the Galileo Circle which was founded by Karl Polanyi for "the defense and propagation of unbiased science." Michael Polanyi participated but without the same enthusiasm for the socialist views of some of its members. He shared the moral passion of many of the members of this society who wanted to see sweeping social reform. But he dissented from their willingness to consider change by revolutionary force. Michael Polanyi remained true to the beliefs of his family that wanted social reform of the nation but by constitutional means. He believed in the way of persuasion rather than the way of military force. Later this aversion to violence would influence his criticism of Communism.

The last phase of Polanyi's medical career was actually his first practice during the First World War 1914-1918. [27] Polanyi had not yet done his hospital internship because of his preoccupation with his studies in physical chemistry. Within a month after the Austro-Hungarian declaration of war, Polanyi was allowed to volunteer for service as a medical officer and was accepted. The war years gave Polanyi medical experience but not an experience that led to further medical studies or practice. He was sent to

an epidemic hospital at Sombor. There he saw the overwhelming carnage of war as he acted as assistant surgeon. Within a few months, Polanyi had contracted diphtheria and was returned to Budapest.

Polanyi's period of convalescence shows his inclination to return to basic science. During this time, he freed his mind from the horrible memories of war by reading and by pursuit of his ideas in physical chemistry. One of these was to become his thesis for his doctor of philosophy degree in physical chemistry at the University of Budapest. After nearly two months of rest, Polanyi returned to Sombor in December of 1914. Soon a cholera epidemic, followed by typhoid fever, took over his time. Not long after that crisis was over, he was sent to another post in the Carpathian mountains. But this stay was shortened by another illness, an inflammation of his bladder. This condition persisted, and he had eight medical examinations between March, 1915 and April, 1917. During this time, it was observed that his health seemed to be affected not only by his physical condition but also by his "general weakness of the nerves." [28] The stress of war had affected his sensitive spirit. On April 29, 1917, Polanyi's medical examiners recommended that he be retired from medical duty short of a general mobilization. The recommendation became effective in August, and Polanyi returned permanently to his interests in physical chemistry leaving medicine as a field of practice or research behind.

Individual and Community

From August of 1917 to 1935 when Polanyi had his conversation with Bukharin, which led to his search for a better philosophy of knowledge, is seemingly a period when Polanyi was engaged primarily in physical chemistry. Following the conversation with Bukharin, Polanyi returned to England to write his first major treatise on social problems, 'USSR Economics---Fundamental Data, System and Spirit'. [29] Yet during these years, the concerns and habits of his training at the Minta and the University of Budapest continued. Polanyi was actively engaged in the art, literature, and social issues of his time. Outstanding among them was the circle of Berlin associates with whom he discussed the course of events in Russia. Among the members of this group were Leo Szilard, Eugene Wigner, and John Von Neumann.

Still Polanyi's entrance into the arena of social thought was only the beginning of his working out of his earlier experience in education and in science. Between 1935 and 1946, Polanyi wrote as a physical chemist entering into the debates about economic and social planning. It is not until his Riddell Memorial Lectures at the University of Durham in 1946 that it became manifest that Polanyi was proposing a new philosophy of knowledge, and even then he does not explicitly talk about epistemology. It is in the Gifford Lectures of 1951-52 that all of these years of experience become focused in his first elaborate presentation of an alternative theory of knowledge that he called "personal knowledge." What we find here, however, is the distillation of all of the prior years of experience. In the formulation of the new theory, we notice the influence of his background in the Minta and the University of Budapest, where he learned theory and practice as one, not separate ways of knowing.

A philosophy of medical education today is still largely in the critical mode of the past. This philosophy relies upon an epistemology of detachment and of objectivism. It analyzes the training of a physician

into cognitive, affective, and psychomotor learning. The basic science instruction is thought to be the development of the cognitive aspect. Clinical instruction is seen as training in attitude and in technique for working with patients drawing upon the basic science preparation. But Polanyi's view of knowledge completely changes the accuracy of this analysis by seeing all knowing as a skill. The highly cognitive process of calculating the equations of physical chemistry has also an affective and a psychomotor component as well as a cognitive one. Knowing is falsely separated into cognitive, affective and psychomotor as if they are separate types of knowing. The abstraction demanded in thought by the mathematics of the equations depends also upon the emotional attention and the mechanical movements of the scientist. This interdependence can be further demonstrated by the way the knowledge of physical chemistry is gained through not only the grasp of the formulas and numbers but also depends upon an intense focus of effort by mind and body.

Polanyi addressed this issue in his identifying "the tacit dimension" in knowing. [30] Here Polanyi spelled out how by a process of "indwelling," we literally know through our bodies. The structure of all knowing elaborated in Polanyi's concept of tacit knowing is one that has two types of awareness, subsidiary and focal. The subsidiary awareness is the background of clues internalized and upon which we "mindbodily" [31] rely in order to attend to any focal target of knowing. The enormous consequences of this structure are the reinstatement of our personal participation in the most objective forms of knowing. But the elaboration of this structure of knowing is not our aim here. Our concern is to observe that his incisive case of philosophical thought is itself rooted in Polanyi's background in Hungary at the beginning of this century.

