

MICHAEL POLANYI AND 'MODERN MORAL RATIONALISM'

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ABSTRACT

Polanyi was not a professional ethicist but he analysed the moral malaise of his times correctly. Using resources from the phenomenological and Gestalt movements he criticised current ideas of ethics on two fronts. First, the ideological conception that led to nihilism, the destructive inversion of our moral passions. Second, the utilitarian approach that reduced the moral subject to one dimension that could be examined by the natural sciences. Charles Taylor's ideas confirm Polanyi's intuitions and help us see how he restored depth to our moral vision.

Rereading Michael Polanyi's *Person Knowledge* to celebrate its golden jubilee of publication in 1958 has awakened the desire to respond to the question of just what makes it unique among studies on the importance of science for culture. Polanyi has given a positive account of the sciences that is not only humanistic, but is also genuinely open to transcendence. This essay obviously cannot take up every dimension of his thought but will concentrate on the ethical as crucial to today's concerns. Its title has been inspired by Charles Taylor's, "Modern Moral Rationalism" (2007). It aims at examining Polanyi's stance on ethics, and science's place in its interpretation. Taylor is a good counterfoil since he also identified naturalism as the culprit responsible for denaturing modern ethical theories. For him Polanyi stands with Wittgenstein, Heidegger and Merleau-Ponty as one of the twentieth century intellectuals who liberated philosophy from the tyranny of the disengaged ego, reinserting it into a comprehensive grasp of the world (Taylor 1989, 1975: 467, 475, 567). There is an enigma for he wonders how successful Polanyi has been in his endeavour (Taylor 1989: 460).

I. THE PROBLEM OF NATURALISM AS A STARTING-POINT

Both authors must be understood against the background of their academic careers. Taylor began in social philosophy and its history, particularly studying Hegel, to discover that the epistemological problem had deformed our approaches to history and the social sciences. He researched the social sciences' conception of the human

agent in depth. In *Sources of the Self* he showed that these had assimilated a naturalistic perspective on agency that resulted in the two currently predominant ethical theories, i.e., utilitarianism and Kantianism. The fact of their being permeated by the ideal of a natural science born in the seventeenth century stood out conspicuously above all else. This ideal caused the collapse of traditional metaphysics which visualised the world as a reflection of the Platonic ideas. Naturalism is defined as the explanation of all phenomena by means of these new scientific causes. Taylor contends that it was responsible for suppressing the true moral sources and motivations of the modern ethical theories. This is the theme of his *magnum opus*, and naturalism provides him with the *bête noire* in his account of modern moral rationalism. An intriguing point is that he felt no need for an alternative positive theory of science to undo the woes caused by naturalism. Although he often discusses the philosophy of science we might ask why he was so blissfully aware of this “strange estrangement” (Geertz 1994: 83-95) for he does not venture beyond the philosophical account of the natural sciences currently in possession, naturalism.

Polanyi’s curriculum, as it were, ran in the opposite direction, from physical chemistry to culture broadly conceived and then increasingly to philosophy. What motivated him was the desire to understand his vocation as a scientist and how this placed him in society. His experience as a scientist impressed on his mind how naturalism was denaturing the social even more than the natural sciences and that none of them could avoid its corrosive influence. Both authors therefore strove to produce an ontology, indeed a moral ontology, of the human person as agent. They agreed that we should be open to transcendence and treat religion in a positive but critical manner. Taylor articulates his vision in terms of the good we seek in our personal and cultural endeavors, i.e., in terms of hyper, constitutive and life goods. Polanyi in part 4 of *Personal Knowledge* Polanyi propounds a hierarchy of the sciences to which progressive levels of indwelling in reality correspond. Ethics occupies the highest point in the hierarchy where a person communicates with another person in an I-You relationship and at this level looks up to transcendence. Ethics is supported by and depends on all the lower levels of reality comprehended by the sciences. These play a constitutive role in our understanding of the human agent as the responsible centre in all knowing. Polanyi’s reflections on science have to be situated in the context of the terrible ideological strife with Marxism and Nazism that left its mark on his character. He was actively caught up in these conflicts and what he says about ethics has to be taken as a personal struggle to make sense of his times. The ideal of science had been manipulated to present these ideologies as scientific theories. It was here that he saw naturalism working its way into social institutions under the guise of modern moral rationalism.

Both authors want to put society on a solid base and both recognize that science plays a crucial role in how to do this. Without doubt this task was always part of the human project, but the arrival of modern science in the seventeenth century precipitated a critical turning-point in its history. Taylor appears to take the naturalist

justification of science in absolute terms at face value. What is the impact of an 'absolute' account of science? It implies total certainty based on evidence unassailable by doubt. It is not just a complete but a total victory over all alternative world-views so that they could no longer participate in the on-going discussion about knowledge. Scientific standards took possession and controlled the field of epistemology which now provided the only criteria of what was science. Taylor rebelled against epistemology's domination of modern thought.

II. TAYLOR'S REACTION TO NATURALISM

Taylor articulates his phenomenology as an analysis of the modern self's historical development in order to discover the sources that nourished its growth. This implies a genetic and dynamic approach to philosophy, a *Wirkungsgeschichte* of our self-understanding. Its sources are defined as "moral sources" that *de facto* have often been suppressed and rendered invisible by naturalism. Descartes' explicit logic of absolute assertions and the currents of modern philosophy deriving from it are responsible for this obscuring. Taylor learnt his method as a practitioner researching the history of philosophy. He seeks to give the best account of our experience that can be achieved with the available resources, "BA" as he names it, a working through of "the predicament of practical reason" (Taylor 1989: 74). It has no absolute pretensions as in the mathematical model applied in the natural sciences. Taylor is clear that it was not science as such that caused the crisis brought on by the Enlightenment but the philosophy of naturalism used to justify it that has blocked our view of the moral sources of modern culture. Ironically, science is perpetually in danger of being reduced to scientism while naturalism remains a hidden premise in modern culture. The following statement demonstrates how Taylor replied to this situation employing a dialectic with positive and negative aspects.

Theories like behaviourism or certain strands of contemporary computer-struck cognitive psychology, which declare 'phenomenology' irrelevant on principle, are based on a crucial mistake. They are 'changing the subject' in Donald Davidson's apt expression. What we need to *explain* is people living their lives: the terms in which they cannot avoid living them cannot be removed from the explanandum, unless we can produce other terms in which they could live them more clairvoyantly. We cannot just leap outside these terms altogether, on the grounds that their logic does not fit some model of 'science' and that we know a priori that human beings must be explicable in this 'science'. This begs the question. How can we know that humans can be explained in any scientific theory *until* we actually explain how they live their lives in its terms? (Taylor 1989: 58)

Taylor's thought has its roots deep in the *Lebenswelt*, a sphere constructed by human action that utterly isolates it from the rigorously impersonal concerns of natural

science. “Our best account will never figure in a physical account of the universe” (Taylor 1989: 59).

Even though our two authors have seemingly irreconcilable premises written into their starting-points they are of one mind about the devastating effects of naturalism on sociology and psychology. Taylor has expanded this insight into a comprehensive approach to the social sciences in his collected philosophical papers entitled *Human Agency and Language* and *Philosophy and the Human Sciences*. He wrote *Sources of the Self* as a full exposition of his solution to this problem. But before that he had to clarify the scope of his phenomenology. “The Moral Typology of the Self” (1988) laid the foundations for such a venture. Its title reveals that the self must be understood in exclusively moral terms. This stance distances him from the natural sciences’ peculiar type of objectivity which is neither of interest to nor falls within the range of such a phenomenology.

Taylor elaborates an overall theory of the self in moral space, i.e., morality necessarily involves some account of the direction in which we have to move to achieve the goods that make life worthwhile. The first part of *Sources of the Self* is dedicated to elaborating the moral landscape of modernity. Its space is not physical, but that of interiority and intimacy defined by the good whose source according to Plato is the Good and for St. Augustine God. In the subsequent three parts Taylor attempts a comprehensive historical synthesis of how interiority was introduced by St. Augustine, became the self as a centre set over against the world in Descartes, and then was formulated as the disengaged punctuated self by Locke. Taylor emphasizes the importance of ordinary everyday life, work and the family, which became a platform for the changes the Reformers pressured to have introduced into society consequent on the collapse of medieval hierarchical society. These ideas clashed with the monks’ ideal of contemplation as a superior way of life. Francis Bacon held that knowledge should better the human condition rather than explain it. Here, according to Taylor, is a necessary precondition for the emergence of modern science. Finally romanticism conceived nature as an inner, hidden, unfathomable depth with which we have to be in harmony to be authentic (Taylor 1991). It is also at the origin of the expressive culture that has fashioned our conception of the self and a satisfying life.