What Polanyi articulated seems to reflect a schooling at the Minta and in medicine that learned how to value both the individual and the community in the process of discovery. It is an epistemology that employs the way Polanyi experienced learning by apprenticeship, by immersion in both formal and informal learning, and by introduction to the experimental as well as the established areas of science and art. Polanyi does not seem to have turned toward the rebellion against all authority and a movement toward some absolute new center of loyalty. Rather, he seems to emulate the experience of drawing out of a rich background in classics, arts, and science the way of tackling new problems with revisions of former insights and concepts. In his own time, his holding together this "from-to" approach made him a distinctive voice against those who sought progress by separation and revolution.

This epistemology in which the individual has to work from within the community and society in which she or he lives is accepted with hope. In *The Tacit Dimension*, Polanyi boldly and honestly says that society is an organization based on power and profit and that social progress will be tainted by this fact. [32] The result of ignoring the way social change improves by reliance upon imperfect conditions is to force absolute morality upon others leading to violence. Polanyi then says:

When I listen to my Hungarian friends who took refuge in England after taking part in the revolution of 1956... I find their hopes are basically the same as those which animated liberal thought at the turn of the last century. They are the hopes with which I was brought up as a child in Hungary.... The revival of the liberal tradition can be assured only if we can establish it on a

new, conscious understanding of its foundation, on grounds which will withstand modern self-doubt coupled with perfectionism. [\[33\]](#)

Strikingly put, Polanyi has moved from the theoretical statement of his epistemology to its practical social and political implications. His major epistemological work then is trying to teach us how to nurture our individual strivings for truer understanding without the destruction of community and of society. It is a calling to our humanity to accept the limitations of our place as an opportunity through which we can rise to increasing levels of creativity and of social order. This way is a reciprocity of knower and known, individual and community, discovered, perhaps not entirely, but deeply in his own social origins in Hungary.

Notes

1. Chicago: University of Chicago Press, 1958.
2. Based upon Werner Stein's *Kulturfahrplan*, New York: Simon and Schuster, 1979, p. 526.
3. Chicago: University of Chicago Press, 1946.
4. The Polanyi Society, % Richard Gelwick, University of New England, Biddeford, Maine 04005, USA coordinates a Polanyi association in North America and Europe, and the Michael Polanyi Liberal Philosophical Association, % Eva Gabor, Philosophy Department, Technical University of Budapest, 1111 Budapest, Mûegyetem rkp. 3. K.I. 59 coordinates a Polanyi association in Hungary and Eastern Europe.
5. New York: Macmillan Co., 1967.
6. *Personal Knowledge*, p. 299.
7. 'Beyond Nihilism', *Knowing and Being*, Marjorie Grene (ed.), Chicago: University of Chicago Press, 1969, pp. 3-23.
8. 'Bosnia and Beyond', *The New York Review of Books*, October 7, 1993, pp. 16-17.
9. Paul Ignatus, 'The Hungary of Michael Polanyi', *The Logic of Personal Knowledge*, Glencoe, Illinois: The Free Press, 1961.
10. Abraham Flexner, *Medical Education In Europe*, New York: The Carnegie Foundation, 1912, p. 32.

11. Flexner, p. 33.
12. Kiss Istvánné, 'A Trefort utcai "Minta".' Az *ELTE Ságvári Endre Gyakorlóiskola története*, pp. 285-288.
13. *Ibid.*, p. 286f.
14. 'The Minta and the University', Chapter III, *Michael Polanyi, Scientist and Philosopher*, unpublished manuscript, Reno, Nevada: 1994. Scott's biography is especially helpful in understanding this part of Polanyi's development and helps here and throughout this discussion.
15. Public lecture by the principal of the Minta on the occasion of the Michael Polanyi Centennial Celebration in Budapest, sponsored by The Michael Polanyi Liberal Philosophical Association, August, 1991.
16. William T. Scott, p. III-2.
17. *Ibid.*, p. III-8.
18. Richard Gelwick, 'Michael Polanyi and the Philosophy of Medicine', *Tradition and Discovery*, No. 3, XVIII, 1992, pp. 21-29.
19. *Personal Knowledge*, p. 54.
20. Michael Polanyi, *The Tacit Dimension*, Garden City, New York: Doubleday, 1966, p. 7.
21. *A Budapesti Orvostudományi Egyetem Jubileumi Évkönyve: az Orvosi Kar alapításának 200. évfordulója alkalmából*, Budapest, 1969, p. 105.
22. *Ibid.*
23. Michael Polanyi, 'The Potential Theory of Adsorption', *Knowing and Being*, (ed.) Marjorie Grene, Chicago: University of Chicago Press, 1969, pp. 87-96.
24. *Ibid.*, III-18.
25. *Ibid.*, III-20.
26. *Ibidem.*
27. *Ibid.*, Chapter V, 'The War Years'.

28. *Ibid.*, V-10.

29. *The Manchester School of Economic and Social Studies*, 6 (October, 1935), pp. 67-89.

30. See *The Tacit Dimension* above.

31. This term is coined by William H. Poteat in his *Polanyian Meditations: In Search of a Post-Critical Logic*, Durham, North Carolina: Duke University Press, 1985. In its conjoint character, 'mindbodily' expresses in a single word the revolutionary contention in Polanyi's epistemology, namely, the end of subject-object and body-mind dichotomies.

32. p. 86.

33. *Ibidem*.

Polanyiana Volume 5, Number 1, 1996, pp. 63-75

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[Back to Contents](#)