The actual construction of the self takes place in terms of three types of goods, hyper, constitutive and life goods (Taylor 1989: 91-107). Hyper-goods are what we strive for as overarching values, the constellation under which we live our lives. Constitutive goods are what guide our ways of being and styles of life. Human rights might be placed here. Life goods direct our choices toward the constitutive goods and the achievement of the hyper-goods. Our striving towards these goods has two aspects, their attractive force that actually gets us moving, and then their articulation in language which is our way of expressing and embodying them symbolically in personal relations, social institutions and in openness to transcendence.

Articulation here has a special semantic role; it is not just putting our deepest

intuitions of who we are and what moves us into words. Taylor's thesis is that such intuitions have a hidden energy, buried from sight to even the best philosophers of modernity who obscure the notion of the good by accepting naturalist criteria. The disappearance without trace of the notion of the good in the articulation of modern ethical theories has two effects. First, articulation has now become retrieval. In other words what has to be said involves not just finding words for a reality with which we are comfortably familiar, but experientially recovering the reality lost in the articulation of modern ethical theories. Nietzsche with his tactic of suspicion has unmasked the secret motivations behind much modern philosophy. Taylor's retrieval and Polanyi's tacit knowing might be seen as alternatives to genealogy. They set out to circumvent the barriers raised by modernity so as to arrive finally at a focal good. This happens by perceiving such a good as actively alive and providing motives for the aspirations of modernity although in fact it denies its actuality in culture and in ethics. Taylor notes how modernity has appealed to freedom, rights, autonomy, authenticity, dignity, etc, as the values constituting it. Here he notes a phenomenon that could be paralleled with Polanyi's 'moral inversion.'

The more one examines the motives – what Nietzsche would call the 'genealogy' – of these theories of obligatory action, the stranger they appear. It seems they are motivated by the strongest moral ideals, such as freedom, altruism, and universalism. These are among the central aspirations of modern culture, the hypergoods which are distinctive of it. And yet what these ideals drive the theorists towards is a denial of such goods. They are caught in a strange pragmatic contradiction, whereby the very goods which move them push them to deny or denature such goods. They are constitutionally incapable of coming clean about the deeper sources of our thinking. Their thought is inescapably cramped (Taylor 1989: 88).

But Taylor's phenomenology leads to a curious fact about his non-treatment of natural science in its own right. He appreciates its successes and praises them, but its dignity has been so exaggerated that it has led to the isolated punctuated self typical of modernity. When inquiring into the origins of secularization in *A Secular Age* Taylor levels his criticism not against science as such but against the philosophies built on it (Taylor 2007: 326-332). The distinction is clear. This stance, however, leaves natural science in an eternal limbo where it wanders endlessly seeking for a real world in which to live. As long as modern culture subscribes to naturalism as its basic philosophy there can be no hope of release or liberation from this state.

III. POLANYI AND NATURALISM

Polanyi commences *Personal Knowledge* by observing that the natural sciences lead to a lot of questions outside science. He then asserts the platform on which he is

going to proceed to address the problems that need to be solved: "I start by rejecting the ideal of scientific detachment" (Polanyi 1958: vii), the very premise that Taylor had implicitly trusted without ever thinking to question its account of science. One might say that Polanyi sets out to save science and so to redeem culture. Only in this context can a lot of the mystic language he employs to evoke how science relates to the further reaches of human knowing be made intelligible. Many of his admirers have found this aspect of his thought quite off putting if not outright wrong headed. As with Taylor there are two dimensions of his thought to be considered, first, his phenomenology and the ontology it engenders, and second, its articulation symbolically in culture. Of course my account shall have to presume an acquaintance with much of the established scholarship on him.

Let us begin with his phenomenology. After writing *Person Knowledge* he had to give more explicit attention to how his ideas about tacit knowing, drawn heavily from his experience as a medical doctor and as a physical chemist, sat with the conception of the social sciences then in vogue. This he did briefly but efficaciously in the final chapter of the *Study of Man* (Polanyi 1959). The pressing question was how to understand the study of history. He referred back to a famous debate among German philosophers and sociologists about the epistemological status of the social sciences that run from around the turn of the century until some years after the First World. It seems this debate was a matter of intense interest to him whether he was in Budapest, or Karlsruhe which was one of its centres, or later in Berlin. He notes contributions by Windelbrand, Rickert, Weber, Dilthey, Troeltsch and others and in his concluding "Biographical Note" indicates how it helped him assume an anti-positivist and non-value free position (Polanyi 1959: 83, 100-103). What he learnt from it can be seen in his use of the term 'comprehension.' Underneath its use lies the distinction drawn by Weber between *Erklärung* and *Verstehen*. The first applies to the facts of the natural sciences, the second to the events of history. The result was that the notion of *Verstehen* as comprehension or understanding was reserved as a *specificum* to the social sciences so that there could be no continuity between the methods of the natural and social sciences. *Erklärung* on the other hand was now identified with the natural sciences as explanation in the strictly objective and scientific sense. The subject was excluded from contributing to knowledge so that the scientist as agent had no part in his discoveries, research and regular scientific work. There can be little doubt that Taylor's approach pertains to this tradition and its epistemological stance on the natural sciences. He posited a strict methodological discontinuity between the natural and social sciences so as to seal off the moral realm as truly personal from contamination by an impersonal idea of objectivity. But Polanyi would retort: Is not a scientist a human and indeed a moral agent when he engages in scientific research and discovery? This is the beginning point for his critique of objectivity and his theory of the personal contribution of the knower to the act of knowing whether in the natural or social sciences. Both continuity and discontinuity are necessary in the schema of the

sciences. Meaning deepens as we move from the natural to the social sciences and into the realm of the properly personal that implies moral responsibility for his actions by the knowing subject. Spelling out this progressive deepening in the levels of *Verstehen* is the core issue in his ontology.

Personal Knowing is divided into four parts. The first, "The art of knowing," takes up both the invention of the scientific method in the seventeenth century and its actual practice as experienced by Polanyi as a professional researcher. When he examines this history phenomenologically it quickly becomes obvious that Newtonian science was considered superior to that of Ptolemy not in absolutist terms as claimed by naturalism but because it gave a better account of the phenomena. The same is true of the relationship between Einstein and Newton. In spite of the extreme accuracy of scientific theory and its beauty, its progress can only be rendered intelligible on a best account (BA) basis. Even mathematical formulae have to be applied by a human agent. The contribution of the knower to the whole process of acquiring knowledge in any field makes the best account method necessary. Polanyi argues strongly that objectivity in science is achieved on a best account basis.

It follows that the scientist cannot be excluded from a scientific understanding of the universe, and that an understanding of what it is to be human would be the highest achievement of scientific objectivity. The observing subject in science belongs in its way to what is observed, as the principle of complementarity implies in physics. All understanding therefore emerges out of indwelling, another phenomenological term dear to Polanyi. The degree of indwelling increases as we move from the natural to the social sciences, history, art and religion. T. F. Torrance says of Polanyi, "The deeper he probed into the natural cohesions and configurations, into the morphological structures imbedded in the real world, the more he found *spontaneous order* operating within a relatively determined framework, restricted but not determined by it" (Torrance 1979: 11).

The crucial question was: how do we come to know another person? We come to know his mind by comprehending his outward bodily actions. For example the skill of chess playing is acquired by trying to understand the moves a master performs and by mentally combining these moves in the way the master does. By such indwelling the novice gets the feel of the master's skill and enters into his thought. "We experience a man's mind as the joint meaning of his actions by dwelling in his actions from outside" (Polanyi 1969: 152). There is a structural kinship between what we know and our knowing it. Our concepts arise from integrations of a multitude of details into a focal unity or meaning. The mind recognizes the unity of its object by the process of synthesizing its perception of particulars into a universal reality represented by the real that science knows. The dynamic of our knowing follows the contours of reality into its inner depth. In tacit knowing Polanyi presumes "the correspondence between the structure of comprehension and the structure of the comprehensive entity which is its object" (Polanyi 1966: 33-34). Thus the structure of tacit knowing puts us in contact with the real structure of

comprehensive entities. Polanyi develops this insight into an appreciation of the different levels of reality. In a game of chess there are two levels of reality. First, that covered by the rules of the game that govern the movement of the pieces: second, the skillful playing of the game in order to win. This level involves principles that cannot be accounted for in terms of the rules of chess.

Polanyi also illustrates the logical structure of different levels of reality by considering a machine. A machine consists of two levels; the parts of the machine which are governed by the principles of physics and chemistry, and the joint purposeful functioning of these parts according to the principles of engineering. Now the principles that formally make it a machine are not definable in terms of physics and chemistry. They do however leave open the conditions under which the parts of the machine may be made to operate together for a given purpose. The conditions are what Polanyi, following Einstein, calls "boundary conditions" (Polanyi 1969: 236-239). Thus the laws of physics and chemistry set the boundaries that remain open to the operational principles that control the working of the machine. A breakdown in a machine's physical or chemical components is not the cause of its not functioning correctly at the operational level but provides a reason why it cannot achieve its purpose (Polanyi 1958: 331-332). "Tacit knowing integrates the particulars of a comprehensive entity and makes us see them forming the entity. This integration recognizes the higher principle at work on the boundary conditions left open by the lower principle" (Polanyi 1969: 218).

Polanyi goes on to apply the principle of boundary conditions and a hierarchy of different levels of reality to living beings. The first of the hierarchy of levels in a living being is that of being itself, that is, typical shapes or taxonomy and morphology, from which we move to growth and generation, that is, morphogenesis and embryology. The third level is that of the healthy functioning of the various organs of the body, that is, physiology. We then move to the actively perceiving individual who makes correct or mistaken 'decisions' about what it learns and perceives. Indwelling becomes more intense at each level till we can talk about 'conviviality' as the typical participation of living beings in each other's life. A science dealing with living beings therefore is logically different from a science dealing with inanimate things. We see dual control at work at every level. "The vegetative system which sustains life at rest leaves open the possibility of bodily movement by means of muscular action. This level leaves open the possibility of integration into inanimate patterns of behaviour. This leaves open the sharing of intelligence" (Polanyi 1966: 41). When we come to man in relation to his fellows, observation is transcended by the encounter of minds. We have a "Confluence of an extended biology with the theory of knowledge" (Polanyi 1958: 374). Humans have powers of thought for knowing the truth, judging it by standards set by themselves through the advance of science. A person is a unique comprehensive being who is not only a unity of many levels but is conscious of his personality as not only comprehending a physical,

biological or a conscious world but as relating to reality that transcends even human consciousness. Morality can thus integrate the sciences into personal existence.

For Polanyi the highest level in this hierarchy of ontological levels is the "responsible person" (Polanyi 1958: 380). The person is the pinnacle of all progress, material, cultural and spiritual. Thus these levels of reality and understanding are open upwards but not reducible downwards. The more our knowledge of the universe advances the more we are convinced that we are in contact with an objective rationality in nature. There is an upward movement among the levels of reality, which Polanyi takes as indicating a unitive emergent purpose functioning in all reality. Perhaps his most contentious statement is the very last sentence of *Personal Knowledge*. "We may envisage then a cosmic field which called forth all these centres by offering them a short-lived, hazardous opportunity for making some progress of their own towards an unthinkable consummation. And this is also, I believe, how a Christian is placed when worshipping God" (Polanyi 1958: 405). In this ascending movement of evolution he discerns a hint, a clue, even a way to God. This means that our scientific theories as really bearing upon the universe are ultimately open to higher meaning (Schwartz 1974: 129).

IV. THE QUESTION OF ETHICS

For both our authors the question of morality must be seen in terms of its relation to ultimate purposes. How has natural science as interpreted by naturalism been incorporated into cultural frameworks? In Polanyi's circumstances this question became a confrontation with ideology: for Taylor it was a truly philosophical question, that of correct ethical theory. As said earlier, the history of modern science raised the problem of how it might be liberated from naturalism, the question of its salvation.

Early in his career Polanyi recognized that critical philosophy, with its cannons of self-evidence and the test of absolute doubt, both established by Descartes, had undone the philosophical justification for the authority of religion and of morality. This rendered the intellectual passion for truth (Polanyi 1958: 132-202) directionless and so meaningless.

While a radical denial of absolute obligations cannot destroy the moral passions of man, it can render them homeless. The desire for justice and brotherhood can then no longer confess itself for what it is, but will seek embodiment in some theory of salvation through violence. Thus we see arising those skeptical, hard-boiled, allegedly scientific forms of fanaticism which are so characteristic of our age (Polanyi 1951: 47).

Polanyi traced the course of history since the Enlightenment in terms of these displaced passions. He invented the notion of moral inversion so as to help explain

the dynamic set in motion by this crisis. In *Beyond Nihilism* (Polanyi 1969: 3-23) he characterized moral inversion in this brief, definition-like statement

There is a progression from Robespierre to his successors *which transforms Messianic violence from a means to an end into an aim in itself*. Such is the position reached by moral passions in their modern embodiments, whether in personal nihilism or in totalitarian violence. I shall call this transformation a process of *moral inversion* (Polanyi 1969: 14).

The term ‘moral inversion’ in fact betrayed Polanyi’s dependence on St. Augustine from whose God-centred language of grace, liberation, salvation, righteousness, and conversion he borrowed. Turning to Augustine allowed him to put scientific progress in contact with humanity’s ultimate values. Patrick Grant pointed out that while Polanyi’s conceptions evoke the whole range of Augustine’s theological and mystical language they are used in a thoroughly secular way. In fact Polanyi wanted to open up the possibility of speaking about transcendence but had no intent to expound it as religion or theology. He thus articulated the experience of scientific discovery in Augustine’s terms for conversion. This gave him a reason for maintaining that the mind is primarily directed not to itself but outward, to the real universe that it progressively understands by indwelling it. Like Augustine he played on the Latin verb *vertere*. Conversion means *turning toward*, i.e., to the true and the good, implicitly to the True and the Good. Aversion in Augustine is *turning away* from these and so to self. The destructive power of such misdirected turning in on the self was called nihilism because it created a culture of personal senselessness for the individual or of ideological totalitarianism at the social level. Polanyi believed that just such a turning to self away from the true and the good as grasped by science founded moral inversion. When this happened our moral passions were expelled from their true home and went searching futilely for a new framework that would restore meaning. A mechanistic worldview created the security they crave. Science was used to justify this transformation for the radical betterment of the world as Francis Bacon had dreamed. In other words there was a coupling between our displaced moral passions and a scientific worldview. This coupling explained ideology’s fascinating appeal over the human mind, its dynamism and destructive power in the political realm.

Alasdair MacIntyre has rejected Polanyi’s way of relating the philosophy of science to its history. He preferred Thomas Kuhn’s thesis in *The Structure of Scientific Revolutions* that scientific theories can be incommensurable in a way that precipitates “an epistemological crisis” (MacIntyre 1977). MacIntyre disliked Polanyi’s belief that science should proceed by reform rather than by revolution. Does this refute the BA method? No! Theories may truly contradict each other on some points. The BA method incorporates such decisive refutations as part of its logic. The debate then continues as to what is the best explanation of the phenomena, and so the BA

method prevails. Polanyi never claimed that revolutions do not occur in science, but that, as in politics, they are brought on by introducing ideology into science. MacIntyre actually contradicted himself in *Whose Justice? Which Rationality?* After describing the history of ethics in a Kuhnian manner he used Aristotelian dialectics to resolve the contradictions and oppositions that arise in it. This but confirms Polanyi's adherence to the best account (BA) method

Polanyi explained the influence of ideology on science by pointing out "the contradiction between the high moral dynamism of our age and our stern critical passion which demands that we see human affairs objectively, i.e., as a mechanical process in the Laplacean manner" (Polanyi 1958: 228). Marxism took possession of men's minds when these passions were coupled to revolutionary purposes justified by scientific rationalism.

In such men the traditional form for holding moral ideals had been shattered and their moral passions diverted into the only channels which a strictly mechanical conception of man and society left open to them. We may describe this as a process of *moral inversion*. The morally inverted person has not merely performed a philosophical substitution of material purposes for moral aims: he is acting with the whole force of his homeless moral passions within a purely materialistic framework of purposes (Polanyi and Prosch 1975: 189).

This is the structure of what he called "a dynamo-objective coupling". Here we encounter one of Polanyi's great insights used in judging both history and morality. It involved "Alleged scientific assertions, which are accepted as such because they satisfy moral passions, will excite these passions further, and thus lend increased convincing power to the scientific affirmations in question, and so on indefinitely" (Polanyi 1958: 230). Naturalism had introduced this circular process that goes *ad infinitum* and which has denatured our conception of what is genuinely human and moral. Because it was circular and self-referential it is neither easily recognized nor refuted. Polanyi's summed up his assessment of modern moral rationalism and the catastrophe it has wrought in this little noted citation describing what is now called secularisation.

Christianity is a religion of moral passions...the modern critical movement destroyed the communion between the Christian conscience and the person of Christ, and in so doing it pent up a vast accumulation of unsatisfied moral desire. Barred from their opening toward eternity, the hopes and passions of Christianity overflowed into the secular world, transforming themselves into a belief in historical progress and generating unlimited demands for political and social reform (Polanyi 1943: 43).

Polanyi also assimilated Christian mystical ideas into his treatment of science as the mental framework that democratic societies trust as their way of understanding

the universe. A scientific theory is like a screen between reality and the knower. Experience guides our scientific judgments as we employ a theory to achieve deeper contact with the world. Polanyi maintained that contemplation is necessary in science. He invoked the mystical theology of Pseudo-Dionysius to show how science embraced not only the frameworks that shape perception but also the 'breaking out' of them in order to remain true to the world we experience. This phenomenology manifests how discovery is an enlightenment, a turning to the real as given (1958: 195-202). It is worth noting that his contemplative vision of a correspondence between ascending levels of reality and the structure of our knowing also derives from the type of Platonism propagated by the Pseudo-Dionysius.

On the basis of that vision he noted that some forms of moral inversion are authentic while others are spurious. It all depends on which prevails: our experience of the world finding genuine explanations in science, or, an ideology justified as being scientific. His example of a spurious form of moral inversion is the moral philosophy of utilitarianism as put into practice in Great Britain (Polanyi 1958: 234). In itself it is a child of naturalism, reducing all values to a calculation of the greatest good as pleasure for the greatest number. Polanyi acknowledged that in itself it is contradictory as has often been noted. But it failed to have the toxic effect of moral inversion because there were a set of sound moral values and civic institutions protecting the culture from infection. He claimed, however that ideology "has turned morality on its head" so that the dynamic coupling mentioned above took over as the myth of progress pointing to utopia.

Polanyi's ideas about morality originated primarily out of his phenomenological analysis of Marxism performed against a background commitment to resist it. His approach was authentically existential and furnished a particularly powerful antidote to ideology. He founded his assertions on his own often tragic experience of how science, politics and culture suffered under totalitarian regimes. Such a phenomenology facilitated our perception of why society had lost its bearings and was functioning without or outside morality. Polanyi did not believe that we needed to invent new moral rules, but that we had to make the ones we have credible. He did not so much aspire to formulate an original ethical theory as to make available to society a truthful perception of how nihilism and totalitarianism were ruining it. His solutions were, unfortunately, largely limited by the problems he addressed. His direct influence on the today's cultural situation may perhaps be fading after the fall of the Berlin Wall. His thought, however, will remain as a personal testimony to the twentieth century's dramatic fight to throw off the shackles of totalitarian ideology driven by a false ideal of science.

CONCLUSION

Charles Taylor has an acute perception of the malaise of modernity which he diagnosed in the technical terms of moral philosophy. He discovered two strains of a virus that was generated inside Western culture when modern science was invented in the seventeenth century. Both are variants of naturalism that explains all phenomena, including morality, exclusively in terms of causes established by the new born science. Polanyi responded by propounding a phenomenology that described this malaise as moral inversion. Taylor identified the two predominant forms of ethical theory today as utilitarianism and Kantianism. Both are infected with the DNA of naturalism mutating into variant forms of modern moral rationalism. Both authors agree that this constitutes the basic problem. Utilitarianism may no longer be passed over as innocuous because our social institutions are sound. Both authors also complement each other on Kant. Polanyi's critique of Kant's epistemological skepticism supports Taylor's account of Kant's reduction of ethics to considerations of moral obligation. But, more importantly, both suggest ways of answering this challenge. Taylor proposes a retrieval of the notion of the good that would recover the intelligibility of the moral values we aspire to realize in society. Science in Polanyi's view cannot fulfill its vocation as interpreter of the universe without referring to ultimate values. The complimentary contributions of Polanyi and Taylor are needed as we negotiate the transition from modernity's obsession with epistemology to the postmodern priority of the ethical. *

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